Write For FREE Catalog

Call your order in and get a FREE program

NEW

Call your order in and get a FREE program

Write For FREE Catalog



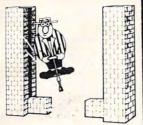
(602) 855-3357

VIC SOFTWARE CBM 64

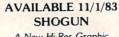
(602) 855-3357



CRICKET



POP TOP



A New Hi-Res Graphic Adventure For The Vic-20. Different Every Time!

WORMS - CBM 64

PAK-20 -

20 Programs for the 64

GOLD QUEST

A Hi-Res Disk Adventure For The CBM-64.



TREASURE PAK



BUG BLAST



PARATROOPER





TARGET COMMAND



COSMIC **CRUZER**



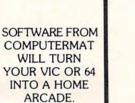
MOW



ALIEN **INVASION**



SNAKE OUT





MUSIC MAKER

COMMODORE 64

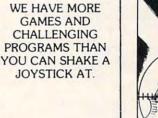
(In Text) Four Programs Include:

1. Music Maker

2. Music Player

3. Player Utility

4. Music Demo





SPACE PAK



ComputerMat •Box 1664 C • Lake Havasu City, Az. 86403

Add \$1.00 For Shipping



HEAD ON

ATARI Printers/Etc. *ASTRA 1620

1200XL

1050 DRIVE

1025 PRINTER

1027 PRINTER

RANA 1000

PERCOM 88-S1

PERCOM 40-S2

PERCOM 44-S2

1020 COLOR PTR . . . \$219

1010 RECORDER \$72

850 INTERFACE CALL DRIVES

PERCOM AT 88-S2 . . \$539

PERCOM 40-S1

PERCOM 44-S1

CALL*

*Reflects \$100 Atari Rebate

TECHNICAL NOTES \$25

810 DRIVE \$419

\$319 48K RAM (INTEC) \$95

48K RAM (MOSAIC) ...

64K RAM (MOSAIC) ...

32K RAM (MOSAIC) ... \$68

128K RAM DISK

MEMORIES

... \$119

\$109

\$145

\$299

..... \$335 MICROBITS INFC \$78

..... \$279 REAL TIME CLK \$38

.... \$399 80 COLUMN BD

.... \$358 64K RAM (INTEC)

\$510

\$799

\$639

\$929

GEMINI 10X \$289	PROWRITER . \$345
GORILLA \$199	SMITH TPI \$488
CITOH Prowriter \$34! Prowriter II \$62: Starwriter \$114! Printmaster \$144! NEC 8023 A-C \$400 3510 \$137: 3550 \$157: 3550 \$177. 7710/7730 \$1999	OKI-DATA Microline 82A \$398 Microline 83A \$538 Microline 84P \$958 Microline 92 \$488 Microline 93 \$858 DIABLO DIABLO 600 \$539
	00011
MON	NITORS
AMDEK Color I \$289 V300 \$139 V300A \$146 Color II \$446	GRN (JB1201) \$155 Color Composite \$298

MODEMS

NOVATION J-Cat

ATARI SOFTWARE						
ADVENTURE INT'L AVALON HILL(Cont'd)						
ADVENTURE INT'L Adv. 1-12 each (C) \$18 Preppie (C/D) \$20 Preppie II (C/D) \$23 Diskey (D) \$33 Sea Dragon (C/D) \$23 Bug. Off! (C/D) \$20 Tutti-Frutti (C/D) \$27 Lunar Lndr (C) \$11 (D) \$15 Galactic Empire (C) \$14	AVALON HILL(Cont'd) Moon Patrol (C)					
Preppie II (C/D) \$23	Conflict 2500 (C) \$12					
Sea Dragon (C/D)\$23	Space Station Zulu (D) \$17 (C) \$14					
Bug-Off! (C/D) \$20 Tutti-Frutti (C/D) \$17	Flying Ace . (D) \$21 (C) \$18 Gypsy (D) \$18 (C) \$15					
Saga 1-3 (ea.) (D) \$27	Galaxy (D) \$17 (C) \$14					
Galactic Empire (C) \$14	Nuke War (C) \$12					
Galactic Empire (C) \$14 Galactic Trader (C) \$14 Stratos (C/D) \$23	Andromeda Conquest					
Rear Guard (C) \$14 (D) \$17	Space Station Zulu (D)\$17 (C)\$14 Flying Ace (D)\$21 (C)\$18 Gypsy (D)\$18 (C)\$15 Galaxy (D)\$17 (C)\$14 Guns of Fort Def. (C)\$14 Nuke War (C)\$15 Andromeda Conquest (D)\$16 (C)\$13 Close Assit (D)\$23 (C)\$20					
APX Eastern Front (C/D) \$23	Sky Blazer (D) \$22					
APX Fastern Front (C/D) \$23 747 Land Sim. (C/D) \$17 Fig-Forth (C) \$30 Family Cash Flow (D) \$17 Downhill (C/D) \$17 Avalanche (C/D) \$17 Outlaw/Howitzer (C/D) \$17 Salmon Run (C/D) \$17 Data Management (D) \$17 Galahad/Holy Grail (D) \$21 Ady. Music System (D) \$21 Ady. Music System (D) \$21	BRODERBUND Sky Blazer (D) \$22 Bank St. Writer (D) \$46 A.E. (D) \$23 Arcade Machine (D) \$23 Arcade Machine (D) \$29 Labyrinth (C/D) \$20 Serpentine (D) \$23 (R) \$27 Steller Shuttle (C/D) \$17 Apple Panic (C/D) \$20 Genetic Drift (C/D) \$20 David's Midnight (D) \$20 Sea Fox (D) \$20					
Family Cash Flow (D) . \$17	Arcade Machine (D) \$39					
Downhill (C/D) \$17 Avalanche (C/D) \$17	Choplifter . (D) \$23 (R) \$29 Labyrinth (C/D) \$20					
Outlaw/Howitzer (C/D) \$17	Serpentine . (D) \$23 (R) \$27					
Data Management (D) \$17	Apple Panic (C/D) \$20					
Galahad/Holy Grail (D) \$21 Adv. Music System (D) \$21	Genetic Drift (C/D) \$20 David's Midnight (D) \$23					
ATARI INC.	Sea Fox (D)\$20					
Microsoft Basic II (R) . \$62 Mickey in Great	Sea Fox (D) \$20 Track Attack (D) \$20 Operatn Whrlwnd (D) \$23 Match Boxes (C/D) \$20					
Outdoors (C/D) \$36	Match Boxes (C/D) \$20 CDY CONSULTING					
Speed Reading (C) \$54	Pogoman (C/D) \$27					
Qix (R) \$30 Dia Dua (R) \$30	Pogoman (C/D)					
Atari Writer (R) \$68	CRS					
Visicalc (D) \$139	Boulders & Bombs (R) \$27					
Juggles House (C/D) . \$22 Juggles Rnbw (C/D) \$22	Krazy (each) (R) \$27					
Pilot (Home) (R) \$55	Mountain King (R) . \$27 Boulders & Bombs (R) \$27 Krazy (each) (R) . \$27 CONTINENTAL SOFT. Home Accountant (D) \$48 Tax Advantage (D) . \$39					
Defender (R) \$30	DATA MOST					
Mickey in Great Outdoors (C/D) \$36 Paint (D) \$30 Speed Reading (C) \$54 Qix (R) \$30 Dig Dug (R) \$30 Atari Writer (R) \$88 Time Wise (D) \$23 Visicalc (D) \$139 Juggles House (C/D) \$22 Juggles Robw (C/D) \$22 Juggles Robw (C/D) \$22 Juggles Robw (C/D) \$25 Juggles Robw (C/D) \$30 Centripede (R) \$30 Conv. Lang. Ea. (C) \$42 Jusic Composer (R) \$31 Super Breakout (R) \$26 Prog. 2 & E (ea.)(C) \$21 Word Processor (D) \$102 Pilot (Educ.) (R) \$92 Touch Typing (C) \$19 Home File Mngr (D) \$36 Bookkeeper (D) \$102 Family Finance (D) \$35 Prog. 1 (C) \$18 Scram (C) \$18 Scram (C) \$18 Scram (C) \$18 Asteroids (R) \$27 Space Invaders (R) \$27 Missile Command (R) \$27 Telelink (R) \$24 Donkey Kong (R) \$34	Pig Pen (D) \$20 Mating Zone (D) \$20 Roundabout (D) \$20 Roundabout (D) \$20 Bilestoad (D) \$20 Night Raiders (D) \$20 Monster Smash (D) \$20					
Macro Ass. & Edit (D) . \$62	Roundabout (D) \$20					
Basic Cartridge (R) \$45	Bilestoad (D) \$20 Night Baiders (D) \$20					
Pac Man (R) \$30 Centinede (R) \$30	Monster Smash (D) \$20					
Caverns of Mars (D) \$28	Text Wizard (D) \$65					
Conv. Lang. Ea. (C) \$42	DATASOFT Text Wizard (D) \$65 Graphic Master (D) \$27 Micro Painter (D) \$23 Lisp Interpreter (D) \$79 Graphics Gen. (D) \$17 Basic Compiler (D) \$65 Zaxxon (C/D) \$27 Teletalk (D) \$34 Pac. Coast Hwy (C/D) \$20					
Music Composer (R) \$31 Super Breakout (R) \$26	Lisp Interpreter (D) \$79					
My First Alphabet (D) . \$26	Basic Compiler (D) \$65					
Word Processor (D) . \$102	Zaxxon (C/D) \$27					
Pilot (Educ.) (R) \$92 Touch Typing (C) \$19	Pac. Coast Hwy (C/D) . \$20					
Home File Mngr (D) \$36	Clowns/Balloons (C/D) \$20 Spell Wizard (D) \$53					
Family Finance (D)\$35	Canyon Climber (C/D) \$20					
Prog. 1 (C)	Zaxxon (C/D) \$27 Teletalk (D) \$34 Pac. Coast Hwy (C/D) \$20 Clowns/Balloons (C/D) \$20 Spell Wizaldron (C/D) \$20 Sands of Egypt (D) \$27 O'Rilley's Mine (C/D) \$23 Rosen's Brigade (C/D) \$23 Moon Shuttle (D) \$27 DON'T ASK					
Asteroids (R) \$27	Rosen's Brigade (C/D) \$23 Moon Shuttle (D) \$27					
Missile Command (R) . \$27						
Telelink (R) \$21 Superman III (R) \$34	Sam (D) \$39 P.M. Animator (D) \$23					
Basketball (R) \$24	Teletari (D) \$27 Poker Sam (D) \$17					
Donkey Itong (ii)	Word Race . (D) \$17 (C) \$14					
AVALON HILL VC (D)	Prisoner II (D) \$27					
Legionnaire (C) \$23.	Prisoner II (D) \$27 Spelling Bee (D) \$27 Rendevous (D) \$27					
Tanktics (D) \$23 (C) \$20 Tanktics (D) \$20 (C) \$17 Comptr Stock & Bonds (D) \$17 (C) \$14	Compu/Math-FR					
Dnieper River Line (D) \$20	Compu/Math-Dec					
Voyager (D) \$20 Voyager (D) \$20	(D) \$27 (C) \$21					
CONTROLLE (D) 420	EDUCATIONAL SOFT.					
GFS Sorceress	EDUCATIONAL SOFT. Tricky Tutorial 1,2,3 or 4 (C/D) \$15 Tricky Tutorial					
Telegard (D) \$19 (C) \$16 Vorrak (D)\$18	Tricky Tutorial 5,6 or 7 (C/D) \$22					

GFS Sorceress (D) \$23 (C) \$20
Telegard (D) \$19 (C) \$18
Vorrak (D) \$18
Lord of Karma (C) . . . \$14

HAYES	NOVATION
Smartmodem \$209	J-Cat\$9
Smartmodem 1200 \$498 Micromodem II \$259	Apple Cat II \$25 D-Cat \$14
anneren en e	ANCHOR AUTOMATION
	Mark I or II Modem \$7
O # Obet cariage	1
O # Och Cartelee	
O Car The	
OM SSE	
ac Ch	V. 1
¢ 0"	M
	5
	TM
	~
	4
SPEC	CIALS
Gemini 15X Printer	\$379

Atari 400 Keyboard (In Home) \$35 Programmer Kit . \$48 Entertainer Kit . \$64 Wico Joystick . . \$23 Wico Trackball . . \$49 COSMIC **COMPUTERS**

Axiom AT-100 Printer (with interface \$229 Astra Double Density Dual Drive \$469 Rana 1000 Drive\$319

Mannesmann Talley 160L Printer \$589

Bit-3 80 Column Board

727 BREA CANYON RD., SUITE 16 **WALNUT, CA 91789**

ORDER LINES OPEN MON-SAT 8 am - 8 pm

626-7642

PLEASÉ FOR ORDERS ONLY SORRY, NO COD'S

(714) 594-5204

FOR TECHNICAL INFO, ORDER INQUIRIES, OR FOR CALIFORNIA ORDERS

Add \$2.50 shipping per software order in continental U.S. Add \$5.00 shipping per software order for AK, HI, FPO-APO. Add \$10.00 or 15% (whichever is greater) per software order for non-U.S. Call for cost of hardware shipping. Callf. residents add 61% % sales tax. Cashiers checks or money orders filled within 24 hours for items in stock. Personal checks require 4 weeks to clear. MasterCard and Visa OK for software only within continental U.S., add 3% surcharge. Include card no., expiration date and signature. Due to our low prices, all sales are final. All defective returns must have a return authorization number. Please call to obtain one before returning goods for replacement or repair. Prices & availability subject to change.

DISK DRIVE SYSTEM



MORE FOR YOUR MONEY DOUBLE OR SINGLE DENSITY TWO DRIVES

SPECIAL \$469

EPYX-AUTO. SIMULATION Rescue at Rigel (CID) \$34	SPECIAL	\$409
Rescue at Rigel (C/D) \$20	EPYX-AUTO. SIMULATION	SIERRA ON-LINE
Curse of Ra (CiD)	Rescue at Rigel (C/D) . \$20	Marauder (D) \$23
Curse of Ra (CiD)	Unr Robe Anshai (C/D) \$14	Wiz & Princess (D) \$20
Curse of Ra (CiD)	Ricochet (C/D) \$14	Frogger (C/D) \$23
Heillifre Warrior (CID) \$27		SIRIUS
Heillifre Warrior (CID) \$27	Danger/Drindisti (C/D) \$14	Wavy Navy (D)\$23
Heillifre Warrior (CID) \$27	Fscn Vulcans Isla (D) \$20	Bandits (D) \$23
Heillifre Warrior (CID) \$27	Crypt of Undead (D) \$20	Space Eggs (D)\$20 Sneakers (D)\$20
Heillifre Warrior (CID) \$27	Nightmare (D) \$20	Way Out (D) \$27
Heillifre Warrior (CID) \$27	Monster Maze (R) \$27	Renton (D) \$27
Heillifre Warrior (CID) \$27	Alien Garden (R) \$27	Critical Mass (D) \$27
Heillifre Warrior (CID) \$27	Morloc's Tower (C) \$27	Fast Eddy (R) \$23
Invasion Orion (C/D) \$27 Temple of Aps. (C/D) \$27 Temple of Aps. (C/D) \$27 Temple of Aps. (C/D) \$27 Star Warrior (C/D) \$27 Star Warrior (C/D) \$27 Star Warrior (C/D) \$27 Star Warrior (C/D) \$28 Story Machine (D) \$23 Story Machine (D) \$24 Story Machine (D) \$25 Story Machine (D) \$25 Story Machine (D) \$27 Story Machine (D) \$28	King Arthur's Heir	SPINNAKER
Face Maker (D) \$23 \$25	Hellfire Warrior (C/D) \$27	Snooper Troop 1,2 (D) . \$30
Face Maker (D) \$23 \$25	Invasion Orion (C/D) \$17	Rhymes & Riddles (D) \$20
Face Maker (D) \$23 \$25	Temple of Aps. (C/D) . \$27	Hey Diddle Diddle (D) . \$20
Face Maker (D) \$23 \$25	Dragon's Eye (D) \$20	Srch Amzng Thngs (D) \$27
Firebird (R)	Ordan Ordinble (Orb) . \$20	Face Maker (D) \$23
Comparison	GEBELLI Firebird (R) \$27	STRATEGIC SIM.
Comparison	Embargo (R) \$30	Cosmic Balance (D) \$27
Comparison	Candy Factory (D) \$20	Tigers In Snow (C/D) \$27
Comparison	Dr. Goodcode (D) \$20	Battle of Shiloh (C/D) . \$27
Buildog Pinbail (C) \$20 HES Coco (C/D) \$34 Coco (I (C/D) \$34 Coco	HAYDEN	Cytron Masters (D) \$27
Buildog Pinbail (C) \$20 HES Coco (C/D) \$34 Coco (I (C/D) \$34 Coco	Sargon II (D) \$23 (C) \$20	Knights/Desert (C/D) . \$27
Coco (C/D)	Buildog Pinball (C) \$20	Combat Leader (C/D) . \$27
Suspended (D)		Pinball (C/D) \$20
Suspended (D)	Coco II (C/D) \$27	
Starcross (D) S27 Deadline (D) S34 Protector II (D) \$23 (R) \$29 NHOME Saseball (R) \$23 (D) \$23 Shamus (D) \$23 (R) \$29 Starbase II (P) \$23 (C) \$20 NNOVATIVE DESIGN Pool 1.5 (D) \$23 (C) \$20 NHOVATIVE DESIGN Pool 1.5 (D) \$20 (C) \$20 NHOVATIVE DESIGN Pool 1.5 (D) \$20 (C) \$20 Pharoh's Curse (C/D) \$23 Shamus II (C/D) \$23 Pharoh's Curse (C/D) \$24 Pharoh's Curse (C	INFOCOM	
Starcross (D) S27 Deadline (D) S34 Protector II (D) \$23 (R) \$29 NHOME Saseball (R) \$23 (D) \$23 Shamus (D) \$23 (R) \$29 Starbase II (P) \$23 (C) \$20 NNOVATIVE DESIGN Pool 1.5 (D) \$23 (C) \$20 NHOVATIVE DESIGN Pool 1.5 (D) \$20 (C) \$20 NHOVATIVE DESIGN Pool 1.5 (D) \$20 (C) \$20 Pharoh's Curse (C/D) \$23 Shamus II (C/D) \$23 Pharoh's Curse (C/D) \$24 Pharoh's Curse (C	Zork I II or III (D) \$27	Space Shuttle (D) \$20
ODESTA Chess (D)	Starcross (D) \$27	SYNAPSE SOFTWARE
ODESTA Chess (D)	Deadline (D) \$34	Protector II (D) \$23 (R) \$29
ODESTA Chess (D)	INHOME	Shamus (D) \$23 (R) \$29
ODESTA Chess (D)	Deceball (D) 600 (D) 600	Shamus II (C/D) \$23
ODESTA Chess (D)	(D) \$23 (C) \$20	Necromancer (C/D) \$23
ODESTA Chess (D)		Slime (C/D) \$23
ODESTA Chess (D)	Pool 1.5 (D)\$23	Page 6 (D) \$23
ODESTA Chess (D)	Speedway Blast	Picnic Paranoia (C/D)\$23
ODESTA Chess (D)	Decido (D) \$20 (R) \$27	Claim Jumper (C/D) \$23
ODESTA Chess (D)	JV SOFTWARE	Shadow World (C/D) \$23
ODESTA Chess (D)	Jrny to Pints (C/D) \$20	Survivor (C/D) \$23
ODESTA Chess (D)	Action Quest (C/D) \$20	T.N.T. (C/D)\$23
ODESTA Chess (D)	LIK	Slamball (C/D) \$23
ODESTA Chess (D)	Letter Perfect (D) \$104	Blue Max (C/D) \$23
ODESTA Chess (D)	Letter Perfect (R) \$137	Chicken (R/D) \$23
ODESTA Chess (D)	Edit 6502 (R) \$137	Quasimodo (C/D) \$23
ODESTA Chess (D)	ABC Compiler (D) \$48	SYNERGISTIC \$23
Odri (D)	ODESTA	Programr Wkshp (D) \$23
Odri (D)	Chess (D) \$45	Disk Workshop (D) \$27
Soccer (R) S34	Odin (D) \$34	Worlock's Hevenge (D) \$23
Max-85 (D) \$58 Submarine Comm. (R) \$34 Astronom (D) \$58 Action (D) \$58 Action (D) \$65 Speed Read Plus (D) \$40 PHOENIX (E) Birth of Phoenix (D) \$16 Adv. In Time (D) \$20 Atari World (D) \$22 Atari World (D) \$23 Atari World (D) \$24 Atari World (D) \$25 At	OPTIMIZED STSTEMS	I HONN EMI
Max-85 (D) \$58 Submarine Comm. (R) \$34 Astronom (D) \$58 Action (D) \$58 Action (D) \$65 Speed Read Plus (D) \$40 PHOENIX (E) Birth of Phoenix (D) \$16 Adv. In Time (D) \$20 Atari World (D) \$22 Atari World (D) \$23 Atari World (D) \$24 Atari World (D) \$25 At	D - 05 (D) 600	Jumbo Jet (R) \$34
Action (D)	Max-65 (D) \$58	Submarine Comm (R) \$34
Birth of Phoenix (D)		Pool (C)\$22
Birth of Phoenix (D)	Speed Read Plus (D) \$40	Humpty Dumpty (C) \$22
Adv. In Time (D) \$20 QUALITY	PHOENIX	Darts (C)\$22
QUALITY	Adv. In Time (D) \$20	IISA
Starbase Hyperion Close	QUALITY	3-D Sprgrphcs (C/D)\$39
Starbase Hyperion Close	Name That Song	Survival Adv. (C/D) \$17
Ali Baba/40 Thvs (D) \$14 Ali Baba/40 Thvs (D) \$20 Jeeper Creepers (D) \$20 ROKLAN Gorf (D) \$27 (R) \$30 Wizard/Wor (D)\$27 (R)\$30 Dix Invaders (D)\$23 (R)\$27 Anti Sub Ptri (D)\$20 (C)\$14 Telecom (D) \$30 SENTIENT Gold Rush (D) \$33 SENTIENT Gold Rush (D) \$23 Mission Asteroids (D) \$17 Wisard (C/D) \$20 Astro Chase (D) \$22 Astro Chase (D) \$20 Astro Chase (D) \$22 Astro Chase (D) \$22 Astro Chase (D) \$22 Astro Chase (D) \$22 Astro Chase (D) \$20 Astro Chase (D) \$22 Astro Chase	(D) \$13 (C) \$11	
All Baba/40 Thvs (D) \$20 Jeeper Creepers (D) \$20 Jeeper Creepers (D) \$20 ROKLAN Gorf (D) \$27 (R) \$30 Wizard/Wor (D)\$27 (R)\$30 Felecom (D) \$49 Space Journey (R) \$30 SENTIENT Gold Rush (D) \$23 Cyborg (D) \$23 Cyborg (D) \$23 Cyborg (D) \$23 SIERRA ON-LINE Mission Asteroids (D) \$17 Ulys.& Gidn Fleece (D) \$27 Crossfire (D) \$20 (R) \$23 Mouseattack (D) \$24 Management (D) \$14 Millionalre (D) \$39	Starbase Hyperion	Globe Master (D) \$20
Telecom (D) \$49 Bug Attack (CD) \$20 Space Journey (R) \$30 SENTIENT Prism (D) \$18 Gold Rush (D) \$23 Gyborg (D) \$24 Gyborg (D) \$25 Gyborg (D) \$27 Gap'n Cosmo (D) \$18 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 G	Ali Baba/40 Thvs (D) \$20	MICCELLANEOUS
Telecom (D) \$49 Bug Attack (CD) \$20 Space Journey (R) \$30 SENTIENT Prism (D) \$18 Gold Rush (D) \$23 Gyborg (D) \$24 Gyborg (D) \$25 Gyborg (D) \$27 Gap'n Cosmo (D) \$18 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 G		Castle Wolfenstein (D) \$20
Telecom (D) \$49 Bug Attack (CD) \$20 Space Journey (R) \$30 SENTIENT Prism (D) \$18 Gold Rush (D) \$23 Gyborg (D) \$24 Gyborg (D) \$25 Gyborg (D) \$27 Gap'n Cosmo (D) \$18 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 G	Gorf (D) \$27 (R) \$30	Master Type (D) \$27
Telecom (D) \$49 Bug Attack (CD) \$20 Space Journey (R) \$30 SENTIENT Prism (D) \$18 Gold Rush (D) \$23 Gyborg (D) \$24 Gyborg (D) \$25 Gyborg (D) \$27 Gap'n Cosmo (D) \$18 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 G	Wizard/Wor . (D)\$27 (R)\$30	Miner 2049er (R) \$34
Telecom (D) \$49 Bug Attack (CD) \$20 Space Journey (R) \$30 SENTIENT Prism (D) \$18 Gold Rush (D) \$23 Gyborg (D) \$24 Gyborg (D) \$25 Gyborg (D) \$27 Gap'n Cosmo (D) \$18 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$19 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D) \$20 Gyborg (C)\$18 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 (G)\$19 Gap'n Cosmo (D)\$20 G	Anti Sub Ptrl (D)\$23 (H)\$27	Cypher Bowel (C) \$33
Space Journey (H) Spac	101000111(0)	DUG ALLACK (C/D) 320
Sold Rush (D) \$23 Megalegs (C) \$23 SiERRA ON-LINE Mission Asteroids (D) \$17 Salac. Chase (D)\$20 (Ci\$18 Ulys.& Gidn Fleece (D) \$27 Kid Grid (C/D) \$20 Kid Grid (C/D) \$20 Mouseattack (D) \$22 Battle Trek (D) \$20 Salac. Chase (D)\$20 (F) \$23 Jawbreaker (D)\$20 (R)\$23 T&F-PMP Property Threshold (D) \$27 Management (D) \$149 Millionaire (D) \$39	Space Journey (H) \$30	Air Strike (C/D)\$27
Mission Asteriols (D) \$17 Galac, Chase (D)\$20 (C)\$18 Ulys, & Gidn Fleece (D) \$27 Kild Grid (C/D) \$20 Crossfire (D) \$20 (R) \$23 Battle Trek (D) \$20 Mouseattack (D) \$23 Tak-PMP Property Threshold (D) \$27 Management (D) \$149 Softporn (D) \$20 Millionaire (D) \$39	Gold Rush (D) \$23	Prism (D)
Mission Asteriols (D) \$17 Galac, Chase (D)\$20 (C)\$18 Ulys, & Gidn Fleece (D) \$27 Kild Grid (C/D) \$20 Crossfire (D) \$20 (R) \$23 Battle Trek (D) \$20 Mouseattack (D) \$23 Tak-PMP Property Threshold (D) \$27 Management (D) \$149 Softporn (D) \$20 Millionaire (D) \$39	Cyborg (D) \$23	Cap'n Cosmo (D) \$19
Sampler Samp	SIERRA ON-LINE	Galac Chase (D)\$14
Sampler Samp	Ulvs.& Gldn Fleece (D) \$27	Kid Grid (C/D)\$20
Jawbreaker (D) \$20 (H) \$23 Tak-PMP Property Threshold (D)\$27 Softporn (D)\$20 Millionaire (D)\$39	Mouseattack (D) \$20 (R) \$23	Spanner (D) \$20
Softporn (D)\$20 Millionaire (D)\$39	Jawbreaker (D) \$20 (H) \$23	TAT-PMP Property
Litting 1 (b)	Softporn (D) \$20	Management (D) \$149
THE THEOREM	Ultima LONG. A.J. A.J. \$39-	ommodore
	1111111	

VIC 20

1541 DISK DRIV	E \$239
1701 Color Monitor \$255	1530 Recorder \$59
1525 Printer \$239	1600 Modem \$59
1520 Color Ptr \$169	1650 Auto Modem \$158
Hescard \$23	Microtek 16K Ram \$82
Hes Sound Box \$13	UMI 3K Ram \$56
Data 20 Exp. Chassis . \$56	

Large Selection of Vic 20 Software at Great Prices!

VIC 20 SOFTWARE VIC 20

ADDITION OVETENS	OHIOK BROWN FOX
APPLIED SYSTEMS	Prof. Word. Proc \$48
Number Gulper (C) \$17 Number Chaser (C) \$17	
PRODEDRIND	SIRIUS Snake Byte (R) \$27 Fly Wars (R) \$27 Type Attack (R) \$27 Fast Eddy (R) \$27 Deadly Duck (R) \$27 Turmoil (R) \$27 Plasmania (R) \$27 Squish 'Em (R) \$27 Final Orbit (R) \$27 Bumper Bash (R) \$27 SPECTRAVISION
Martian Raider (C)	Fly Wars (R) \$27
Multisound Synth, (C) \$14	Type Attack (R) \$27
Shark Trap (C) \$14	Fast Eddy (R) \$27
Sky Blazer (R) \$27	Deadly Duck (R) \$27
Seafox (R)\$27	Turmoil (R) \$27
AE(R) \$27	Plasmania (R) \$27
CDO	Spider City (H)\$27
K-Razy Patrol (R) \$29 K-Razy Antiks (R) \$29	Squish Em (R)\$27
K-Hazy Antiks (H) \$29	Rumper Bach (R) \$27
COMM-DATA	SPECTRAVISION
Pakacuda (C) \$13 Sketch and Paint (C) \$13 Eight Ball (C) \$13	Cave in (R) \$27
Fight Ball (C) \$13	Number Crunch (R) \$27
Invader Educ, Series	Cave In (R) \$27 Number Crunch (R) \$27 Reaganomics (R) \$27 Gold Mine (D) \$27 Ape Escape (D) \$27
(each) ((:)	Gold Mine (D) \$27
COMPUTERMAT Paratroopers (C) \$15 Bug Blast (C) \$12 Cricket (C) \$12	Ape Escape (D) \$27
Paratroopers (C) \$15	
Bug Blast (C) \$12	Asteroids (C) \$18
Cricket (C) \$12	Backgammon (C) \$18
	Ski Run (C)
Black Hole (R) \$36	Asteroids (C) \$18 Backgammon (C) \$18 Ski Run (C) \$12 Meteor (C) \$9 Vic Men (C) \$18 Vic Panic (C) \$18
Trashman (R) \$36	Vic Panic (C)
Black Hole (R) \$36 Trashman (R) \$36 Astrobilitz (R) \$36 City Bomber (R) \$20 Apple Panic (R) \$36 Choplifter (R) \$36 Serpentine (R) \$36 Videomania (R) \$36 Terraguard (R) \$36	SYNAPSE
Apple Papie (P)	Harrier (C) \$23
Chonlifter (R)	Harrier (C) \$23 Squeeze (C) \$23 Astro Patrol (C) \$23
Sementine (R) \$36	Astro Patrol (C) \$23
Videomania (R) \$36	TAYLORMADE
Terraquard (R) \$36	Fun Fractions (C) \$18 Vic Lemonade (C) \$12 Tch Typing Tutor (C) \$13
	Vic Lemonade (C) \$12
Monster Maze (R) \$27	Tch Typing Tutor (C) \$13
Sword of Fargoal (C) . \$20	T&F SOFTWARE
Ricochet (C) \$14	Word Search (C) \$14 Sports Search (C) \$14 Arcade Search (C) \$14
Rescue at Rigel (C) \$20	Sports Search (C) \$14
Monster Maze (R) \$27 Sword of Fargoal (C) \$20 Ricochet (C) \$14 Rescue at Rigel (C) \$20 Temple of Apshai (D) . \$27	Arcade Search (C) \$14
HES	TOTL
HES Gridrunner (R) \$27 Raid of Isram (C) \$14 Robot Panic (R) \$29 Shamus (R) \$27 Predator (R) \$29 Shamus (R) \$27 Predator (R) \$39 Aggressor (R) \$27 Turtle Graphics (R) \$27 Turtle Graphics (R) \$27 Turtle Graphics (R) \$27 Turtle Graphics (R) \$27 List (R) \$27 Turtle Graphics (R) \$27 List (R) \$27 List (R) \$27 List (R) \$29 Georgia (R) \$27 List (R) \$29 Georgia (R) \$27 List (R) \$39 Georgia (R) \$29 List (R) \$27 Li	Mailing List (C) \$14 Time Management (C) \$22
Raid of Isram (C) \$14	Time Management (C) \$22
Protector (P) \$27	Hesearch Asst. (C) \$22
Chamus (P) \$27	THORN EMI
Predator (R) \$27	River Rescue (R) \$29 Vic Music Comp. (R) \$29 Submarine Comm. (R) \$29
Syn The Sound (R) \$39	Submarine Comm. (R) \$29
Aggressor (R) \$27	Mutant Herd (R) \$29
Heswriter (R) \$27	Fourth Encounter (R) . \$29
Turtle Graphics (R) \$27	TRONIY
Hesmon (R) \$27	Galactic Blitz (C) \$17 Swarm (C) \$20 Sidewinder (C) \$20 Scorpion (R) \$27 Gold Fever (R) \$27 Deadly Skies (R) \$27
Vic Forth (R) \$39	Swarm (C) \$20
6502 Prof. Dev. Sys. (C) \$20	Sidewinder (C) \$20
Concentration (C) \$13	Scorpion (R) \$27
Fuel Pirates (C) \$12	Gold Fever (R) \$27
Simon (C) \$12	Deadly Skies (R) \$27
Vic Trek (C) \$13	UMI
Co Co II (C/D) \$27	Video Vermin (R) \$27
IMAGIC	Amok (C/H)\$20
Demon Attack (R) \$25	Satellites & Met (D) \$27
Demon Attack (R) \$25 Atlantis (R) \$25	UMI Video Vermin (R) \$27 Amok (C/R) \$20 Outworld (R) \$27 Satellites & Met. (R) \$27 Subchase (C) \$17 Kosmic Kamikaze (C) \$17 Meteor Shower (C) \$11 Super Hangman (C) \$14 Spiders of Mars (R) \$27 Meteor Run (R) \$27 Vicalc (C) \$11 Vi Cert A (C) \$14 Vi Cat (C) \$17 Alien Blitz (C/R) \$20 Sky Math (C) \$11
LITTLE WILAND	Kosmic Kamikaze (C) \$17
Pro Football (C) \$15 Cosmic Crusader (C) . \$12	Meteor Shower (C) \$11
Cosmic Crusader (C) . \$12	Super Hangman (C) \$14
LOGISTIC	Spiders of Mars (R) \$27
X-Rated (C)\$9	Meteor Run (R) \$27
X-Rated (C) \$9 Algebra Wiz (C) \$9 Profess. Journal (C) \$36 Viccalc (C) \$36 Budget & Bill Payer (C) \$15 Accounts Payable (C) \$36 Mad Bomber (C) \$15	Vicalc (C) \$11
Profess. Journal (C) \$36	Vi Term A (C) \$14
Budget & Bill Payer (C) \$15	Vi Cat (C)
Accounts Payable (C) \$15	Alien Blitz (C/P)
Mad Bomber (C) \$10	Sky Math (C) 911
MIS	Sky Math (C) \$11 Space Division (C) \$11 The Alien (C) \$17
Vic Vango (C) \$10	The Alien (C) \$17
Vic Vango (C) \$10 Galactic Crossfire (C) \$11	Grand Master (C) \$27
Checkbook (C) \$14	Renaissance (R) \$33
Checkbook (C) \$14 Fruitfly (C) \$10 Alien Soccer (C) \$11	Cloud Burst (R) \$20
Alien Soccer (C) \$11	Skibbereen (R) \$20
NUFEKOP	Skibbereen (R) \$20 Wordcraft 20 (R) \$65 VICTORY
Krazy Kong (C) \$11	VICTORY
3-D Man (C) \$17	Adv. Pak I (C) \$14
Externimator (C) \$20	Adv. Pak I (C) \$14 Adv. Pak II (C) \$14 Annihilator (C) \$18 Grave Robbers (C) \$12
ON LINE	Grave Robbers (C)
Crossfire (C) \$20	Siare Houseis (C) \$12

Kongo Kong (C) Trek (C)

04 LATE ARRIVALS 04						
BATTERIES INCLUDED	INFO-DESIGNS					
Delphis Oracle(D) 114	G/L (D)					
Paper Clip(D) 89	A/P (D)					
COMM-DATA						
(New Versions)	NUFEKOP					
Supercuda(C/D) 18	Exterminator(C) 20					
Pegassus Odyssey(C/P) 18	3-D Man(C) 16					
Escape MCP(C/D) 18	RAINBOW					
Toddler Tutor(C/D) 18 Prim. Math Tutor(C/D) . 18	Pers. Finance Assist.(D) 41					
Math Tutor(C/D) 18	F6/3. 1 Illatico Assist.(5)					
English Invaders(C/D) . 18	PSYCOM SOFTWARE					
English invadors(o/o/) . To	Personality Analyzer(D) 24					
DATA 20						
Pro Word Proc.(C) 21	SIERRA ON-LINE					
General Ledger(C) 21	Crossfire(D) 20					
Accounts Rec.(C) 21	SOUTHERN SOLUTIONS					
Elec. Spreedsheet(C) 21	Bill Payer(A/P) 68					
	Business Man(G/L) 68					
EN-TECH	Paymaster(Payroll) 68					
Studio 64(D) 28	Bill Collector(A/R) 68					
Sprite Fun(C) 18	Widget(Inventory) 68					
EPYX	T & F SOFTWARE					
sword Fargoal(C/D)20	Word Search(C) 1					
Crush Crumble(D) 20	Sport Search(C) 1					
Upper Reaches APS(D) 14	Arcade Search(C) 1					
HES	TIMEWORKS					
Synthe Sound 64(R) 34	Programming Kit 1(D) . 1					
64 Forth(R)40	Programming Kit 2(D) . 1					
Time/Money Mgr.(D) 48	Programming Kit 3 (D), 1					
Λ.						
4 0	/					
515 88 \						



Prowriter Printer					\$34	15
Gorilla Banana Printer					\$19	36
Card ? Printer Interface						
The Connection Printer Interface		 			. \$8	3
1541 Disk Drive		 			\$23	35
Koala Graphics Tablet		 			. \$6	38
Flip N' File Diskette Box						
Elephant Disks (10)						
The Boss Joystick (Wico)						
Wico Joystick						
Wico Trackball						
000===						

COSMIC **COMPUTERS**

727 BREA CANYON RD., SUITE 16 **WALNUT, CA 91789** ORDER LINES OPEN MON-SAT 8 am - 8 pm

PLEASÉ FOR ORDERS ONLY SORRY, NO COD'S

(714) 594-5204

\$12 FOR TECHNICAL INFO, ORDER INQUIRIES \$18 OR FOR CALIFORNIA CONTINUES

COMMODORE

CBM 04 CALL
1541 DISK DRIVE \$239
1701 Color Monitor \$255 1530 Recorder \$59
1525 Printer \$239 1600 Modem \$59
1520 Color Ptr \$169 1650 Auto Modem \$158
Card ? (Infc) \$60 CMB 64 Ref Guide \$18
Light Pen \$29 The Connection (Infc) \$85
Cassette Infc \$29 MSD Disk Drive \$339
Card ? Software \$16 PTI 45 Lot Board \$59
Script 64
Calc Result Prof
Calc Result Easy
The Home Accountant
Delphis Oracle
Word Pro 3 with Spell
04

	The Home Accountant	\$48
	The Home Accountant	\$78
	CA	GA
	04 SOFT	
	ACCESS SOFTWARE Neutral Zone (C/D) \$26	MICROSPEC Payroll System (D) \$73
,	Neutral Zone (C/D) \$26 Sprite Master (C/D) \$27	Payroll System (D)
	AVALON HILL Nukewar (C) \$12	Disk Data Mgr (D) \$62
	Nukewar (C)	Checkbook Mgr (D) \$39
3	Midway Campaign (C) \$12	M-SOFT M-File (D)\$89
	North Atl. Convoy (C) . \$12 Comp. Stcks/Bnds (C) \$15	ON-LINE
	Computer Football (C) \$18 Telengard (C) \$16	Frogger (D) \$23 Jawbreaker (D) \$20
	Paper Clip (D)\$89	PACIFIC COAST SOFT. PCS (80 Col BD, Word Proc, D.Base,Spreadsheet) CALL
	D.Base \$114	D.Base,Spreadsheet) CALL Account PAC (C/D) \$34
	BRODERBUND Choplifter (R) \$29	D.Bass, Spiedasteet, Oct. 1 Account PAC (C/D) . \$34 File PAC (D) . \$30 Editor PAC (D) . \$39 Inquire PAC (D) . \$57 Happy Tutor Typng (D) \$18
	Choplifter (R) \$29 Serpentine (R) \$27 Seafox (R) \$27 David's Midnight (D) \$23	Inquire PAC (D) \$57
	David's Midnight (D) \$23	PROFESS. SOFTWARE
	COMMODORE Easy File (D) \$75	Wordpro 3 + /64 (D) \$68 QUICK BROWN FOX
	Easy Finance (D) \$38	Prof.Word Proc. (R) \$50
	Easy Script (D)\$75	RAINBOW Writers Assistant \$95
	Logo (R) \$75	Writers Assistant \$95 Spreadsheet Assist \$95 File Assistant \$95
	COMMODORE Easy File (D) \$75 Easy Finance (D) \$38 Easy Mail (D) \$38 Easy Schipt (D) \$75 Easy Schedule (D) \$59 Logo (R) \$75 Assembler (D) \$75 Assembler (D) \$25 Music Composer (D) \$25 Music Composer (D) \$25 Music Composer (D) \$25 Music Machine (D) \$25 Music Composer (D) \$25 Music Composer (D) \$25 Music Machine (D) \$25 Easy Music (D) \$25 Easy Music (D) \$25 Easy Music (D) \$25 Easy Music (R) \$25 Easy Mail (R) \$25 Easy Music (R) \$25 Easy Mail (R) \$25 Easy M	
	Music Machine (D) \$25 Music Composer (D) \$25	Type Attack (D) \$27
	Meza Music (D) \$75	Critical Mass (D) \$27
1	Jupiter Lander (R) \$25	Snake Byte (D) \$23 Way Out (D) \$27
1	Sea Wolf (R)\$25	Fast Eddie (D) \$23 Turmoil (D) \$23
	Kickman (R) \$25	Spider City (D) \$27
1		SIRIUS Blade/Blackpoodle (D) \$27 Type Attack (D) \$27 Repton (D) \$27 Critical Mass (D) \$27 Snake Byte (D) \$23 Way Out (D) \$27 Fast Eddie (D) \$23 Turmoil (D) \$23 Spider City (D) \$27 Squish'Em (D) \$23 Final Orbit (D) \$27 Alpha Shield (D) \$27 SKYLES ELEC WOKKS
é	Pakacuda . (C) \$14 (D) \$18 Escp. MCP . (C) \$14 (D) \$18 Centropods (C) \$14 (D) \$18	SKYLES ELEC. WORKS
9	COMPUTERMAT	Busicalc (C/D) \$52 Busiwriter (D) \$72
5	Arcade-Pak (C) \$18 Education-Pak (C) \$18	SPINNAKER
9	Moondust (R) \$25	Facemaker (D) \$23 Kindercomp (D) \$23 Kindercomp (D) \$20 Hey Diddle (D) \$20 Most Amaz. Thing (D) \$27
1	Moondust (R) \$25 Trashman (R) \$25 Save New York (R) \$25 Astroblitz (R) \$25 Household Fin. (D) \$25	Hey Diddle (D) \$20
i	Astroblitz (R)\$25	Most Amaz. Thing (D) . \$27 SYNAPSE
5	DATA 20	Fort Apocalypse (C/D) \$23 Survivor (C/D) \$23
3	Video Pak 80 \$139 Z80 Video Pak \$229	Dreibs (C/D) \$23
10	EN-TECH	STNAPSE STNAPSE STNAPSE
	Finance Calc 64 \$34 Data Base 64 \$56 Invoice Ease 64 \$56	Shamus (D) \$23
		TAYLORMADE Touch Typing Tutor
	Temple of APS (D) \$27	3.0 (D)\$21
	Temple of APS (D) \$27 Upper Reach. APS (D) \$14 Jumpman (D) \$27	Rbbrs/Lost Tomb (C/D) \$21
	MES	Wall Street (C/D) \$21 Money Manager (C/D) \$21
6	HES Modem \$59 6502 Prof. Dev. Sys.(C) . \$22	Data Master (C/D) \$21 Dungeons of Alg.
	6502 Prof. Dev. Sys. (C) \$22 Hesmon 64 (R) \$27 Turtle Grapics II (R) \$41	Dragons (C/D) \$21
	Heswriter 64 (R) \$32 Gridrunner (R) \$27	Text 2.6 (C) \$32 (D) \$34
	Retroball (R) \$27	Time Manager 2.6 (C) . \$24
	Zork I, II or III (D) \$27	Text 2.6 (C) \$32 (D) \$34 Label 2.6 (C) \$15 (D) \$17 Time Manager 2.6 (C) . \$24 Time Manager 2.6 (D) . \$27 Resrch Assist. 2.0 (D) . \$24 Resrch Assist. 2.0 (D) . \$27
	Deadline (D)	Resrch Assist. 2.0 (D) . \$27
	JIN SAM	Motor Mania (C) \$20
	Mini-Jini (R) \$75	Renaissance (C) \$27 VICTORY
	Pro.Mail.List (C)\$22 (D)\$25	Annihilator (C/D) \$16 Kongo Kong (C/D) \$16
	Stockmaster (Inventory) (C)\$25 (D)\$28	Trek (C/D) \$14
5,	LOGISTIC	Adv. Pack #2 (C/D) \$16
	Datacalc 6. (C) \$55 (D) \$59 Home Journal (D) V. \$55	Adv. Pack #1 (C/D) \$16 Adv. Pack #2 (C/D) \$16 Grave Robbers (C/D) \$13 Chomper Man (C/D) \$18
-		

\$114 \$78	
WARE 64	
MICROSPEC Payroll System (D) \$73 Inventory Pkg (D) \$73 General Ledger (D) \$73 Disk Data Mgr (D) \$62 Mall List Mgr (D) \$41 Checkbook Mgr (D) \$39	
M-SOFT M-File (D)\$89	
Frogger (D) \$23 Jawbreaker (D) \$20 PACIFIC COAST SOFT. PCS (80 Col BD, Word Proc, D. Base, Spreadsheet) CALL Account PAC (C/D) \$34 File PAC (D) \$39 Inquire PAC (D) \$39 Inquire PAC (D) \$57 Happy Tutor Typng (D) \$18 PROFESS. SOFTWARE	
Wordpro 3 + /64 (D) \$68 QUICK BROWN FOX Prof.Word Proc. (R) \$50	
RAINBOW Writers Assistant \$95 Spreadsheet Assist \$95 File Assistant \$95	
Sindo State Stat	
Busiwriter (D) \$72 SPINNAKER Snooper Troops 1 (D) \$29 Facemaker (D) \$23 Kindercomp (D) \$23 Kindercomp (D) \$20 Most Amaz. Thing (D) \$27	
SYNAPSE Fort Apocalypse (C/D) \$23 Survivor (C/D) \$23 Dreibs (C/D) \$23 Pharoh's Curse (C/D) \$23 Protector II (D) \$23 Morgal (D) \$23 Shamus (D) \$23 TAYLORMADE Touch Typing Tutor 3.0 (D) \$21	
TIMEWORKS Rbbrs/Lost Tomb (C/D) \$21 Wall Street (C/D) \$21 Money Manager (C/D) \$21 Data Master (C/D) \$21 Dungeons of Alg.	
TOTL Text 2.6 (C) \$32 (D) \$34 Label 2.6 (C) \$15 (D) \$17 Time Manager 2.6 (C) . \$24 Time Manager 2.6 (D) . \$27 Resrch Assist 2.0 (C) . \$24 Resrch Assist 2.0 (D) . \$27	
Motor Mania (C) \$20 Renaissance (C) \$27 VICTORY Annihilator (C/D) \$16	
Kongo Kong (C/D) \$16	

High Octane Transfer For Atari

Steve Kaufman

Data storage and retrieval with disk files can be a slow process. Using Atari's unique string length capability, the author presents programming techniques which will read a file of 10,000 characters in 14 seconds.

The storage and retrieval of data is a relatively simple procedure on most microcomputer systems. Unfortunately, the speed of the process can leave a great deal to be desired.

The programs throughout this article will illustrate a method of achieving high-speed data transfer to disk. Let's start with Program 1, which will create a file of names and occupations.

Program 1: Names And Occupations File

```
10 DIM NAME$(30),OCC$(15)
20 OPEN #1,8,0,"D:NAMEOCCU.DAT"
30 ? "NAME (RETURN ONLY TO END)";:IN
PUT NAME$
40 IF LEN(NAME$)=0 THEN CLOSE #1:END
50 ? "OCCUPATION";:INPUT OCC$
60 ? #1;NAME$;CHR$(155);OCC$
70 GOTO 30
```

This program is straightforward and simple, but simplicity does not imply efficiency. It does not cause disk access after every entry because DOS will write only to the disk when its sector buffer is full (every 125 bytes on single density drives, 253 on double density), but it does waste a lot of disk time in cases where a long file is being created.

Storing Data In Strings

More important, however, is the status of the data. Once a new name and occupation are entered, all the prior data is eliminated from RAM. It's on the disk, to be sure, but it becomes a rather tedious process to retrieve and modify it. A far better procedure, in terms of both disk access time and data manipulation flexibility, is to store all the data, as it is generated, in a single long string as demonstrated in Program 2.

Program 2: String Storage Of Data

```
10 DIM NAME$ (20), DCC$ (15), A$ (10000)
   ? "NAME (RETURN ONLY TO END) ";: IN
   PUT NAMES
3Ø IF LEN(NAME$)=Ø THEN GOTO 1ØØ
40 ? "OCCUPATION";:INPUT OCC$
50 REM now pad the data with spaces
   so that each entry is the same le
   ngth
60 IF LEN(NAME$) < 20 THEN NAME$ (LEN(N
   AME$)+1)=" ":GOTO 60
70 IF LEN(OCC$)<15 THEN OCC$(LEN(OCC
   $)+1)=" ":GOTO 70
8Ø A$ (LEN(A$)+1) = NAME$: A$ (LEN(A$)+1)
   =OCC$
9Ø GOTO 2Ø
100 FOR X=0 TO LEN(A$)/35-1
110 PRINT A$(X*35+1, X*35+20);"
{4 SPACES}"; A$(X*35+21, X*35+35)
12Ø NEXT X
```

In this example, though we've wasted what may turn out to be a substantial amount of space by padding the data fields with blanks (lines 60-70) so that they're all the same length, the padding creates a series of easily accessed records that can be edited or (as in lines 100-120) printed out in a formatted fashion without any difficulty. Equally significant is the speed with which the entire file of data can be sent to the disk (or cassette):

200 OPEN #1,8,0,"D:NAMEOCCU.DAT" 210 PRINT #1;A\$:CLOSE #1

In addition, in this instance, even after you have sent the file to the disk, it is still sitting in RAM (in A\$) where it can be manipulated further. You could also combine the two methods, writing each field of data to the disk and putting it into the long string A\$ at the same time.

Note that Atari BASIC provides you with a substantial speed advantage in disk time here over most other microcomputer BASICs inasmuch as it allows strings to be up to 32K long. In other BASICs (for example, Microsoft BASIC on the Atari), the file would have to be saved in an array of strings (or in this case perhaps in two arrays,

THERE'S A COMPUTER BORN EVERY MINUTE... GIVE IT A HOME.

For \$89.95 with the CS-1632 you can house your computer, peripherals, and accessories without spending a fortune.



For those with a large computer family the CS-2748 gives you all the room you need for your computer, monitor, printer, peripherals, software, etc. at a price that's hard to believe: \$299.95.



The CS-1632 computer storage cabinets compact yet functional design fits almost anywhere while housing your computer monitor, joysticks, software, books and peripherals all for only \$89.95.

The slide out shelf puts the computer at the right height and position for easy comfortable operation.

The fold up locking door keeps unwanted fingers off the key board when not in use.

To store joysticks just turn them upside down and slide them into the inverted storage rack.

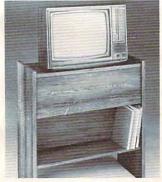
Twist tabs on the back of center panel allow for neat concealed grouping of wires, while power packs rest hidden behind center panel on shelf.

The slide out software tray has room for 14 cartridges or cassettes and up to 30 diskettes. Most brands of software will fit between the adjustable partitions with a convenient hook for the spare key at rear.

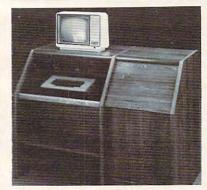
Stand fits Atari 400 & 800, Commodore 64 & VIC 20, Ti 99/4A and TRS-80.

Cabinet dimensions overall 36"





To order CS-1632 send \$89.95 to:



To order CS-2748 send \$299.95 to:

HYTEC

P.O. Box 446
West Lynn, OR 97068

For Fast Phone Orders Call Toll Free 1-800-547-3100 Inside Oregon Call (503) 635-6667

Name				
Address _				
City		State _	Zip	
Quantity	CS-1632		Quantity	CS-2748
	Golden Oak Finish	☐ Natu	ral walnut finish	
	onal check, cashiers check o	r money or	der is enclosed.	
Bill my \	ЛSA #		Ex	o. Date
Bill my l	MasterCard #		Ex	o. Date
Please in	nclude freight charge on my	VISA or Mas	sterCard.	
Card Holde	ers Signature			
2 weeks. CS-16	pment if in stock. If not, allow 3-4 week	on. CS-2748 sh		

Both the CS-1632 and CS-2748 ship unassembled in two cartons. Assembly requires only a screwdriver, harmrer, and a few minutes of your time.

Choice in simulated woodgrain of warm golden oak or rich natural walnut finish.

The two slide-out shelves put the keyboard at the proper operating height while allowing easy access to the disk drives.

The bronze tempered glass door protecting the keyboard and disk drives simply lifts up and slides back out of the way during use.

Twist tabs on the back of the center panel allow for neat concealed grouping of wires while a convenient storage shelf for books or other items lies below. The printer sits behind a fold down door that provides a work surface for papers or books while using the keyboard. The lift up top allows easy access to the top and rear of the printer. A slot in the printer shelf allows for center as well as rear feed printers.

Behind the lower door are a top shelf for paper, feeding the printer, and a bottom shelf to receive printer copy as well as additional storage.

Stand fits same computers as the CS-1632 as well as the

as the CS-1632 as well as the Apple I and II, IBM-PC, Franklin and many others.

The cabinet dimensions overall: 39-1/2" high x 49" wide x 27" deep.

Keyboard shelf 20" deep x 26" wide. Disk drive shelf 15-34" deep x 26" wide. Top shelf for monitor 17" deep x 27" wide. Printer shelf 22" deep x 19" wide

Printer shelf 22" deep x 19" wide.

Www.commodore.c

NAME\$(), and OCC\$()), and the save to the disk would have to be done in a significantly slower FOR/NEXT loop:

```
10 FOR X=1 TO ARRAYSIZE
20 PRINT #1,NAME$(X)
30 PRINT #1,OCC$(X)
40 NEXT X
```

Data Retrieval By INPUT

While creating and writing data files is a relatively straightforward procedure, reading the files is by no means as simple, or, in many cases, as rapid. The easiest way in BASIC to read such files is to use the INPUT statement. This would work very well on the data file created in Program 1. Indeed it is a simple matter to read in the data, pad each field with blanks, and put it all into a long string as in Program 3.

Program 3: Reading Data With INPUT

```
10 DIM NAME$(20),OCC$(15),A$(10000)
20 OPEN #1,4,0,"D:NAMEOCCU.DAT"
30 TRAP 200
40 INFUT #1,NAME$:INPUT #1,OCC$
50 IF LEN(NAME$)<20 THEN NAME$(LEN(NAME$)+1)=" ":GOTO 50
60 IF LEN(OCC$)<15 THEN OCC$(LEN(OCC$)+1)=" ":GOTO 60
70 A$(LEN(A$)+1)=NAME$:A$(LEN(A$)+1)=OCC$:GOTO 40
200 CLOSE #1
```

INPUT in Atari BASIC is relatively problemfree. Unlike most BASICs, you can use it easily even if the data contains commas or colons which would signal end of field to the INPUT statement of other BASICs (that is, it really works more like the LINPUT/LINE INPUT available in some dialects).

The problem with the INPUT statement is that it can be used only when there is a carriage return character (ATASCII 155) in the file after every line of text. The file created by Program 1 has such carriage returns embedded in it automatically because every PRINT statement (not followed by a semicolon or comma) automatically attaches a carriage return to the data. This is the reason we had to embed a CHR\$(155) in our data in line 60 of Program 1. Alternatively, we could have written ?#1;NAME\$:?#1;OCC\$.

In Program 2 we do not have carriage returns embedded in the data. The normal way to retrieve such files in BASIC is to use the GET statement, which retrieves one character at a time:

```
10 DIM A$(10000)
20 OPEN #1,4,0,"D:NAMEOCCU.DAT"
30 TRAP 200 :REM to catch the "end of file" error
40 GET #1,X:A$(LEN(A$)+1)=CHR$(X):GOTO40
200 CLOSE #1
```

The problem with this procedure is that it is inordinately slow, much slower than using INPUT, and INPUT itself doesn't even come close to the speed of data access that the disk drive is capable of providing. In this particular case we could revise Program 2 by inserting a CHR\$(155) after every field in the storage string A\$, then we could use INPUT to retrieve it.

Reading Files Of Unknown Length

There are many kinds of data in which carriage return characters might not only be inappropriate but also might be found within data fields themselves, so that INPUT could not be used. Reading in a segment of machine language or the data for a graphics display would be two common examples. Some computers provide an easy way to directly and quickly store and retrieve chunks of RAM memory, such as the commands BSAVE and BLOAD in Applesoft.

Experienced users realize that the Atari operating system supports such operations, but even with them, the user must declare in advance the exact length of the file to be transferred.

The challenge is to find a simple routine that will read a file from disk into memory at maximum speed, even though we don't know in advance how long the file is. Simply knowing that we have reached end-of-file is not enough. Let us say, for example, that we have provided a 10,000-character block of memory (DIM A\$(10000)) in which to store our file. How do we know how far into that memory block the file has reached? No problem. It turns out that the operating system keeps track for us, in RAM locations 40 and 41, of exactly how many bytes are transferred during a Central Input/Output (CIO) operation.

The following routine, then, can be ENTERed into any BASIC program to initialize a string (FAST\$) containing machine language which allows us optimum-speed file access:

```
3000 RESTORE 30001:FOR I=1 TO 39:RE
AD A:FAST$(LEN(FAST$)+1)=CHR$(
A):NEXT I:GOTO 10
30001 DATA 104,104,104,10,10,10,10,1
70,169,7,157,66,3,104,157,69,3
,104,157,68,3,104,157,73,3
```

30002 DATA 104,157,72,3,32,86,228,13 2,212,160,0,132,213,96

In order to use this routine, you need only open the file normally in BASIC and do a USR function call:

Y=USR(ADR(FAST\$), CHANNEL, ADR(A\$), BSIZE) where Y is the status returned by the CIO call, CHANNEL is the channel number that you have assigned to this file in your OPEN statement, A\$ is the buffer string into which the file will be read, and BSIZE is the maximum length of that buffer (normally the value to which you have DIMensioned A\$). Using this procedure on a file of 10,000 characters, it takes only 14 seconds (9 if you have double density) to read the file into RAM. This is



BOOKS for ATARI 400/600XL/800XL

1200XL
ATARI BASIC – Learning by Using
An excellent book for the beginner.
Many short programs and learning exercises. All important features of the
ATARI computers are described (screen
drawing, repeal sounds, leave, paddles) drawings, special sounds, keys, paddles, joysticks, specialized screen routines, graphics, sound applications, peeks, pokes, and special stuff). Order-No. 164

Games for the ATARI Computer

Games for the ATARI Computer
This book describes advanced programming techniques like player-missilegraphics and use of the hardware-registers.
Contains many ready to run programs in
BASIC and one called GUNFIGHT in machine language. Order-No. 162 \$7.95

How to program your ATARI in 6502 Machine Language

Introduction to machine language for the BASIC programmer. Order-No. 169

\$9.95 FORTH on the ATARI - Learning by

Introduction, programs, applications, learning exercises. Order-No. 170

\$7.95 All programs from book No. 170 on disk. Order-No. 7319 \$22.00 only! \$22.00 only!

A Look into the Future—ASTROLOGY on your ATARI 800. How to calculate your own horoscope. Including listing of the program.

Order-No. 171

HACKERBOOK for your Atari computer Tips+tricks—Very important subroutines in 6502 machine language. How to make bootable cassettes, disks, and EPROMs. Complete construction article and software on how to build an EPROM burner. Order-No. 172

SMALL BUSINESS SOFTWARE FOR ALL ATARI COMPUTERS

SUPERMAIL (500 addresses on 1 disk) Completely written in FORTH. Comes on autoboot disk. No cartridge, no DOS, no FORTH language required.

Order-No. 7312 \$49.00

SUPERINVENTORY (1000 items p.disk)

Completely written in FORTH. Same as above. (Disk only)
Order-No. 7320 \$49.00 BUSIPACK-1 (written in FORTH). Com-

plete order entry, inventory, mailing and invoicing. (Disk only).

Order-No. 7313 \$98.00 Microcomputer Hardware Handbook Order-No. 29 & 14.95 Convert your ATARI 800 into a powerful cash register. (Disk only).

Order-No. 7303 \$49.95

Invoicing program in BASIC Order-No. 7201 (C) Order-No. 7200 (D) \$29.95

Mailing List in BASIC Order-No. 7212 Order-No. 7213 (C) \$19.95 \$24.95 Inventory control in BASIC \$19.95

Order-No. 7215 (D) \$24.95 SOFTWARE IN MACHINE LANGUAGE FOR ATARI

ATMONA-1 Machine language monitor. Order-No. 7022 (C) \$19.95

ATMONA-2
This is a tracer (debugger) that lets you explore the ATARI RAM/ROM area. You can stop at previously selected address, opcode, or operand. Also very valuable in understanding the microprocessor. At each stop, all registers of the CPU may be changed.Includes Atmona-1. Order-No. 7049 cassette \$49.95 Order-No. 7050 disk \$54.00 Order-No. 7050 disk \$54.00

Macro-Assembler for ATARI-800/48K.
One of the most powerful editor
assemblers on the market. Versatile editor with scrolling. Up to 17k of source-code.
Very fast, translates 5k source-code in about 5 seconds. Source code can be saved on disk or cassette (Incl.Atmona-1). Order-No. 7099 disk Order-No. 7999 cartridge ATMS APPLICATION DISK \$89.00

All programs and machine language sub-routines from Book No.169 on disk. Order-No. 7311 \$20.00

ATAS Same as ATMAS but without macro-capability. (32K and 48K RAM) Order-No. 7098 \$49.95

ATEXT-1 This wordprocessor is an excellent buy for your money. It features screen oriented editing, scrolling, string search (even nested), left and right margin justification. Over 30 commands. Text can be saved on disk or cassette.

Order-No. 7210 Order-No. 7216 \$29.95 \$34.95 disk Order-No. 7217 \$69.00 cartridge

FORTH for the ATARI FORTH from ELCOMP PUBLISHING, Inc. is an extended Fig-Forth-version, Editor and I/O package included. Utility package includes decompiler, sector copy, Hexdump (ASCII), ATARI filehandling, total graphic and sound, joystick program and player missile. Extremely powerful! Order-No.7055(D) reg.\$99.00sale \$39.95

Floating point package with trigonometric functions (0 - 90°).

Order-No. 7230 \$29.95

Learn FORTH

A subset of Fig-Forth for the beginner. On disk (32k RAM) or cass. (16k RAM). Order-No.7053 reg. 79.00 sale \$19.95

HARDWARE-ADD-ONs for ATARI

PRINTER INTERFACE

This construction article comes with printed circuit board and software. You can use the EPSON printer without the ATARI printer interface. (Works with gameport 3 and 4).

Order-No. 7211

\$19.95

300 Baud serial interface (RS232+5V) Software with connector and construction article

Order-No. 7291 **EPROM BURNER for ATARI 400/800** KIT. Printed circuit board incl. software and extensive construction article.

Order-No. 7292 \$49.00

\$19.95

EPROM BOARD (CARTRIDGE)
Holds two 4k EPROMs (2532). EPROMs

not included Order-No. 7043 \$29.95

EPROM BOARD KIT Same as above but bare board only with description

Order-No. 7224 Astrology and Biorhythm for ATARI Order-Nol 7223 D/C \$29 \$29.95 D/C

Birth control with the Atari (Knaus Ogino) Order-No. 7222 disk only! \$29.95 The APPLE in your Hand, BRAND NEW! Book includes introduction to 6502

Machine Language and FORTH. BASIC programs never published before!
Order-No. 178 (200 pages) \$12.95
CP/M —MBASIC and the OSBORNE computer

Business Applications, compl. listings of mailing list, datablock, inventory, invoicing and more.

Order-No. 177 \$9.95

SUPERSOFTWARE f.the Commodore-64 BLIZTEXT! — The best wordprocessor for the C-64 in the whole universe. In-cludes terminal software for electronic

Order-No. 4965 (62 pages manual) \$89.00 MACROFIRE - Editor/Assembler for

The best macroassembler you can buy!
Order-No. 4963 \$89.00

SUPERBOOKS for your C-64

The Great Book of Games, Vol. I 64 programs for the Commodore-64. Order-No. 182 \$9.95 Programs from this book on disk \$19.95 MORE ON THE SIXTYFOUR

Tips, tricks, hints, very important sub-

routines. Order-No. 182 Programs from this book on disk \$19.95 How to program in 6502 Machine Language on your C-64 Order-No. 184 \$12.95

Commodore-64 Tune-up, Vol. I How to expand your C-64.

\$12.95 Order-No. 185 Small Business Programs for the C-64 Order-No. 186 \$12.95

HARDWARE ADD-ONs for your C-64 Parallel printer interface, KIT

\$19.95 Order-No. 4990 Universal Experimenter Board Order-No. 4970

Expansion Board (holds 4 exp. boards) Order-No. 4992 \$29.95

BOOKS, SOFTWARE, ADD-ONs for VIC-20, APPLE II, OSBORNE, TIMEX + OSI computers

Tricks for VICs (Book)

Order-No. 176 Universal Experim.board for the VIC-20 (Save money with this great board). This board plugs right into the expansion slot of the VIC-20.

Order-No. 4844 reg. \$19.95 sale \$9.95
Programming in BASIC and machine language on the ZX-81 (82) TIMEX1000
Order-No. 174 (book) \$9.95

The Custom APPLE + Other Mysteries A complete guide to customizing the APPLE software and hardware. Order-No. 680 We also stock the boards which are used in the book No. 680 (bareboards).

Pomona CA 91766, Elcomp Publishing, Inc, 53 Redrock Lane,

PAYMENT: Check, money order, VISA, MASTER CARD, Eurocheck, ACCESS, Interbank Prepaid orders add \$3.50 for shipping (USA) \$5.00 handling for C.O.D.
All orders outside USA: add 15% shipping, California residents add 6.5% sales tax.
Phore: 714) 623-8314, Telex: 29 81 91

ATARI is a reg. trademark of ATARI Inc., VIC-20 + Commodore-64 are trademarks of Commodore Business Machines, APPLE is a reg. trademark of APPLE Computer, Inc., CP/M is a reg. tradem. of Digital Research

as fast as the drive is capable of reading. Using INPUT, where possible, takes about 42 seconds to transfer the same number of bytes. Using GET to perform this function takes 2½ minutes.

Program 4 is a simple BASIC program using this function that allows you to read any file off disk and print it on the screen. Note that if the USR call returns a status of 136, the end-of-file has been reached. If the status is 1, the file is longer than the buffer you have provided. Any other status indicates an error situation.

This routine can also be used for saving data directly from RAM to a disk file. Simply substitute the value 11 (the binary PUT command value) for the value 7 in the DATA statements or in FAST\$ after it has been initialized (FAST\$(10,10) = CHR\$(11)). Using such a modified FAST\$, the following routines will save an entire GRAPHICS 0 screen to disk:

```
10 OPEN #1,8,0,"D:GRØ.DAT"
```

- 2Ø START=PEEK(80)+256*PEEK(89)
- 30 Y=USR(ADR(FAST\$),1,START,40*24)
- 40 CLOSE #1: IF Y<>1 THEN PRINT "ERR OR "; Y

Change FAST\$(10,10) back to CHR\$(7), and you can put the data right back on the screen just as quickly:

10 OPEN #1,4,0,"D:GRØ.DAT" 2Ø START=PEEK(88)+256*PEEK(89) 30 Y=USR(ADR(FAST\$),1,START,40*24) 4Ø CLOSE #1

Program 4: Data Retrieval By A USR Call

- Ø BSIZE=10000:DIM FAST\$(39),A\$(BSIZE), FNAME\$ (15)
- A\$(1)="{,}":A\$(BSIZE)="{,}":A\$(2)= A\$(1): Z=Ø: GOTO 3ØØØØ
- 10 ? "NAME OF FILE TO READ"; : INPUT F NAME \$
- 100 OPEN #1,4,0,FNAME\$
- 110 Y=USR(ADR(FAST\$),1,ADR(A\$),BSIZE
- 115 Z=PEEK(40)+256*PEEK(41)
- 116 REM Y is the error status, Z is the number of bytes read from th e file
- 119 REM now tell BASIC how long our storage string is
- 12Ø A\$(Z) = A\$(Z,Z)
- 125 IF Y=136 THEN ? A\$:? "END OF FIL E": END
- 130 IF Y=1 THEN ? A\$:? "RETURNING TO GET REMAINDER OF FILE": GOTO 110
- 139 REM any other value of Y is a di sk error.
- 14Ø ? "ERROR #"; Y: END
- 30000 RESTORE 30001:FOR I=1 TO 39:RE AD A: FAST\$ (LEN(FAST\$)+1) = CHR\$ (A):NEXT I:GOTO 10
- 30001 DATA 104,104,104,10,10,10,10,1 70, 169, 7, 157, 66, 3, 104, 157, 69, 3
- , 104, 157, 68, 3, 104, 157, 73, 3 30002 DATA 104,157,72,3,32,86,228,13 2,212,160,0,132,213,96

BIG BYTES

1309 BOARDMAN-POLAND RD., POLAND, OHIO 44514 Monday - Friday 10 am - 10 pm, Sat. 10 am - 5 pm

CC 40 COMPUTER \$199 TI 99/4A \$99

with \$50 rebate applied

DISK DRIVE WITH

CONTROLLER CARD & "P" BOX all for \$299 ADD 32 K EXPANSION.....\$129 and receive your choice of:

TI WRITER, TI MULTIPLAN, TI LOGO FREE! TI IMPACT PRINTER\$359 RS 232 Card..... \$ 79

SOFTWARE

Extended Basic\$75	Miliken Subtraction \$31
Securities Analylsis31	Hustle 20
Household Budget 31	Yahtzee 20
Personal Record Keeping.	Chess Teacher 54
	Blackjack/Poker 20
Early Learning Fun., 31	Pirate Adventure 31
Begining Grammar 24	Munch Man 31
Number Magic17	Parsac 31
Early Reading 41	Joysticks 28
Milliam Addist - 21	

Miliken Addition 31

1526 Prin

Programmers Guide... Assembler/Monitor....

Super Expander... LOGO.....

Intro to BASIC

Visible Solar System

Pinball Spectacular... ZORK I,II,or III......

Car Costs..... Household Finance. Home Inventory

SIERRA-ON-LINE

Moon Dust.....

Frogger Jawbreaker...

CREATIVE SOFTWARE

DISK Drive		32.	19
atasette	\$ 5	9 160	0 Modem
rinter 100cps	\$28	9 152	0 Printer
COMMODO	RE	64	\$219

1701	C	lor	Monitor	\$21	19
· \$	59	1525	Printer 30cps	\$1	99
r/Plotter \$1	59	1650	Auto Modem	\$	89

VIC - 20 \$99

_	•			
\$	17	Easy Calc\$	55	
\$	15	Easy Finance I,II,III,IV,V\$	17	
\$	15	The Manager\$	35	
\$	39	General Ledger\$	35	
\$	39	Accounts Receivable \$		
\$	59	Accounts Payable \$	35	
\$	17	Payroll \$	35	
\$	16	Inventory\$	35	
\$	18	Easy Script\$	35	
\$	16	Easy Spell \$	17	
\$	25	SPINNAKER SOFTWARE		
\$	25	Facemaker	20	
			22	
		Kindercomp\$		
\$	13		29	
. \$	23	Delta Drawing \$	29	
\$	13	Story Machine \$	29	

\$	16	Inventory	.\$	3
\$	18	Easy Script	\$	3
\$	16	Easy Spell		
\$	25	SPINNAKER SOFTWARE		
\$	25	Facemaker		2
		Kindercomp	5	2
\$	13	Snooper Troops No. 1		
. \$	23	Delta Drawing		
5	13	Story Machine	\$	2
\$		HES SOFTWARE		
	29		\$	25
		Synthesound 64	\$	3
\$	24		\$	45
\$	21		\$	2:

	•	.,	Choplifter	e
DFTWARE			Household Finance	š
	\$	26	Home Inventory	s
	\$	22	Home Office	
No. 1	\$	29	PRINTERS	Ī
	\$	29	Star Gemini 10X	_
	\$	29	Prowriter 8510	
E				
	\$	29	Even if it's not lis	
	\$	36	at the lowe	2
		40		

410		LU 499
Programmers Guide \$	13	Simplicale \$ 18
VicMon \$	25	Filer \$ 18
Atomic Mission\$	18	Writer \$ 18
Voodoo Castle \$	18	Money Decisions I or II \$ 22
Visible Solar System \$	12	Speed/Bingo Math \$ 12
Gortek Learner\$	19	Quizmaster \$ 17
Child's I.Q \$	17	Your Own I.Q\$ 17
Menu Planner \$	17	Intro to BASIC I or II\$ 19
CREATIVE SOFTWARE		SIERRA-ON-LINE
Choplifter \$	29	Frogger\$ 24
Household Finance \$	26	Jawbreeker \$ 22
Home Inventory \$	16	Luna Leeper \$ 24
Home Office	26	Sammy \$ 24

ACCESSORIES

ted, we probably have it, st price possible. SEND FOR OUR CATALOG!!

\$1 (refundable first order)

MOST ORDERS SHIPPED WITHIN 48 HOURS!

... \$ 24

All prices include cash discount. VISA/MC orders accepted - add 3.5%. C.O.D. orders add \$5.00. For quickest delivery send bank check or money order. All sales are final defective merchandise exchanged for same product only. Shipping add 3% (\$2.50 minimum). Ohio customers add 5.5% sales tax. Prices & availability subject to change

ORDERS ONLY 1-800-638-2617

Information and in Ohio 1-216-758-0009

Comput Ability Mare Store That's As Close As Your Phone!!

ATARI 800 48K CALL ATARI 800XL 64K CALL ATARI 810 DISK DRIVE CALL ATARI 1050 DISK DRIVE CALL ATARI 850 INTERFACE CALL ATARI 1010 RECORDER 77.00 HOME MANAGER KIT 64.95 ATARI 1027 PRINTER 289.00	MOSAIC 64K Ram/400 149.00 64K Ram + Cable Kit /400/800 169.00 48K Ram Kit. 94.00 16/32 Expander 64.99 32K Ram 77.99 Mosaic Adaptor 49.99 64K Ram Utility Software - Superdrive & Handyman Call
DISK DRIVES: PERCOM, RANA, TRAK,	, ASTRA CALL FOR PRICES.

Third Party Printer Interface Call for Price and Availability

PRINTERS

PROWRITER 8510 AP... CALL

Axiom AT-100

w/Parallel Port CALL

JUMPMAN **DISK/TAPE \$26.95** DEADLINE DISK \$33.95

WAYOUT DISK \$26.95

POOYAN DISK/TAPE \$19.95 CARTRIDGE \$33.95

MINER 2049'ER

BANDITS DISK \$22.95

EFFECTIVE NOW THROUGH NOVEMBER 30, 1983

FREE* SOFTWARE AND ACCESSORIES

ATARI Conversational Languages - T ... 43.95

Conversational Languages - 1	43.95
Programming 2 & 3 - T	
Music Composer - C	32.95
My First Alphabet - D	26.95
Touch Typing - T	19.95
Touch Typing - T	37.95
Mailing List - T	1995
Asteroids - C	
Caverns Of Mars - D	28 05
Computer Chess - C	26.95
Missile Command - C	
Super Breakout - C	20.95
Super Breakout - C	20.95
Star Raiders - C	32.95
Assembly Editor - C	44.95
Basic - C.	39.95
Macroassembler - D	
Microsoft Basic - D	
Pilot (Home Package) - C	. 58.95
Invitation To Programming I-T.	18.95
Speed Reading - T	
Baskethall - C	. 26.95
Graph-It - T	15.95
Juggles House - D/T	. 22.95
Pilot (Educator) - C	97.95
Video Easel - C	26.95
Defender - C	
Galaxian - C	32.95
Galaxian - C	32 95
Dig Dug - C	32.95
ET - C	37.05
Timewise - D	
Atariwriter - C	
Dealess Kong C	27.05
Donkey Kong - C	30.05
Ms. Pac-Man - C	39.95
Tennis - C	35.95
Eastern Front - C	
Donkey Kong Jr C.	39.95
Pengo - C	
Logo - C	79.95
Robitron - C.	35.95
Pole Position - C	39.95
Microsoft Basic II - C	
Paint - D	33.95
Caverns of Mars - C	. 32.95

INFOCOM Call for items & prices

23.95

23.95

COMPUTABILITY DIVIDEND	
3 M Blank Disk - Box of 10	
Elephant Disks - Box of 10	
Flip 'n File Disk Holder	
Flip 'n File Cartridge Holder	
Monitor Stand	
VU - Case Disk Holder W/Lock	24.00 or 10 Coupons
Heavy Plastic Dust Cover 800 or 810	
First Book of Atari Software 1983	
Kids & The Atari	
The Atari Assembler	
Atari Games & Recreation	
Atari Pilot for Beginners	14.95 or 6 Coupons
The Visicalc Book Atari	
Atari Basic	
Atari Sound & Graphics	
Starfighter	
Slik Stik	
Extension Cable - 6 ft	
Lefty Adaptor	
Stik Stand	6.99 or 3 Coupons
Suncom Tac II	
Suncom Game Switch	6.95 or 3 Coupons
TI Adaptor	
Kraft Switch Hitter Joystick	
Kraft Joystick	
Maxell 2 Pack Disks	
Inside Atari Basic	
Compute's First Book of Atari	12.95 or 5 Coupons
Compute's Second Book of Atari	
De Re Atari	
Wico Joystick	
\$24.00 Worth of Software	

*COUPON PROGRAM

The purchase of each program (with the exception of Super Specials, Atari and APX) will earn you 1 COMPUTABILITY DIVIDEND COUPON. Save 10 coupons and redeem them for your choice of any program we sell for \$24.00 or less. Less than 10 coupons may be redeemed for premium items as indicated. You pay only a \$2.50 shipping & handling charge.

DATASOFT

Pooyan - D/T	23.95
Moon Shuttle - D/T	23.95
Sands of Egypt - D	
Text Wizard - D	
Spell Wizard - D	
Basic Compiler - D	
Teletalk - D	
Canyon Climber - D/T	
The state of the s	

SIRIUS

Bandits - D	
Way Out - D	
Repton - D	
Twerps - D	5
Blade of Blackpoole - D 31.9	
Type Attack - D	
Beer Run - D	5
Critical Mass - D	

ADVENTURE INTERNATIONAL

Preppie - D/T	23.95
S.A.G.A. Adventures - D	
Sea Dragon - D/T	
Stratos - D/T	
Bugoff - D/T	
Preppie II - D/C	
Stone of Sisyphus - D	
Eliminator - D/T	
Rally Speedway - Cart	
Ultra Disassembler - D	
Diskey - D	
Triad - D/T	
CVNADCE	

SYNAPSE

Dimension X - D/T	27.95
Shadow World - D/T	
Rainbow Walker - D/T	27.95
Dreibs - D/T	27.95
Shamus II - D/T	27.95
Blue Max - D/T	27.95
Fort Apocalypse - D/T	27.95
Necromancer - D/T	27.95
Pharoah's Curse - D/T	27.95
Survivor - D/T	27 95

PARKER BROS.

Q-Bert - Cart	34.95
Frogger - Cart	34.95
Astro Chase - Cart	
Popeye - Cart	34.95
Tutankhamen - Cart	34.95
Risk - Cart	39.95
01	20 05

MISCELLANEOUS

Night Mission - D/T	23.95
Letter Perfect-D	99.95
Juice - D/T	23.95
Castle-Wolfenstein - D	
Monkey Wrench II - Cart	
PM Animator - D	27.95
Teletari - D	31.95
Starbowl Football - D/T	
Data Perfect - D	79.95
Ultima II - D	
Crisis Mountain - D	
Star League Baseball - D/T	
Home Accountant - D	
Omnimon	

D - Disk T- Cassette C - Cartridge ATARI is a trademark of ATARI, Inc.

We Carry Hundreds of Items for ATARI 400/800, Ask for Our FREE CATALOG.

Mastercard/VISA Order Toll Free



No surcharge for credit cards



COMPLITABILITY P.O. Box 17882 Milwaukee, WI 53217

FIRST STAR

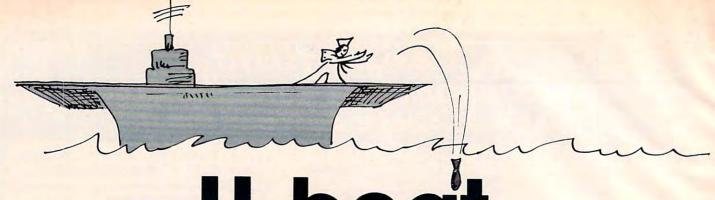
Flip Flop - D/T Rent Wars - D/T

Astro Chase - D/T..... Bristles - D/T.....

> ORDERING INFORMATION: To order by mail, send money order, certified check, or personal check (allow 14 days to clear) to COMPUTABILITY. Include \$2.00 shipping on all software orders. Include 3% shipping on all hardware orders, minimum \$2.50. Mastercard and Visa please include card number and expiration date. WI residents please add 5% sales tax. Canadian, APO & FPO software orders include 5% shipping minimum \$5.00. All other foreign software, please add 15% shipping, minimum \$7.00 (US Funds only). Prices subject to change sales tax. without notice

ORDER HOURS

Mon-Fri 12-9 PM (CST) 12-5 PM (CST)



U-boat

Mark Vittek

"U-boat," for VIC and 64, starts out quietly enough, but don't be lulled into a false sense of security. Without warning, you'll be called upon to use all your wits to save yourself.

"U-boat" is a nice change of pace from fast action,

run-and-shoot games - for a while.

As you calmly patrol the ocean floor, the serenity is soon broken by the sudden explosion of a depth charge. Above you, on the ocean surface, are destroyers on a search-and-destroy mission. And if that isn't bad enough, there is a constant supply of mines to keep you busy.

The object of the game is to sink as many ships as possible before their depth charges reach you. On the surface of the sea, destroyers and aircraft carriers pass to and fro dropping their destructive cargo. Some drop randomly, but others zero in

on your U-boat.

You can destroy bothersome mines with your torpedoes, but new ones always replace them after five ships have been sunk. So in order to keep your patrol area tidy, you have to take time out every now and then to remove mines. Also, it's important to remember that when the charges and mines explode, they take the surrounding eight cursor spaces with them. If your U-boat is in this area, it is permanently retired.

VIC Version

For those of you who do not have a joystick, Program 3 shows the necessary replacement lines for Program 2 so that you can use the keyboard. I used the cursor keys to move the sub, but if you find that they are too 0 difficult, you may assign new keys in lines 70-76.

If you do have a joystick, you may want to try the keyboard later on. You'll find it more of a challenge because the game plays faster. It may be a bit difficult at first, but if you master the game using the keyboard, you can become the scourge of the seven seas.

U-boat was designed to provide a large variety of objects on the screen without slowing the game down. As most game programmers know, too many POKEs and PRINTs can spoil the game's fast action quality. For example, the usual two POKEs to location 37154 have been omitted from

the joystick reading routine.

Using MID\$ is a good technique for achieving fast movement of many objects on screen. In Program 2, MID\$ was used to move the ships across the screen because it was faster than POKEing. Also, when I first wrote the game with POKEs, the ship's bow plunged into the sea as the ship wrapped around the screen. This could be remedied with IF statements, but using MID\$ turned out to be faster and easier. Since the

number of characters displayed by MID\$ is set at 22 (VIC's screen width), the ship disappears as if it just sailed out of view.

LEFT\$, RIGHT\$, and MID\$ often provide for faster and more clever effects in game programming.

Type in and SAVE Program 1 first. This program will print instructions and redefine the necessary game characters. Reset the computer, then type in and SAVE Program 2 immediately following Program 1 on the same tape.

When you RUN Program 1, it will automatically LOAD and

RUN Program 2.

The 64 version plays the same as the VIC version but requires a joystick.

JaniceFary

Complete Personal Accountant: we've made the best much more friend

If you have any doubts that we offer the best and most complete personal financial package available, look over the features listed below. Now we have the only package with **full screen editing** for Atari 400/800*, TRS-80 COLOR, Commodore 64* and VIC-20; the ability to move the cursor in any direction makes our accountant-designed package even more friendly than before. No one else offers all of these:

1. CHECKBOOK MAINTENANCE automatically balances your checkbook with each entry; manages checks, charges, deposits, and interest quickly and accurately. THE COLOR ACCOUNTAIN

2. CHART OF ACCOUNTSmaximum of user flexibilty with up to 99 accounts plus 9 subcategories may be defined.

3. CHECK SEARCH—mul-

ti-reference; tracks items on every field including tax deductibles.

4. NET WORTH/ INCOME/EXPENSE STATEMENTknow-exactly-

where-you-stand program generates statements with the

touch of a key. 5. DETAIL & SUMMARY BUDGET ANALYSIS—an absolute necessity in financial

planning. 6. CHECK WRITER—prints personalized checks.**

*Random Access available for disk. **Atari, Commodore 64 and TRS-80 COLOR. 7. PAYMENTS/APPOINTMENTS CALENDAR monthly displays of up to 250 bills and 200 appointments.

8. COLOR GRAPH DESIGN PACKAGE—graphs all monthly files.

MAILING LIST—maintains all records, sorts by name or zip, allows add/change/delete. 10. FRIENDLY USER MANUAL—complete

with indexing, flow charts and diagrams; the most thorough documentation on the market.

This all adds up to the finest personal financial system available—comprehensive enough for a small business. Less than one hour of data input per month will allow this menudriven package to help you handle your finances with a

lot more fun than drudgery. Plus, ours is the only expandable system; purchase the package in sections and add on as your financial

needs grow. Fea-tures 1, 2, 3 and 6: \$39.95 diskette, \$36.95 cassette; Features 4 and 5: \$29.95 diskette, \$26.95 cassette;
Features 7,8 and 9: \$29.95
diskette, \$26.95 cassette; or
save \$19.90 or \$15.90
respectively by buying the
entire system for \$79.95 diskette, \$74.95 cassette.

Prints all statements and files on any 80 column printer

Prices subject to change without notice. See your local dealer or order direct. New catalog available.

Add \$3.00 for postage and handling. Credit card orders call toll free:

a division of FUTUREHOUSE, INC.

p.o. box 3470, dept. C, chapel hill, north carolina 27514, 919-967-0861

www.commodore.ca

Program 1: U-boat – VIC Version (Instructions And Loader)

BEGINNING PROGRAMMERS
If you're new to computing, please read "How
To Type COMPUTE!'s Programs" and "A
Beginner's Guide To Typing In Programs."

- 5 PRINT "{CLR}{6 DOWN}{BLU}{RVS} {8 SPACES}U-BOAT{8 SPACES}"
- 10 X=28:POKE52,X:POKE56,X:POKE51,PEEK(55)
- 2Ø FORI=7168T07679:POKEI,PEEK(I+256ØØ):NE
 XT
- 30 READT: IFT=-1THEN50
- 4Ø POKE7168+Q, T:Q=Q+1:POKE36879, T:GOTO3Ø
- 50 POKE36879,28:PRINT"{3 DOWN} INSTRUCTIONS? (Y/N)"
- 55 FORT=1T01000:GETA\$:IFA\$="N"THENT=1000
- 60 IFA\$="Y"THENT=1000:NEXT:GOTO100
- 65 NEXT: GOTO150
- 100 PRINT" (CLR) (DOWN) FIRE TORPEDOES FROM {3 SPACES} THE SUB'S FRONT {2 SPACES} TO {3 SPACES} SINK SHIPS AND "
- 105 PRINT" DESTROY MINES."
- 110 PRINT" {DOWN} BEWARE OF THE DEPTH
 {3 SPACES} CHARGES AND MINES {5 SPACES}
 DESTRUCTIVE AREA "
- 115 PRINT" WHEN THEY EXPLODE."
- 120 PRINT" [DOWN] DESTROY AS MANY SHIPS AS YOU CAN UNTIL YOU [2 SPACES] ARE PERMA NENTLY [7 SPACES] RETIRED."
- 125 FORT=1T05000:NEXT:PRINT"{3 DOWN}{RVS}
 PRESS ANY KEY "
- 130 GETA\$: IFA\$=""THEN130
- 140 REM THE NEXT LINE{2 SPACES}WILL NEW T HE PROGRAM. DO NOT PUT IT IN WHEN TES TING{2 SPACES}PROGRAM.
- TING{2 SPACES}PROGRAM.
 150 PRINT"{CLR}":POKE198,5:FORT=631T0635:
 READX:POKET,X:NEXT
- 1000 DATA182,193,213,128,201,193,182,255, 255,159,159,159,243,243,243,255,,,,, 255,101,63
- 1002 DATA31,,96,112,252,255,148,255,255,,
 14,30,127,255,145,255,255,,,,,255,16
 6,252,248
- 1004 DATA,,4,4,15,10,127,63,,192,196,200, 208,224,255,254
- 1006 DATA,3,35,19,11,7,255,127,,,32,32,24 0,80,254,252,254,254,252,252,,133,20 8,224
- 1008 DATA255,255,127,63,,80,3,31,255,255, 254,254,,10,192,248
- 1010 DATA127,127,63,63,,161,11,7,255,239, 239,239,239,199,215,255,65,41,68,175 ,122,189
- 1012 DATA110,219,17,74,148,125,218,180,22 1,182,255,255,255,255,255,255,255,25
- 1014 DATA191,213,187,92,171,237,190,219,2 47,174,181,125,235,189,173,222
- 1016 DATA-1,78,69,87,13,131

Program 2: U-boat — VIC Version (Main Program)

- Ø GOTO6ØØ
- 50 PA=PEEK(37152)AND128:P=PEEK(37151):IF-((PAND32)=0)ORLTHENGOSUB150
- 70 IF-(PA=0)THENAY=AY+1:X=12:IFAY>20THENA

- Y=AY-1
- 72 IF-((PAND16)=Ø)THENAY=AY-1:X=1Ø:IFAY<Ø THENAY=AY+1
- 74 IF-((PAND8)=0)THENAX=AX+22:IFAX>198THE NAX=AX-22
- 76 IF-((PAND4)=0)THENAX=AX-22:IFAX<-22THE
- 8Ø A=AX+AY+79ØØ:P=PEEK(A):PØ=PEEK(A+1):PO KEA1,17:POKEA1+1,17:POKEA,X:POKEA+1,X+ 1:A1=A
- 82 IFP<20RPØ<2THEN4ØØ
- 84 LM=LM+1:IFLM<RRTHEN92
- 86 N1=N1+22:CO=PEEK(N1):IFN1=AORN1=A+1THE NPOKEN1-22,17:GOTO400
- 88 IFN1>AORCO<3THEN3ØØ
- 90 POKEN1-22,17:POKEN1,1
- 92 IFM>VTHEN:PRINT"{HOME}{BLK}{7 DOWN}"MI D\$(A\$(TT),H,22);:H=H+M2:IFH=H1THENM=Ø: H=1
- 94 M=M+1:IFM<VTHEN5Ø
- 96 IFM=VTHEN1ØØ
- 98 GOTO5Ø
- 100 LM=0:N1=7856+AY:T=(RND(1)*6)+1:ONTGOT O110,108,106,104
- 102 TT=(RND(1)*2)+1:H=2:H1=26:M2=1:RR=22-(LM+AY):GOTO94
- 104 TT=(RND(1)*2)+3:H=26:H1=2:M2=-2:RR=-(LM-AY)/2:GOTO94
- 106 TT=(RND(1)*2)+3:H=28:H1=2:M2=-2:T=RND (1)*19:N1=7858+T:RR=3-(LM-T)/2:GOTO94
- 108 TT=4:H=28:H1=2:M2=-1:T=RND(1)*19:N1=7 858+T:RR=3-(LM-T):GOTO94
- 110 TT=2:H=2:H1=26:M2=1:T=RND(1)*20:N1=78 56+T:RR=22-(LM+T):GOTO94
- 150 L=L+1:IFL<2THENC=A:IFX=12THENC=A+1
- 152 C=C-22:CO=PEEK(C):IFCO<17THEN160
- 154 IFC<7856THENPOKEC+22,17:L=Ø:RETURN
- 156 POKEC+22,17:POKEC,14:RETURN
- 16Ø ONCO+1GOTO162,162:GOTO18Ø
- 162 POKEZZ-2, (RND(1)*50)+155:FORT=-1TO1:F ORI=-1TO1:POKEZZ-1,10-T-I:C1=PEEK(C+I +T*22)
- 164 IFC1=1THENRR=99:LM=Ø
- 168 IFC1>9ANDC1<14THENM1=1
- 169 L=Ø:POKEC+I+T*22,(RND(1)*2)+18:NEXTI,
 T:POKEZZ-2,Ø:IFM1=1THEN4ØØ
- 170 FORT=-1TO1:FORI=-1TO1:POKEC+I+T*22,17 :NEXTI,T:RETURN
- 180 PRINT" {HOME} {PUR} {7 DOWN} "MID\$ (A\$(0), H,22):POKEC+22,17:POKEC-22,32:POKEZZ-2,(RND(1)*100)+140
- 182 FORT=15TOØSTEP-.Ø9:POKEZZ-1,T:NEXT:PR
 INT"{HOME}{7 DOWN}{22 SPACES}";
- 184 M=Ø:L=Ø:IFCO<7THENBS=BS+1
- 186 IFCO>6THENMS=MS+1
- 188 IFLM<RRTHENRR=99
- 190 IFMS+BS=5THENPOKEZZ,248:V=20
- 192 IFMS+BS=15THENPOKEZZ, 232:V=10
- 194 IFMS+BS=3ØTHENPOKEZZ, 2Ø4
- 196 IF(MS+BS)/5=INT((MS+BS)/5)THENFORT=1T 08:POKE7878+(RND(1)*197),Ø:NEXT:J=1
- 198 IFJ=1THENFORT=-1TO2:FORI=-1TO1:POKEA+ T+I*22,17:NEXTI,T:J=Ø
- 200 RETURN
- 300 J=15:RR=99:ML=0:POKEZZ-2,(RND(1)*30)+ 128:FORT=-1TO1:FORI=-1TO1:C1=PEEK(N1+ I+T*22)
- 302 POKEZZ-1, J:J=J-1.6:IFC1=14THENL=0
- 304 IFC1>9ANDC1<14THENM1=1
- 306 POKEN1+I+T*22,(RND(1)*2)+18:NEXTI,T:P OKEZZ-2,0:IFM1=1THEN400

Finally! An Affordable Full-Size, Full-Feature PRINTER

For your VIC-20®, C-64®

Centronics Parallel Types And RS-232 Serial Types

FEATURES:

- Full graphics capability.
- In the graphic mode, a column of graphic data can be repeated as many times as you want with a single command.
- Double width character output under software control (5 char. per inch).
- Print position addressable by character or dot (positioning control).
- Graphic character and double width character modes can be intermixed on a single line.
- Automatic printing. When the text exceeds the maximum line length no data is lost due to overflow.
- Self-test printing mode.
- Paper width is adjustable up to 10 inches. Standard plain paper.
- 50 cps print speed.
- 80 characters per line.
- 5 × 7 dot matrix.
- Full 2 yr. Warranty.
- Foreign character sets For U.S., U.K., Sweden, and Germany.

\$229.95!!

BASIC PRINTER (Requires one Option Below)



Any of these Options allow you to connect and print - cables included. APROPRINT-2064™ (pictured)Add: \$35.95 For Commodore VIC-20 & C-64 - Cable included. APROPRINT-4080™Add: \$45.95 For all Atari Computers - Cable included. APROPRINT-1000™Add: \$29.95 RS-232-Serial - Name your computer

ADD: \$8.00 shipping (cont. USA), \$25.00 (Canada, HI, AK)

(All other foreign orders Add \$55.00 (shipped by Air)

The ONE VIC-20® Memory Expansion Board that DOES IT ALL!

Maximum Memory allows you to use more powerful programs for:

■ EDUCATION ■ ENTERTAINMENT ■ MAIL LISTS

■ BUSINESS APPLICATIONS ■ FINANCIAL RECORDS

APROPOS TECHNOLOGY RAMAX Very low power usage requires no external Totally self Built-in RESET switch! Fuse protected!

WE SERVICE WHAT WE SELL

VIC-20 & Commodore-64 are registered

trademarks of Commodore International. Atari is a trademark of Atari Inc.

APROPOS TECHNOLOGY

TO ORDER:

Send Check or Money Order For the Total Calif. residents add 6% tax. Or Contact your Local Dealer

Phone orders Call (805) 482-3604



VISA All Prices U.S. Dollars



1071-A Avenida Acaso **DEALER INQUIRIES WELCOME** Camarillo, CA 93010



SPECIAL LOW PRICE!

Only \$124.95

10 DAY MONEY-BACK GUARANTEE

RAMAX Jr.™

Already own an 8k Expander? Get the NEW RAMAX "Jr."! Identical to the RAMAX" except with 19k instead of 27k. Our instructions will show you how to use your 8k as BLK 3 with Jr. to get the full complement of

Special Only \$109.95 Shipping included

APROSPAND-64™

To equal the total memory of RAMAX "you would have to buy a 16k Memory Expansion, PLUS an 8k Expansion, PLUS 38 K Expansion, THEN you would need a "mother board". With RAMAX " you buy just ONE piece ... at ABOUT HALF THE PRICE!

RAMAX " Features and Specifications Adds up to a full 27k bytes of additional RAM to the standard VIC-20's internal RAM of 5k. Built-in switch allows User selection of any combination of 5 areas or RAM memory*:

BLK1 (8k: Adr. 6192-16383 BLK2 (8k: Adr. 16384-24575) BLK3 (8k: Adr. 24576-32767) BLK5 (6k: Adr. 24576-32767) BLK5 (Adr. 40960-49151, allows/disallows 8k ROM games 1024-4095) RAM (3k: Adr. 1024-4095) RESET (Resets computer without power off/on)

· Built-in electrical Fuse to protect equipment. Totally self-contained. No external power supply needed.

Two (2) extension connectors allow ANY addi-tional cartridges and/or devices designed for the VIC expansion port.

 Very low power consumption (.175 amp usual). High reliability gold-plated connectors are designed for long life.

Many VIC-20 cartridges and programs require certain configurations of the memory (i.e certain games will only run on the unexpanded VIC while others require the upper portion of the expanded memory). With RAMAX you have switches that turn-on and turn-off portions of the memory to provide the right area of memory - all without plugging or unplugging. It's so easy!

Complete Operating Manual.

308 FORT=-1TO1:FORI=-1TO1:POKEN1+I+T*22,1 7:NEXTI, T:GOT092 309 POKEN1+I+T*22, (RND(1)*2)+18:NEXTI, T:P OKEZZ-2, Ø: IFM1=1THEN4ØØ 400 POKEZZ-1,15:POKEA,15:POKEA+1,16 402 FORT=1T016STEP.15:POKEZZ-2,255-T*5:PO KEZZ, T*11: NEXT: POKEZZ-5, Ø 404 FORT=15TOØSTEP-.2:POKEA, (RND(1)*2)+18 :POKEA+1, (RND(1)*2)+18 406 POKEZZ-1, T:NEXT:POKEZZ-2, 0:POKEZZ-10, 240: POKEZZ, 221: PRINT" [CLR] [BLK] [DOWN] YOU SANK"BS"CARRIERS" 408 PRINT" [DOWN] AND "MS" DESTROYERS" : FORT=1 TO2000:NEXT 410 PRINT" [3 DOWN] PLAY AGAIN ?":PRINT" {RVS}{DOWN} UP=YES DOWN=NO" 412 IF-((PEEK(37151)AND4)=Ø)THENRUN 414 IF-((PEEK(37151)AND8)=Ø)THENPOKE37154 ,255:PRINT" [CLR] SO LONG. ": END 600 ZZ=36879:POKEZZ,24:POKEZZ-10,255:POKE ZZ-1,15:POKE37154,127:X=10:V=30:AX=19 8:AY=10 602 RR=30:H=2:PRINT" (CLR) [BLK] [RVS] {5 SPACES}U-BOAT{2 SPACES}26 {7 SPACES} {OFF} "CHR\$(8); 604 A\$(1)="{21 SPACES}BDE{3 SPACES}":A\$(2)="{21 SPACES}FG{3 SPACES}" 606 A\$(3)="{25 SPACES}BCDE ":A\$(4)=" {25 SPACES}HI 608 A\$(0)="{22 SPACES}OPOP " 610 FORT=1TO4:PRINT" {YEL}QQQQQQQQQQQQQQQQQ QQQQQQ";:NEXT:PRINT"{3 DOWN}";:FORT=1 TO12

614 FORT=812ØTO8186:POKET,17:POKE3Ø72Ø+T, Ø:NEXT:FORT=1T015:POKE7878+(RND(1)*19 618 NEXT: POKE8108, 17: POKE8109, 17: GOTO50

612 PRINT" {BLU} QQQQQQQQQQQQQQQQQQQQQQ;:N

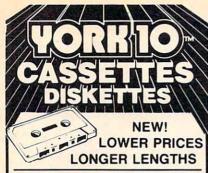
Program 3: U-boat – VIC Version (Replacement Lines For Keyboard Control)

- 50 GETA\$: IFA\$=" "ORLTHENGOSUB150 7Ø IFA\$="{RIGHT}"THENAY=AY+1:X=12:IFAY>2Ø
- THENAY=AY-1 72 IFAS="{LEFT}"THENAY=AY-1:X=10:IFAY<0TH ENAY=AY+1
- 74 IFA\$="{DOWN}"THENAX=AX+22:IFAX>198THEN
- 76 IFA\$="{UP}"THENAX=AX-22:IFAX<-22THENAX =AX+22

Program 4: U-boat – 64 Version

- 100 POKE55, 0: POKE56, 48: CLR: PRINT" {CLR} "CH R\$(8):GOTO88Ø
- 120 FORI=0TO27:POKEI+54272,0:NEXT 130 POKE54296, 15: POKE54272, 100: POKE54273, 5:POKE54277,Ø:POKE54278,249
- 140 POKE54279, 100: POKE54280, 2: POKE54284, 0 :POKE54285,249
- 150 POKE54291,0:POKE54292,249:M=V:GOTO340 160 :
- 170 MV=1:P=PEEK(56320):IFP=127THENMV=0
- 180 IF(PAND16)=00RLTHENGOSUB420
- 190 IF(PAND8)=0THENAY=AY+1:X=12:IFAY>38TH ENAY=AY-1
- 200 IF(PAND4)=0THENAY=AY-1:X=10:IFAY<0THE

- NAY=AY+1
- 210 IF(PAND2)=0THENAX=AX+40:IFAX>360THENA X=AX-40
- 220 IF(PAND1)=0THENAX=AX-40:IFAX<-80THENA $X=AX+4\emptyset$
- 23Ø A=AX+AY+1424:P=PEEK(A):PØ=PEEK(A+1):I FMVTHENPOKEA1, 17: POKEA1+1, 17
- 240 POKEA, X:POKEA+1, X+1:A1=A
- 25Ø IFP<2ORPØ<2THEN76Ø
- 260 LM=LM+1:IFLM<RRTHEN300
- 270 N1=N1+40:CO=PEEK(N1):IFN1=AORN1=A+1TH ENPOKEN1-40,17:GOTO760
- 28Ø IFN1>AORCO<3THEN68Ø
- 290 POKEN1-40,17:POKEN1,1
- 300 IFM>VTHENPRINT"{HOME}{BLK}{7 DOWN}"MI D\$(A\$(TT), H, 40); :H=H+M2:IFH=H1THENM=0
- 310 M=M+1:IFM=VTHEN340
- 32Ø GOTO17Ø
- 330 :
- 34Ø LM=Ø:N1=1344+AY:T=RND(1)*6+1:ONTGOTO3 90,380,370,360
- 350 TT=RND(1)*2+1:H=2:H1=44:M2=1:RR=40-(L M+AY):GOTO310
- 360 TT=RND(1)*2+3:H=44:H1=2:M2=-2:RR=-(LM -AY)/2:GOTO310
- 37Ø TT=RND(1)*2+3:H=46:H1=2:M2=-2:T=RND(1)*37:N1=1344+T:RR=3-(LM-T)/2:GOTO310
- 38Ø TT=4:H=46:H1=2:M2=-1:T=RND(1)*37:N1=1 344+T:RR=3-(LM-T):GOTO310
- TT=2:H=2:H1=44:M2=1:T=RND(1)*38:N1=13 44+T:RR=40-(LM+T):GOTO310
- 400
- 410 REM TORP MOVE 420 L=L+1:IFL<2THENC=A:IFX=12THENC=A+1
- 43Ø C=C-4Ø:CO=PEEK(C):IFCO<17THEN46Ø
- 440 POKEC+40,17:IFC<1344THENL=0:RETURN
- 450 POKEC, 14: RETURN
- 46Ø IFCO<>ØANDCO<>1THEN54Ø
- 47Ø POKE54276,129:POKE54276,128
- 480 FORT=-1TO1:FORI=-1TO1:C1=PEEK(C+I+T*4 Ø)
- 49Ø IFC1=1THENRR=99:LM=Ø
- 500 IFC1>9ANDC1<14THENM1=1
- 510 L=0:POKEC+I+T*40,(RND(1)*2)+18:NEXT:N EXT: IFM1=1THEN76Ø
- 520 FORT=-1TO1:FORI=-1TO1:POKEC+I+T*40,17 : NEXT : NEXT : RETURN
- 53Ø :
- 540 PRINT" [HOME] [PUR] [7 DOWN] "MID\$ (A\$ (0), H,40):POKEC+40,17:POKEC-40,32
- 55Ø POKE54276,129:POKE54276,128
- 560 FORT=1TO100:NEXT
- 570 PRINT" {WHT} {HOME} {7 DOWN} {40 SPACES}"
- 580 M=0:L=0:IFCO<7THENBS=BS+1
- 590 IFCO>6THENMS=MS+1
- 600 IFLM<RRTHENRR=99
- 61Ø IFMS+BS=5THENPOKE53281,7:V=2Ø
- 62Ø IFMS+BS=15THENPOKE53281,14:V=1Ø
- 63Ø IFMS+BS=3ØTHENPOKE53281,1Ø
- 640 IF(MS+BS)/5=INT((MS+BS)/5)THENFORT=1T 08:POKE1384+(RND(1)*359),Ø:NEXT:J=1
- IFJ=1THENFORT=-1TO2:FORI=-1TO1:POKEA+ T+I*40,17:NEXT:NEXT:J=0
- 660 RETURN
- 67Ø :
- 68Ø RR=99:ML=Ø:POKE54283,129:POKE54283,12
- 69Ø FORT=-1TO1:FORI=-1TO1:C1=PEEK(N1+I+T*



DATA TRAC / C-06, C-12, C-24

From the leading supplier of Computer Grade Cassettes, new, longer length C-12's (6 minutes per side) provide the extra few feet needed for some 16K programs.



Premium 5-screw shell with leader - BASF tape



Internationally acclaimed. Thousands of repeat users.



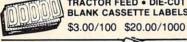
Error Free • Money back Guarantee

	C-06	C-12	C-24	HARD BOX
1 Dozen	7.00	7.50	9.00	2.50
2 Dozen	13.00	14.00	17.00	4.00



500 C-12's-38¢ each · w label: Shipping \$17.500 500 Boxes 13¢ ea. • shipping \$10./50

> TRACTOR FEED . DIE-CUT BLANK CASSETTE LABELS



CASSETTE STORAGE CADDY

Holds 12 casseries w/o boxes Includes edge labels and Index card



BASF QUALIMETRIC



FLEXI-DISC 51/4" SSDD, Soft Sect. Lifetime warranty!



\$26,95/10 \$120,00/50 \$215,00/100

MICRO CASSETTES in convenient short lengths

	MC-10	MC-20	MC-30
1 Doz.	16.50	18.00	19.00
2 Doz.	32.50	34.50	36.00





SHIPPING/HANDLING \$3.50

Any quantity (except 500 special)

NOTE: Outside 48 Contin. States shipping \$3.50 PLUS \$1 per caddy; per dozen cassettes: per dozen boxes; per 10 discs.

In Cont. U.S. shipments are by UPS unless Parcel Post requested

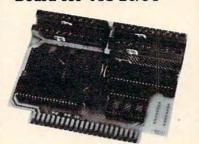
California residents add Sales Tax

WRITE FOR FREE BROCHURE ASK FOR QUANTITY DISCOUNTS

for IMMEDIATE SHIPMENT on Credit Card Orders

Call: 213/700-0330

YORK 10"Computerware 9525 Vassar Ave. #CM Chatsworth, CA 91311 Universal Input/Output Board for VIC-20/64

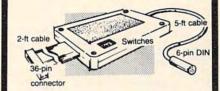


16-channel A/D converter & 1-channel D/A output; 16 high-current discrete outputs.

· University physics & electrical engineering labs and hospital applications

VIC-20 uses MW-311V \$205.00 CBM-64 uses MW-311C \$225.00

MW-302: VIC-20/64 Parallel Printer Interface.



Works with all centronics type parallel matrix & letter printers and plotters-Epson, C.Itoh, Okidata, Nec, Gemini 10, TP-I Smith Corona, and most others. Hardware driven; works off the serial port. Quality construction: Steel DIN connectors & shielded cables. Has these switch selectable options: Device 4, 5, 6 or 7; ASCII or PET ASCII; 7-bit or 8-bit output; upper & lower case or upper only. Recommended by PRO-FESSIONAL SOFTWARE for WordPro 3 Plus for the 64, and by City Software for PaperClip.

MW-302 \$ 79.95



Micro World Electronix, Inc.

3333 S. Wadsworth Blvd. #C105, Lakewood, CO 80227

(303) 987-9532 or 987-2671

No Matter What Type of Computer You Own. This Book Will Get You On-Line TODAY!

THE UNDERGROUND BULLETIN BOARD WORKBOOK AND GUIDE

FIRST TIME BETWEEN TWO COVERS '83 - '84 EDITION

[Periodic Updates] INCLUDING: A Blitz Course In TeleComputing. Complete Information On Computer Bulletin Boarding with Special Emphasis on Public Domain Systems:

- · What They Are.
- Kinds of Information Available.
- How To Get Yours Free.
- Step-by-Step Guide To Get You Started HOOKING IN Immediately.
- · Buyers' Guide To Modems.

PLUS: Over 400 verified listings. Periodic Updates. On-line Logbook. Electronic Mail Address Book.

\$14.95 p.p. Make checks payable to:

ComputerFood Press DIV. OF COLTRANE & BEACH

31754 Foxfield Drive Westlake Village, CA 91361 Phone Number: (213) 462-0888

Please Send	copies.
Enclosed is \$	
NAME	
ADDR.	
CITY	
STATE	_ ZIP
CARD #	Expires
Signature	

Send To:

ComputerFood Press

DIV. OF COLTRANE & BEACH

P.O. BOX 6249 Westlake Village, CA 91359 Visa and MasterCard Accepted





www.commodore.ca

```
700 IFC1=14THENL=0
                                             96Ø A$(4)="{43 SPACES}HI "
                                             97Ø A$(Ø)="{4Ø SPACES}OPOP "
71Ø IFC1>9ANDC1<14THENM1=1
720 POKEN1+I+T*40, (RND(1)*2)+18:NEXT:NEXT
                                             980 FORT=1TO4:PRINT"{YEL}QQQQQQQQQQQQQQQQ
    :IFM1=1THEN760
                                                 QQQQQQQQQQQQQQQQQQQQ";:NEXT
                                             990 PRINT" [DOWN]"
73Ø FORT=-lTO1:FORI=-lTO1:POKEN1+I+T*4Ø,1
                                             1000 FORT=1T012:PRINT"{BLU}QQQQQQQQQQQQQQQQ
    7:NEXT:NEXT:GOTO300
740 :
                                                  QQQQQQQQQQQQQQQQQQQQQQQQ";:NEXT
750 REM SUB DEATH
                                             1010 FORT=1824T02023:POKET,17:POKE54272+T
760 POKEA, 15: POKEA+1, 16: POKE54286, 0: POKE5
                                                  ,Ø:NEXT
    4290,129
                                             1020 FORT=1T015:POKE1384+RND(1)*359,0:NEXT
770 FORT=230T0255STEP.15:POKE54287,255-T:
                                             1030 POKE1794,17:POKE1795,17:GOTO120
    POKE53281,15ANDT:NEXT:POKE54290,128
                                             1040 :
78Ø FORT=1TO5Ø:POKEA, (RND(1)*2)+18:POKEA+
                                             1050 REM CHARSET
    1,(RND(1)*2)+18
                                             1060 POKE53280,0:POKE53281,4:PRINT"(CLR)
790 NEXT: POKE53272, 21: POKE53280, 0: POKE532
                                                  {6 DOWN}{BLU}"SPC(13)"{RVS}
    81,5
                                                  {2 SPACES}U-BOAT 26{2 SPACES}"
800 PRINT"{CLR}{BLK}{3 DOWN}"SPC(9)"YOU S
                                             1070 PRINTSPC(10)" [3 DOWN] ONE MOMENT PL
ANK"BS"CARRIER";CHR$(-83*(BS<>1))
810 PRINT SPC(10)"{2 DOWN}AND"MS"DESTROYE
                                                  EASE"
                                             1080 FORI=0T058: READA: POKE49152+I, A: NEXT:
    R"; CHR$(-83*(MS<>1))
                                                  SYS49152
820 PRINTSPC(6)"{5 DOWN}PRESS TRIGGER TO
                                             1090 READT: IFT=-1THE?N1130
    {SPACE}PLAY AGAIN": I=0
                                             1100 POKE12288+Q, T:Q=Q+1:GOTO1090
83Ø IF(PEEK(5632Ø)AND16)=ØTHENRUN89Ø
                                             1110 :
840 I=I+1:IFI>1000THENPRINT"{CLR}";:END
                                             1120 REM INSTRUCTIONS
                                             1130 PRINT" {CLR} {3 DOWN} FIRE TORPEDOES F
86Ø :
                                                  ROM THE SUB'S FRONT"
870 REM INIT
                                             1140 PRINT" [3 SPACES] TO SINK SHIPS AND DE
88Ø GOSUB1Ø6Ø
                                                  STROY MINES.
890 PRINT"{CLR}":POKE53280,0:POKE53281,1
                                             1150 PRINT" (3 DOWN) BEWARE OF THE DESTRUC
900 POKE53272,28:POKE54296,15:ZZ=80000
                                                  TIVE AREA WHEN"
910 X=10:V=30:AX=360:AY=20:RR=30:H=2
                                             1160 PRINT" [4 SPACES] MINES AND DEPTH CHAR
920 PRINTSPC(13)"{BLK}{RVS}{2 SPACES}U-BO
                                                  GES EXPLODE."
    AT{2 SPACES}26{2 SPACES}"
                                             1170 PRINT"{3 DOWN}{3 SPACES}DESTROY AS M
93Ø A$(1)="{39 SPACES}BDE{3 SPACES}"
                                                  ANY SHIPS AS YOU CAN"
94Ø A$(2)="{39 SPACES}FG{3 SPACES}"
                                             1180 PRINT" BEFORE YOU ARE PERMANENTLY RE
95Ø A$(3)="{43 SPACES}BCDE "
                                                  TIRED."
                                             1190 PRINTSPC(12)"{4 DOWN}{RVS} PRESS
 UNLIMITED SOFTWARE, INC.
                                                  {2 SPACES}TRIGGER ":POKE198,0
                                             1200 IFPEEK (56320) AND 16THEN 1200
                                             1210 RETURN
                                             1220 :
                                             1230 DATA 173,14,220,41,254,141,14,220,16
                                                  5,1,41,251,133,1,169
      DISK.OF. THE MONTH CLUB
                                             1240 DATA 48,133,252,169,208,133,254,169,
                                                  0,133,251,133,253
                                            1250 DATA 162,8,177,253,145,251,200,208,2
 NO OBLIGATION . SEND FOR DETAILS NOW
                                                  49,230,254,230,252
                                            1260 DATA 202,208,242,165,1,9,4,133,1,173
                                                  ,14,220,9,1,141,14,220,96
                                            1270 :
                                            1280 DATA 182,193,213,128,201,193,182,255
                                            1290 DATA 255,159,159,159,243,243,243,255
                                            1300 DATA 0,0,0,0,255,101,63,31
                                            1310 DATA 0,96,112,252,255,148,255,255
                                            1320 DATA 0,14,30,127,255,145,255,255
                                            1330 DATA Ø,Ø,Ø,Ø,255,166,252,248
                                            1340 DATA 0,0,4,4,15,10,127,63
                                            1350 DATA 0,192,196,200,208,224,255,254
                                            1360 DATA 0,3,35,19,11,7,255,127
                                            1370 DATA 0,0,32,32,240,80,254,252
                                            1380 DATA 254,254,252,252,0,133,208,224
          UNLIMITED SOFTWARE, INC.
                                            1390 DATA 255,255,127,63,0,80,3,31
          DISK-OF-THE-MONTH CLUB
                                            1400 DATA 255,255,254,254,0,10,192,248
        P.O. BOX 3223 LODI, N.J. 07644
                                            1410 DATA 127,127,63,63,0,161,11,7
                                            1420 DATA 255,239,239,239,199,215,255
   NAME
                                            1430 DATA 65,41,68,175,122,189,110,219
   STREET ADDRESS
                                            1440 DATA 17,74,148,125,218,180,221,182
                                            1450 DATA 255,255,255,255,255,255,255
   CITY
                                            1460 DATA 191,213,187,92,171,237,190,219
   I own the
                               computer
                                            1470 DATA 247,174,181,125,235,189,173,222
                                  disk 🗆
   with cassette 🗆
                                            1480 DATA-1
```

Www.commodore.ca

FREE

WRITE FOR FREE CSI CATALOG OF VIC 20 and C64 PRODUCTS

- SOFTWARE
- HARDWARE
- PROGRAMMING AIDS
- OPERATIONAL AIDS
- SUPPLIES
- MEDIA
- BOOKS

OMPATIBLE SYSTEMS NCORPORATED

P.O. Box 2070 • Dept. C Saratoga, CA 95070 (408) 255-2024

MicroClear

USER COMPATIBLE SOFTWARE FOR YOUR VIC 20 or '64

- Featuring FORMATTED SCREENS
 - SELECTIVE RECALL TO SCREEN OR PRINTER
 - ADD, DELETE, REVIEW UPDATE, REPORT FUNCTIONS

THESIS MASTER

Organizes research notes and creates bibliography. Report generator with three level sort/select. Large text area. VIC requires 8K expansion. \$29.95 DISK ONLY

STAMP COLLECTOR

Computerize your collection. Ideal for beginners and experts. Store up to 14 fields for each issue including multiple cat. nos., cat. value, cond., perf., wtmk, color. VIC requires 8K expansion. DISK OR TAPE (Specify)

\$29.95

HOME LIBRARIAN

For the collector and avid reader. Random access to your own electronic card catalogue. VIC requires 8K expansion. DISK ONLY

Send check or money order + \$1.50 p/h to:

MicroClear - P.O. Box 9368 Raytown, MO 64133

Missouri residents add 5.625% sales tax Specify VIC or '64

DEALER INQUIRIES INVITED

PROTECT YOUR SYSTEM from POWER DAMAGE



COST

- Metal Oxide Varistor short circuits transient high voltage "spikes" before damage occurs
- Continuous ±5 nanosecond response protection
- Handles common and differential mode surges
- Prevents software "glitches" and memory loss
- Reduces solid state equipment damage
- EMI and RFI noise suppression filters
- For use only with 110 volt, 15 amp, 60 hz
- Limited 5-year replacement warranty

Holub Enterprises, Inc., Dept.-A P.O. Box 947 Greensboro, NC 27429

☐ Enclosed is check or money order for
_____ Solid State Protectors @ 9.50 each plus .50 each for postage and handling. (N.C. residents add 4% sales tax.)

NAME ADDRESS_ STATE CITY 7IP

ORDER SEVERAL - PROTECT STEREOS, TVS AND OTHER SOLID STATE APPLIANCES!!

HUNDREDS OF PROGRAMS

Avalon-Hill . HES . Epyx . Spinnaker . Infocom Abacus . Sirius . Broderbund . Victory . Totl and much more

ALL PRICES UP TO 30% BELOW RETAIL!

		UUK
	RETAIL	PRICES
Quick Brown Fox (64 or VIC 2	(0) 65.00	47.50
Hesmon (64 or VIC 20)	39.95	29.95
Paper Clip (CBM 64) (D)	125.00	96.25
Jumpman (D or Cass.)	39.95	29.95
Temple of Apshai (D)	39.95	29.95
Zork I, II, or III (D)	39.95	29.95
Deadline (D)	49.95	37.50
Starcross (D)	39.95	29.95
Facemaker (D)	34.95	26.25
Kindercomp (D)	29.95	22.50

ACCESSORIES AVAILABLE ALSO

Monitors . Printers . Expansion Boards CARDCO Cardboard/3 slot Cardco Parallel Printer Interface 39.95 31.95 63.95

Video Pak (8K mem., 40/80 col.

includes free word processor) 149.95 119.95

Many more products also available for APPLE, ATARI, CP/M, IBM P/C

Write or call for FREE CATALOG TO ORDER: CALL 1-714-951-5596 8:00 A.M. - 8:00 P.M. PST Mon.-Sal. or send check or credit card no.. signature. & exp. date

CENTURY MICRO PRODUCTS P.O. Box 2520 Mission Viejo, CA 92690

Visa/Mastercard add 3%. Personal checks allow 2 weeks to clear. CA residents add sales tax. Shipping and handling add \$3.00 (hardware extra). Prices

WHAT GOOD IS IT IF YOU CAN'T USE IT?



COMPLETE OPERATIONAL **VIDEO TAPE GUIDE** TO THE **COMMODORE VIC-20**

\$39.95 INCLUDES TAX

This tape includes a simple explantion on hook up. keyboard functions and software use, along with basic programming.

NAME **ADDRESS** ZIP STATE

C-11

VHS
OR BETA CHECK, CASH OR MONEY ORDER VIC FLIC . P.O. BOX 3108 MERCED, CA 95344

part in our Take FOUR-ALL

four new catalogs make it easier than ever for you to find the kind of programs and books you've been looking for - and look at them on a no-risk, 30-day approval basis. Check them out today!

- 1. ☐ K-12 MicroMedia COMPUTER LITERACY catalog
- 2. C K-12 MicroMedia BASIC SKILLS
- 3. C K-12 MicroMedia GENERAL catalog
- 4. ☐ K-12 MicroMedia LEARNING GAME & SIMULATIONS catalog

Name	
School	
School Address	

State. Zip

172 Broadway, Woodcliff Lk., N.J. 07675 (201) 391-7555

-www.commodore.ca

I'S HERE AT LAST!

THE FIRST LOW COST 6502 COMPUTER WITH 48K RAM THAT'S COMPLETELY COMPATIBLE WITH APPLE II®

Introducing the RAM-TECH*RT 2 computer which offers you greater flexibility than the Apple II + * at a price that's easier on your finances. The RT 2 will run all software and use all peripheral hardware designed for the Apple II + .* It's 100% Apple compatible yet it offers you features not available on the Apple II + .*

COMPARE THESE FEATURES:

- supports upper & lower case characters from the keyboard
- Supports upper a lower case characters from the keyboard
 high quality ABS case will not crack and is light weight
 RF modulator included in addition to composite video output
 high quality light-touch keyboard with upper/lower case key
 15 key numeric key pad for fast data entry (optional)

- high power switching power supply (8.5 amps total) will power two disk drives and several peripherals easily, has internal circuit breaker
 eight expansion slots to increase flexibility with peripheral cards
- 48K RAM expandable to 64K (192K RAM upgrade card available soon) - socketed IC's for quick and easy service
- thousands of programs (business & home) available
 operates identically to the Apple II+® with exception of extra features on RT 2
 full 90 days parts and labor warranty with fast service turn-around

THE RAM-TECH* RT 2 IS EVERYTHING YOU ALWAYS WANTED FROM AN APPLE® (AND MORE), BUT THOUGHT YOU COULDN'T AFFORD, AND THAT'S GOOD NEWS!

BUT THE BEST NEWS IS THE PRICE:

WITH OPTIONAL NUMERIC KEYPAD:

\$575.00 + \$18.00 shipping & handling

\$525.00 + \$18.00 shipping & handling

COMPARED TO APPLE II® WHICH RETAILS AT MORE THAN DOUBLE THIS PRICE AND OFFERS YOU LESS, YOU CAN SEE WHY THE RAM-TECH* RT 2 SHOULD BE YOUR CHOICE, MAKE NO SYNTAX ABOUT IT, THE RT 2 IS FOR YOU!

PERSONAL I.D. OPTION — We will burn your name into ROM. When you power up your Ram-Tech your name will be displayed on the screen. **AN EXTRA MEASURE OF SECURITY AGAINST THEFT.**Indicate on your order what name you wish to use (maximum 8 letters including spaces) — ADD: \$25.00 for I.D. option.

ALSO AVAILABLE: (sub-assemblies for do-it yourselfers) — 90 days warranty

The continue of the description
1 - ABS case, high quality, Apple® look-a-like and color matched, will replace Apple® case\$ 68.50
2 - same as #1 above but with numeric keypad cutout\$ 84.00
3 - keyboard with upper/lower case key, direct replacement for Apple® or Ram-Tech*
4 - same as #3 above but with numeric keypad, use in combination with #2, also fits Apple®
5 - RF modulator with TV switch and cable, also fits Apple®
6 - switching power supply, 8.5 amps, internal circuit breaker, high power, also fits Apple®
7 - motherboard, completely assembled & tested, fully operational with burned ROMS\$295.00
8 - bare motherboard w/ parts discription screened on board and instructions, highest quality G10 epoxy\$ 48.00
SHIPPING & HANDLING FOR ABOVE: cases #1 & 2 add 10%; all others add 5%

PERIPHERALS, CARDS & ACCESSORIES FOR YOUR RAM-TECH* OR APPLE®

all items #1 to 19 guaranteed for one year (disk drives for six months)

1 – 16K RAM card\$ 58.00	11 - interger card\$ 97.50
2 - 80 column card\$ 94.50	12 - PAL card\$114.00
3 - clock card\$135.00	13 - language card\$ 72.50
4 - communications card\$ 89.00	14 - RS-232 serial card\$ 84.00
5 - disk controller card \$ 58.00	15 - Z-80 CP/M card\$ 92.00
6 - EPROM writer card\$124.50	16 - VERSA card\$345.00
7 - FORTH card\$ 98.50	17 - analog/digital card\$116.50
8 - IEEE-488 card w/cable\$186.00	18 - system cooling fan\$ 63.00
9 - parallel printer card w/cable\$112.00	19 – joy stick w/button
10 - parallel printer buffer and grappler card with cable	\$245.00

DISK DRIVES: Guaranteed high quality for use with all Apple® compatible (or Ram-Tech*) controllers - DOS 3.3 & 3.2

USES SPECIAL LOW POWER CONSUMPTION CIRCUITRY

TEAC 55A\$325.00	
SHUGART \$285.00	\$330.00 with controller

SHIPPING & HANDLING: add \$3.50 per item #1 - 19 . . . disk drives add \$10.00

TO ORDER

- ALL PRICES IN U.S. CURRENCY
 VISA OR MASTER CARD: SEND NUMBER, EXPIRY DATE, BANK NAME & CARD HOLDER'S NAME, INCLUDE PHONE NUMBER
- CHECKS & MONEY ORDERS O.K. CHECKS NEED THREE WEEKS TO CLEAR. (NO C.O.D.'S TO U.S. DUE TO POSTAL REGULATIONS)
- CANADIAN ORDERS ADD 25% FOR CDN FUNDS EXCHANGE.
- U.S. CUSTOMERS WILL HAVE TO PAY U.S. CUSTOMS 4.7% DUTY. DUTIES COLLECTED BY POST OFFICE. WE ASSUME NO LIABILITY FOR CUSTOMS CLEARANCE.

DEALER INQUIRIES REQUESTED

BYTE-RYTE

DEPT. CP P.O. BOX 205, STATION CART. MONTREAL, QUEBEC, CANADA H4K 2J5

(514) 335-1717

*Ram-Tech is a trademark of 99506 CANADA INC.

Apple is a trademark of Apple Computer Inc.

NEWS&PRODUCTS

Singing Speech Synthesizer

The Alien Group has made its Voicebox Speech Synthesizer available for the VIC and Commodore 64.

The Voicebox plugs directly into the user port, includes its own speaker, volume and pitch controls, and has an unlimited vocabulary potential.

Programs supplied with the Voicebox include: a machine language text-to-speech program that can be merged with BASIC programs; a text-to-speech program that incorporates the "Alien" face, whose mouth moves in sync with what is being said; a program demonstrating the Voicebox's ability to sing; and a spelling quiz program using the talking face as the quizmaster.

The Voicebox is available for the VIC and 64 for \$95. For an



The Voicebox Speech Synthesizer plugs directly into the VIC-20 or Commodore 64 user port.

additional \$25, Commodore 64 users can add a comprehensive music and singing system. The capabilities of the 64's SID chip are incorporated into this program, which also allows the user to enter melodies through the keyboard.

The Alien Group 27 West 23rd St. New York, NY 10010

Four Programs For Atari

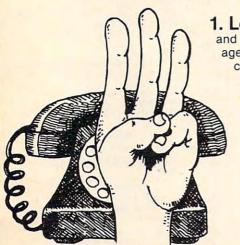
Advanced Computing Enterprises has added four programs to its Atari product list. They include an article indexer, a portfolio management system, a spelling game, and a math game.

MAX is the magazine article index program. It allows the user to code articles with keywords, and it performs sorts and searches in seconds. MAX is available on disk for \$29.95.

Ace Money Machine makes use of a dollar cost averaging formula to help you manage your investment portfolio. The program maintains a complete history of the progress of your investments, and can provide a detailed graph upon request. The program sells for \$19.95.

Word Wizard is a spelling tutorial game that allows the

The Modern that Delivers 3 Ways



- 1. Low \$189 Price. TNW's Operator-103 provides full auto-dial and auto-answer capabilities for only \$189. This is an attractively packaged Bell-103 compatible 110 to 300 bit per second modem, delivered complete with documentation and full one-year warranty.
 - 2. Ease of Use. Operator's commands are easy to remember, like "Dial," "Answer," and Hangup." And they're easy to enter you type only the first letter of the command, and Operator echoes the full command word. Type"?" and Operator lists your command options.
 - 3. High LSI Performance/Reliability. Operator-103 is built around the TI 99532 modem IC, which means fewer errors on marginal telephone lines and reduced chance of modem failure.



3444 Hancock Street San Diego, CA 92110 Phone (619) 296-2115 Telex II 910-335-1194 entry of word lists of up to 50. words. The program adjusts skill levels in relation to each student's progress. Word Wizard sells for \$29.95.

Math Master is similar to Word Wizard in that it allows a parent or teacher to determine the problems to be solved and adjusts speed according to each student's success. The program is available for \$29.95.

Advanced Computing Enterprises 5516 Rosehill Road Shawnee Mission, KS 66216

And Software

Texas Instruments has changed its marketing strategy for TI-99/ 4A Home Computer peripherals. Prices for peripheral equipment and some software have been cut, and TI has begun selling its disk-storage related peripherals as a package.

The Disk Drive Memory System, which now has a suggested retail price of \$550, consists of the peripheral expansion box, the disk controller card, one disk drive, and a 32K memory expansion card. Under TI's old pricing system, the suggested retail price for the above combination of equipment was \$1,200.

Other reductions include: the P-Code Card, cut from \$250 to \$100; the RS-232 card, reduced from \$175 to \$100; the telephone coupler, from \$200 to \$100; the Impact Printer, from \$750 to TI-99/4A Peripherals \$500; and TI Logo II, from \$129.95 to \$99.95.

> In other news from TI, the company has signed manufacturing and marketing agreements for software from Brøderbund Software, Spinnaker Software, and Sega Enterprises. Under the agreements, the software makers will supply programs to TI, and TI will translate them to ROM cartridge and mar

ket them.

As a result of the agreements, TI's software library soon will include Brøderbund's Choplifter, a daredevil rescue game, and David's Midnight Magic, a high-resolution pinball game simulation.

Spinnaker's first offerings to TI are Facemaker, an educational game for 4- to 12-year-olds, and Story Machine, a program that teaches children to write sentences, paragraphs, and simple stories, and then brings the stories to life through color graphics and sound.

Sega, a recognized leader in coin-operated amusement games, will provide TI with Congo Bongo, a cartoon-like adventure that takes players over and through jungle obstacles; Star Trek, in which the player controls the starship Enterprise against the Klingons; and Buck Rogers: Planet of Zoom, a space adventure filled with challenging tunnels and channels to negotiate and bizarre aliens to outsmart.

Most of the above software is expected to sell for \$39.95 in cartridge format.

Texas Instruments, Inc. P.O. Box 53 Lubbock, TX 79408 (800)858-4565

COMPUTER DISCOUNT

TOLL FREE 1-800-621-6131 FOR ORDERS 4251 W. Sahara Ave., Suite E Las Vegas, Nevada 89126 MONDAY THROUGH SATURDAY ● 9 AM TO 6 PM

ATARI	Invit. to Programming 1 20	1701 Monitor 259
1200XL Rebate \$259	Invit. to Programming 2&3 22	Vic 20 90
800XL Call	Home File Manager 36	Datasette
600XL Call	Atari Speed Reading 54	1600 Modem 85
1050 Disk Drive 359	Juggles House (D.C.) 22	HES Mon 29
410 Recorder	Juggles Rainbow	Paper Clip w/p 115
830 Modem 129	Qix 30	Calc Result
850 Interface 199	Atari Writer	Sysres (utility) 90
1025 Printer 429	Visicalc 160	Renaissance
1027 Printer D/W 349	Data Perfect	Frogger
ATARI SOFTWARE	Letter Perfect 105	Jawbreaker 24
Assembler Editor \$42	Home Accountant 48	Ft. Apocalypse 30
Syn Assembler 39	Elephant Disc s/s 20	Pharaoh's Curse 30
Macro Assembler & Text 69	Donkey Kong (new) 35	Type Attack
Word Processor 102	Dig Dug	B-1 Nuclear Bomber 12
Conversational Languages 42	Miner 2049	Midway Campaign 12
Pac-Man	Castle Wolfenstein 22	Telengard 18
Centipede 30	Choplifter (ct)	David's Midnight Magic 29
Breakout	Serpentine (ct) 30	Choplifter 30
Space Invaders 26	Apple Panic (d)	Serpentine 28
Computer Chess 26	Arcade Machine (d) 39	Retro Ball 28
Asteroids 26	Wizard & the Princess (d) 25	Turtle Graphics II 45
The Bookkeeper 102	Ulysses & Golden Fleece (d) 29	Hes Writer
HARDWARE	COMMODORE 64	Gridrunner 28
C. Itoh Prowriter \$379	Comm 64 \$229	Temple of Apshai
Nec. 8023A 439	1541 D.D 249	Jump Man
Banana Printer 199	1525 Printer 249	Zork 1.2.3

New Educational Programs Purchases can be made by check, money order, C.O.D. Carte Blanche and Diners Club. 1-702-367-2215

VIC & 64

BE A COPY CAD.

(CASSETTE AIDED DUPLICATOR) NOW YOU CAN MAKE BACKUP COPIES OF ALL THE COSTLY, NON-SAVEABLE CASSETTE PROGRAMS YOU

OUR BACKUP V1.O UTILITY PROGRAM WILL LET YOU MAKE DUPLICATES THAT RUN.

BACKUP V1.0 WILL WORK WITH A STANDARD 5K UNEXPANDED VIC. MEMORY EXPANSION IS REQUIRED TO COPY PROGRAMS LONGER THAN 3K BYTES

\$24.95

PLUS \$2.00 SHIPPING & HANDLING

SOFTWARE PLUS

6201 SUITE C GREENBACK LANE **CITRUS HEIGHTS, CA 95610**

VISA, MASTERCARD, AND MONEY ORDERS CA. RESIDENTS ADD 6% SALES TAX. VIC IS A TRADEMARK OF COMMODORE

916-726-8793

Will This Happen to You?

NOT IF YOU BUY YOUR PRINTER FROM...



After reading this issue of *Compute*, you are now fully aware of the many outstanding printers on the market today. But what you might not be aware of is that the printer you like best, might not be compatible with your computer and software. (The picture above is good example of printer incompatibility). At the *Printer Store*,we specialize in printers, so our experienced professional staff can help you choose the right printer for your personal and business needs. If you want the *Best Value*, *Low Price*, *Product Availability*, and *Support*, call The Printer Store and ask us about:

- FREE TECHNICAL CONSULTATION
- FULL AFTER SALE SUPPORT
- FULL FACTORY AUTHORIZED SERVICE

DOT MATRIX PRINTERS

EPSON SERIES	
FX 80	S CALL
FX 100	S CALL
OKIDATA SERIES	
82A	S CALL
83A	
92A	
93A	
84 (parallel)	
	UNLL
C. ITOH SERIES	
8510 Prowriter	\$ 395
Prowriter II	S CALL
New! Banana	\$ 239
IDS SERIES	
Microprism 480	S CALL
Prism 80	
Prism 132	
GEMINI SERIES	
Gemini 10X	
Gemini 15	
NEC 8023	
Toshiha P 1350	\$ 1750

LETTER QUALITY PRINTERS

BROTHER SERIES

HR-1 (para	llel)	\$ CALL
HR-1 (seria	al)	\$ CALL
HR-15		S CALL
COMREX SERI		
CR-1 (para	llel)	\$ 795
		\$ 865
		S CALL
C.ITOH SERIES	•	
F-10 40 C	PS	S CALL
F10 55 CF	5	S CALL
Daisywriter	48K	S CALL
NEC SERIES		
3510		\$ CALL
		S CALL
		S CALL
		\$ 2425
		\$ 2900
		\$2400
. , 00		
NEC Accessori	29	S CALL

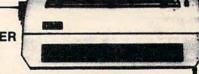
We carry a full line of Cables and Accessories Call (714) 241-0701 and ask us about . . .

C. ITOH 8510 Prowriter

120 CPS - 1.3K Buffer - 144x60 dots 1 inch Nx9 dot matrix - Proportional Spacing - 8 Character sizes - 5 unique alphabets - Greek character set -Graphic symbols - bi-directional, logic-seeking -Adjustable tractors - Single-sheet friction feed -Vertical & horizontal tabbing.

C. ITOH 8510 Prowriter List \$795 \$395

BROTHER HR-1



- 16 CPS Bi-directional Super and Subscript
- IBM Selectric type ribbon Prints up to 6 copies
- · Ideal for word processing

 Parallel
 List 1100
 \$ Call

 Serial
 List 1200
 \$ Call

INTERFACE EQUIPMENT

Apple Dumpling \$145
Grappler Plus . . . \$ CALL
Complete stock of
Epson Accessories \$ CALL
Custom Printer Cables for
Apple, Atari, IBM
TRS-80 \$ CALL

Printer Stands: large ... \$95 Printers Stands: small . \$25 Printer Ribbons ... \$ CALL Printer Sound Enclosure \$ CALL Vic 20/Comm. 64 Interface ... \$ CALL

In order to serve you better, The Printer Store will be moving to larger facilities. The move should be completed by Aug 25.

- 1) LOW PRICES
- 2) SAME DAY SHIPPING
- 3) FREE TECHNICAL SUPPORT
- 4) FULL SERVICE OPTION

Printer

We are so confident of our LOW PRICES and SUPPORT that we are going to sk you to make the initial investment by calling us. In return, when you buy your printer from us, we will rebate the cost of your call and deduct it from your invoice.

HOW TO ORDER: Our phone lines are open from 8 a.m. to 6 p.m. PST, Monday-Friday. We accept VISA, MASTERCHARGE (at no extra charge), personal checks take two weeks to clear. COD's accepted. Same-day shipment on orders placed before 1 p.m. Manufacturer's warranty applicable on all equipment. Prices subject to change.

STORE - 2720 S. Harbor Blvd., Suite E, Santa Ana, CA 92704vwww.room.noodore.ca

The First and Only System to Backup Diskettes Protected by Bad Sectoring without modification to your drive.



ATARI DISK BACKUP SYSTEM \$49.95

Superclone is the *only* ATARI diskette copier system that lets you backup just about ANY 'copy protected' diskette... including those protected by 'bad sectoring.' Bad tracks and including flosse protected by bad sectoring. Bad tracks and sectors are created without modifications to or adjustments of your hardware. Each backup diskette generated by Superclone functions exactly like the original. . self-booting, etc. (In fact, we suggest that you use the backup and save the criginal.)

Superclone includes: SCAN ANALYSIS - Map of diskette contents (Location of

SCAN ANALTSIS - Map of diskette contents (Location of data, bad sectors, etc.)
FORMATTING/BAD SECTORING - Non-ATARI DOS formatting and bad track/sector creation.
BACKUP - Copies just about everything we can find. . . regardless of protection scheme.
Superclone is user-friendly and simple to use.

PIRATES TAKE NOTE: SUPERCLONE only allows two copies to be made of any specific diskette. . . Sorry!!!

SYSTEM REQUIREMENTS
Atari 400 or 800 Computer / 48K Memory
One Atari 810 Disk Drive / Printer Optional
Available at your computer store or direct from
FRONTRUNNER. Include \$2.00 (\$5.00 Foreign Orders) for
each system. DEALER INQUIRES ENCOURAGED.



TOLL FREE ORDER LINE: (24 Hrs.) 1-800-648-4780 In Nevada or for questions Call: (702) 786-4800 Personal checks allow 2-3 weeks to clear. M/C and VISA accepted. Include shipping shipping.

316 California Avenue, Suite #712
Reno, Nevada 89509 - (702) 786-4600
Others make claims. . . SUPERCLONE makes copies!!!
ATARI is a Trademark of ATARI, Inc.

For Your TI-99/4A FLIGHT SIMULATOR

The Dow-4 Gazelle is a realistic IFR simulation of a typical 4-place private plane. It is not a game. A manual with 30 pages of text plus 7 figures helps the novice learn to fly. Experienced pilots will enjoy flying the ILS approach. Response time under 1 sec average. Display shows full panel (10 dials & 11 lights) and indicates position of runway for landing. Realistic sound effects. See reviews in Jan 83 99'er and Jun 83 AOPA Pilot. Only requires joystick. \$30.

EDITOR/ASSEMBLER

The Dow E/A turns your computer into an assembly language machine. Requires Mini Memory Module. Load once and use all day, saving and restoring source assembly language programs on cassette (1 sec. per statement), just as you do with Basic. Supports all of the TI's instructions, 6 directives, and various interactive commands. Assembles into memory in 3 sec. per statement. Manual includes sample program with detailed explanations. Increase your programming enjoyment over the Line-by-line Assembler, and if you upgrade to TI's Editor/Assembler, you can convert your programs without rekeying them. \$25

Send SASE for additional information. To order, send check or MO U.S. funds:

JOHN T. DOW 6360 Caton

Pittsburgh, PA 15217
First class postage to U.S. and Canada included-others add U.S. \$2 (PA residents add 6% state sales tax).

Baseball For Atari, Commodore 64

Star League Baseball, an action and strategy game from Gamestar, is available for Atari and Commodore 64.

The game features realistic animation including windup, delivery, and the arc and shadow of a fly ball. Sounds generated by the program include the crack of the bat, the cheers of the crowd, and the music of the seventh inning stretch.

Players choose their starting team and pitcher, can bring in relievers, and can take batting practice against the legendary "Heat" Muldoon.

Star League Baseball, which can be played against the computer or a human opponent, sells for \$31.95.

Gamestar, Inc. 1302 State St. Santa Barbara, CA 93101 (805) 963-3487

Investment Manager, Disk Manager, And Games

Bytes and Bits has released a handful of programs for the Commodore 64 and VIC-20 computers.

Investment Portfolio Manager is a program to track volatile assets such as stocks and stock options.

The program, for disk-based Commodore 64 systems, can handle entries of up to \$99,999 and can report on nine investment categories. It is available for \$14.95.

Disk Directory Manager, which can sort more than 1500 filenames into an organized list, is available for \$19.95 for the VIC or 64. The program is written in machine language.

In Dungeons for the VIC-20 with 16K expansion, the player creates characters who explore a 12-level, 1200-room dungeon. The game is available on tape or disk for \$19.95.

Pak Alien for the unexpanded VIC is a machine language game that includes 100 difficulty levels. Guide your alien through a maze of interplanetary space particles while dodging seven aliens. Pak Alien, which can be played with joystick or keyboard, sells for \$14.95 on tape or disk.

Bytes and Bits 524 East Canterbury Lane Phoenix, AZ 85022 (602) 942-1475

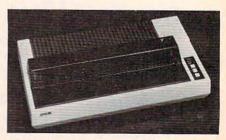
High Speed Printer

Epson America has introduced its new FX-100 dot matrix printer. The printer, which carries a suggested price of \$895, provides a printing speed of 160 characters per second.

The printer offers a wide range of features including elite or pica spacing and a one-to-one graphics ratio so accurate graphics including circles – can be drawn. Users also can create their own character formats on screen and download the font into the printer's memory.

The printer includes a rubber platen that can handle single sheet or roller-fed paper plus a removable tractor to handle pinfed paper and forms.

Epson America, Inc. 3415 Kashiwa St. Torrance, CA 90505 (213) 378-2220



The Epson FX-100 printer has a printing speed of 160 characters per second.



YOU'RE GONNA LOVE THESE **ROCK BOTTOM PRICES!**

			JOURNEY TO T
ACTION	99.00	68.95	JUNPHAN
ADVANCED MUSIC SYSTEM	29.95	21.95	KIDS AND THE KINDERCOMP
ANTI-SUB PATROL	29.95	21.95	K-RAZY SHOOT
APPLE CIDER SPIDER	39.95	27.95	KING ARTHUR
ARCADE MACHINE	59.95	41.49	LEGIONNAIRE
ARMOR ASSAULT ATARI BOOKKEEPER KIT	39.95	27.95	LETTER PERFE
ATARI MACRO ASSEM/TEXT ED	89.95	64.49	LUNAR LEEPER
AWART MICROSOFF BACTO IT	89.95	64.49	MASTER NEMOF
ATARI MUSIC COMPOSER-ROM ATARI PILOT EDUCATION-ROM ATARI PROGRAMMER KIT	39.95	29.95	MASTER TYPE
ATARI PILOT EDUCATION-ROM	129.95	94.95	MATING ZONE MATCH BOXES
ATARI PROGRAMMER KIT ATARI SPEED READING	74.95	45.95	MAURAUDER
ATARI TECH USER NOTES	29.95	21.95	MAX/65 (WITH
ATARI TOUCH TYPING	24.95	17.95	MICKEY IN GE
ATARI WRITER	79.95	56.95	MINER 2049'E
BANK STREET WRITER	69.95	24.95	MISSILE COMP MONSTER SMAS
BASIC COMPILER	99.95	68.95	MORL
BATTLE FOR MORMANDY	39.95	27.95	NAUTILUS
BATTLE OF SHILOH		27.95	NECROMANCER
BILESTOAD THE BLADE OF BLACKPOOL	39.95	21.95	THE NIGHTMAN
BOOK OF ATARI SOFTWARE'83	19.95	14.95	OS-A+ & BASI
BUG/65	34.95		PAINT
C/65	80.00	54.95	PINBALL P.M.ANIMATOR
CAP'N COSMO CASTLE WOLFENSTEIN		21.95	POKER-S.A.M.
CENTIPEDE-ROM	44.95		PREPPIE II
CHOPLIFTER - ROM	44.95	31.95	PYRAMID PUZZ
0000	49.95	34.49	QIX RASTER BLAST
COCO II	39.95	27.95 27.95	READING FLIC
COMMUNICATOR KIT	279.95	214.95	ROUNDABOUT
CONVERSATIONAL FRENCH	59.95	42.95	SAMY LIGHTS
CONVERSATIONAL SPANISH		42.95	SAMMY THE SE SEA DRAGON
THE COSMIC BALANCE CROSSFIRE-ROM	44.95	27.95	SEA FOX
CYTRON MASTERS	39.95	29.95 27.95	SEA FOX 747 LANDING
DA PUZZ	44.95	31.95	SHADOW WORLD
DATA PERFECT DATALINE	99.95		SHAMUS-ROM SNEAKERS
DAVID'S MIDNIGHT MAGIC	34.95		SOFTWARE AUT
DEADLINE	49.95	34.49	SPEED READ F
DEFENDER	44.95	31.95	SPEEDWAY BLA SPELLING BEE
DE RE ATARI DIG DUG	19.95		SPELLING BEE
DISK MANAGER	29.95	31.95	STARCROSS
DISK WORKSHOP	34.95	24.49	STAR MAZE
DISKETTE INVENTORY SYSTEM	24.95	17.49	STAR RAIDERS
DISKEY		34.49	STAR WARRIOF STORY MACHIN
DISKWIZ	29.95	28.00	SUPERMAN III
DIVISION I	44.95	31.95	SURVIVOR
DNIEPER RIVER LINE	30.00	21.95	SWIFTY TACH SYN ASSMBLER
DODGE RACER EASTERN FRONT (1941)	34.95		TELECOM
EDIT 6502-ROM	199.95	144.95	TELETALK
THE EDUCATOR KIT	164.95	109.95	TELETARI
PACEMAKER	34.95	24.49	TEMPLE OF A
FANTASTIC VOYAGE-ROM FILE MANAGER +	34.95 99.95	26.49 68.95	TIGERS IN TH
FINANCIAL WIZARD	59.95		TIME WISE
PLAME LORDS	34.95	24.95	TYPE ATTACK
PLASE GORDON-ROM	34.95		TUTTI FRUTTI
FIREBIRD-ROM	39.95	21.95	VISICALC
PORT APOCALYPSE	34.95		WARLOCK'S RE
PROGGER	34.95	24.49	WAY OUT
GALAXIAN	44.95	31.95	WIZARDEPRING
GHOST ENCOUNTERS GHOSTLY MANOR	29.95		WIZARD OF WO
GLOBE MASTER	29.99		ZAXXON
GORF-ROM	44.95	20 40	ZORK I II OF
GRAPHIC GENERATOR	24.95	17.49	
GRAPHIC MASTER THE HOME ACCOUNTANT	39.95 74.95		/ Insumun
THE HOME MCCOUNTER	,4.33	34.73	400

JOURNEY TO THE PLANETS	29.95	21.5
JUMPHAN	39.95	27.
KIDS AND THE ATARI-BOOK KINDERCOMP	19.95	13.
K-RAZY SHOOTOUT-ROM	49.95	34.
KING ARTHUR'S HEIR	29.95	21.
LEGIONNAIRE	35.00	21.5
LETTER PERFECT (40/80)	149.95	109.5
LETTER PERFECT UTILITY	29.95	
LUNAR LEEPER	29.95	21.
MASTER MEMORY MAP MASTER TYPE	6.95	27.
MATING ZONE	29.95	
NATCH BOXES	29.95	21.9
MAURAUDER	34.95	24.
MAX/65 (WITH OS/A+) MICKEY IN GREAT OUTDOORS	80.00	54.5
MICKEY IN GREAT OUTDOORS	49.95	35.9
MINER 2049'ER-ROM MISSILE COMMAND-ROM	49.95	34.
MONSTER SMASH	29.95	26.4
MORL	44.95	31.5
NAUTILUS	34.95	24.
NECROMANCER	34.95	24.
THE NIGHTMARE	29.95	21.9
OPERATION WHIRLWIND	34.95	24.
OS-A+ & BASIC A+ PAINT	39.95	20 0
PINBALL	29.95	54.5 29.5 21.5
P.M.ANIMATOR	34.95	24.4
POKER-S.A.H.	24.95	17.9
PREPPIE II	34.95	
PYRAMID PUZZLER	44.95	31.5
QIX RASTER BLASTER	44.95	31.5
READING FLIGHT	29.95 44.95	
ROUNDABOUT	29.95	21.5
SAMMY LIGHTFOOT SAMMY THE SEA SERPENT	34.95	24.
SAMMY THE SEA SERPENT	23.95 34.95	16.9
SEA DRAGON	34.95	24.4
SEA POX	29.95	21.9
747 LANDING SIMULATOR SHADOW WORLD	34.95	16.9
SHAMUS-ROM	44.95	
SNEAKERS	29.95	
SOFTWARE AUTO-HOUTH (SAM)	59.95	41.4
SPEED READ PLUS	59.95	41.4
SPEEDWAY BLAST SPELLING BEE GAMES	29.95	21.9
SPELLING BEE GAMES SPELL WIZARD	39.95 79.95	54.9
STARCROSS	39.95	27.9
STAR MAZE		31.9
STAR RAIDERS-ROM	44.95	31.9
STAR WARRIOR	39.95	27.9
STORY MACHINE	34.95	24.
SUPERMAN III SURVIVOR	34.95 49.95 34.95	35.5
	34.95	24.4
SWIFTY TACH MASTER SYN ASSMBLER	49.95	34.
TELECOM	69.95	49.
TELETALK	49.95	36.9
TELETARI	39.95	
TEMPLE OF APSHAI	39.95	
TEXT WIZARD I TIGERS IN THE SNOW	99.95	68.9
TIME WISE	39.95	21.9
TYPE ATTACK	39.95	27.9
TUTTI FRUTTI	24.95	17.9
VC	25.00	17.
VISICALC	199.00	149.5
WARLOCK'S REVENGE	34.95	27.5
WAY OUT WIZARD&PRINCESS HIRES ADV	39.95	22.
WIZARD OF WOR - ROM	44.95	31.
YOUR ATARI COMPUTER-BOOK	16.95	12.5
ZAXXON	39.95	27.9
ZORK I II OR III	39.95	27.
		-
Commence of the later of the la		

AMDEK COLOR I PLUS MONITOR		319.00
APPLE EMULATOR	CBH64	79.5
CARDBOARD (6 CART + RESET)	VIC-20	70.00
THE CARD? (FOR PARALLEL PRTS	() CBM646VIC-20	
CARDETTE (CASSETTE INTFCE)	CBM644VIC-20	22.00
CARDAPTER/1 ATARI 2600 INTFO	Z VIC-20	50.00
CARDWRITER/1 LIGHT PEN W/CAS	S CHM64LVIC-20	16.50
COMMODORE 64 HOME COMPUTER	CBM64	369.50
COMMODORECOLOR PLOTTER	CBM646VIC-20	
COMMODORE 1530 DATASETTE	CBM646VIC-20	65.0
COMMODORE 1541 DISK DRIVE	CBM646VIC-20	329.5
COMMODORE 1525 PRINTER	CBM645 VIC-20	
COMMODORE 1600 MODEM	CBM646VIC-20 CBM646VIC-20	
COMMODORE COLOR MONITOR COMMODORE 1650 AUTODIAL MODE		
MICRO EXPANSION CHASSIS	CBM64	35.7
VIDEO PAK 80 (80 COLUMN)	CBM64	129.0
VIDEO PAK 80 WITH CP/M	CBM64	219.0
	89-\$100 REBATE	
ATARI 1200 64K \$5	19-\$100 REBATE	
ATARI NUMERIC KEYPAD		94.9
ATARI PROGRAMMER KIT		49.9
410 RECORDER		72.9
810 DISK DRIVE		424.9
850 INTERFACE MODULE		169.9
C. ITOH PROWRITER I		394.9
C. ITOH PROWRITER II		649.9
C. ITOH STARWRITER	10	1325.0
CASSETTE 'N CARTRIDGE FILE		21.9
ELEPHANT SS/SD DISK		0/16.9
ELEPHANT SS/DD DISK		0/19.9
ELEPHANT DS/DD DISK	11	0/25.9
EPSON FX-80 W/TRACTOR		TOMI
EPSON MX-100 F/T		LOWI
FLIP'N-FILE		21.9
GEMINI-10 PRINTER GEMINI-15 PRINTER		LOWI
IN HOME 400 KEYBOARD		94.9
INTEC 32K RAM		69.9
INTEC 48K RAM		119.9
MOSAIC 64K RAM SELECT		149.9
HAYES SMARTMODEN 300 BD		194.9
HAYES SMARTMODEM 1200 BD		499.9
NEC 8023 PRINTER		459.9
NEC 12" HIRES GREEN SCRN		149.9
NEC 12" ECONO GREEN SCRN		79.9
NOVATION J-CAT MODEM		109.9
NOVATION SMART-CAT 103		179.9
NOVATION SMART-CAT 212		424.9
PERCOM SS/SD/1DR (88K) PERCOM SS/DD/1DR (176K)		419.9
		539.9
PERCOM SS/DD/2DRS (352K)		859.9
PERCOM DS/DD/1DR (352K)		649.9
PERCOM DS/DD/2DRS (704K) SIGNALMAN MK II MODEM		79.9
USI 12" AMBER MONITOR		159.9
VERSAWRITER GRAPH TABLET		239.9
WICO JOYSTICK		21.9
WICO REDBALL JOYSTICK		24.95
WICO DELUXE JOYSTICK		29.95
WICO TRACKBALL		49.95
WICO 12 PT EXTENSION CORD		6.99
Czcommo	dore	
- Secretaria		
AGGRESSOR	CART/VIC20	27.50
ALIEN SOCCER	CASS/VIC20	10.25
ANDFOMEDA CONQUEST	CASS/C64	12.50
APE ESCAPE	DISK/VIC20	27.50

DEADLY SKIES	CART/VIC20	27.50
DEMON ATTACK	CART/VIC20	27.50
DRELBS	CASSEDISK/64	24.00
FACEMAKER	DISK/C64	24.00
FAST EDDY	CART/VIC20	27.50
FINAL ORBIT	CART/C64	24.00
FT. APOCALYPSE	CASSEDISK/64	24.00
FROGGER	DISK/064	24.00
FRUIT FLY	CASS/VIC20	9.00
FUEL PIRATES	CASS/VIC20	11.00
GALACTIC BLITZ	CASS/VIC20	17.25
GALACTIC CROSSFIRE		10.25
	CART/VIC20	27.50
GOLD FEVER	DISK/VIC20	
GOLD MINE GRIDRUNNER	01 Pm /6 4 /117020	27.50
	CART/64/VIC20	27.50
HANGMAN	8KCASS/VIC20	6.25
HARRIER	CASS/VICZU	24.00
HESMON MONITOR	CART/646VIC20	
HESWRITER W/P	CART/VIC20	27.50
HESWRITER 64	CART/C64	31.00
HEY DIDDLE DIDDLE	DISK/C64	21.00
IN SEARCH OF THE MO		
	DISK/C64	27.50
JUMP MAN	DISK/C64	27.50
KINDERCOMP.	DISK/C64	21.00
MARTIAN RAIDER	DISK/VIC20	13.75
METEOR	BKCASS/VIC20	7.50
MONSTER MAZE	CART/VIC20	27.50
MULTISOUND SYNTH.	DISK/VIC20	13.75
	6KCASS/VIC20	
NUMBER CRUNCH	CART/VIC20	27.50
NUMBER GULPER	8K CASS/VIC20	17.25
	CASSADISK/64	24.00
PREDATOR	CART/VIC20	27.50
PROTECTOR	CART/VIC20	30.25
QUICK BROWN FOX W/P		
	CASS/VIC20	13.75
REAGANOMICS	CART/VIC20	27.50
REPTON	DISK/C64	27.50
RESCUE AT RIGEL	16KCASS/VIC20	
RETRO BALL	CART/C64	27.50
RICOCHET	BK CASS/VIC20	13.75
ROBOT PANIC	CART/VIC20	27.50
SCORPION	CART/VIC20	27.50
SHAMUS	CART/VIC20	27.50
SHARK TRAP	DISK/VIC20	13.75
SIDEWINDER	8K CASS/VIC20	21.00
SIMON	CASS/VIC20	11.00
	CASS/64/VIC20	
SKI RUN	8KCASS/VIC20	12.50
SNAKE BYTE	CART/C64	24.00
SNOOPER TROOPS #1	DISK/C64	27.50
SPACE ATTACK	BK CASS/VIC20	6.25
SPIDER CITY	CART/64/VIC20	27.50
SPORTS SEARCH	CASS/VIC20	13.75
SQUISH'EM	CART/64/VIC20	
STARCROSS	DISK/C64	27.50
SURVIVOR	CASSADISK/C64	24.00
SWARM!	CASS/VIC20	21.00
SWORD OF FARGOAL	16KCASS/VIC20	
SYN THE SOUND/MUSIC		41.00
TELENGARD	CASS/C64	15.75
TORG		12.25
TURMOIL	CART/VIC20	27.50
	CART/VIC20	27.50
TURTLE GRAPHICS TURTLE GRAPHICS II	CART/VICZU	41.00
TYPE ATTACK	CART/64/VIC20	
THE VEIN GAME	DISK/VIC20	24.00
VIC FORTH	CART/VIC20	41.25
VIC-MEN	8KCASS/VIC20	15.00
VIC MUSIC COMPOSER	CART/VIC20	30.00
VICTREK	CASS/VIC20	12.25
VIC VANGO	CASS/VIC20	9.00
VIDEO SEARCH	CASS/VIC20	13.75
HODD CESSON	CLEC ATTOR	12 75

DEADLY DUCK

CART/VIC20

24.00 27.50 27.50



PERCOM

RanaSystems



MOSAIC 64K RAM

DISK/C64

CASS/C64

CASS/VIC20

DISK/C64 CASS/VIC20

CART/VIC20 CASS/VIC20

BLADE OF BLACKPOOLE

CONCENTRATION CRITICAL MASS

COMPUTER FOOTBALL STRATEGY COMPUTER STOCKS & BONDS

CAVE-IN

COLUMBIA

TEXAS INSTRUMENTS OKIDATA

FOR FASTEST DELIVERY; CASHIER'S CHECK OR VISA/MASTERCARD (NO EXTRA CHARGE FOR CARDS. INCLUDE NUMBER, EXPIRATION DATE, NAME, ADDRESS & PHONE). PERSONAL CHECK FOR PASTEST DELIVERY: CASHIER'S CHECK OR VISA/MASTERCARD (NO EXTRA CHARGE FOR CARDS. INCLUDE NUMBER, EXPIRATION DATE, NAME, ADDRESS REPHONE) PERSONAL CHECK ALLOW 2 HEEKS TO CLEAR, PURCHASE ORDER NUST INCLUDE CHECK. SHIPPING & HANDLING; CONTINENTAL U.S. 5% (55 MIN), U.P.S. STREET ADDRESS REQUIRED; APP FO ALASKA HAMAII & MONITORS 5% (\$10 MIN); POREIGN 15% (\$15 MIN). INCLUDE PHONE NUMBER WITH ALL ORDERS. ALL ITEMS ARE NEW WITH MANUPACTURER'S WARRANTY. APPLE COUNTRY, LTD. CANNOT GUARANTEE THE MERCHANTABILITY OF ANY PRODUCT. PRICES ARE SUBJECT TO A VAILABILITY & CHANGE WITHOUT NOTICE. DUE TO OUR TOUR PRICES, ALL SALES ARE FINAL. RETURNED MERCHANDISE IS SUBJECT TO A RESTOCKING FEE & MUST COME IN ORIGINAL UNDAMAGED CARTON WITH RMA NUMBER. NO SOFTWARE EXCHANGES. CALIFORNIA RESIDENTS ADD 6% TAX. SEND \$1 FOR NEW FALL CATALOG (GOOD TOWARD PIRST PURCHASE). APPLE COUNTRY, LTD. IS A DISCOUNT MAIL ORDER HOUSE FOR THE MICROCOMPUTER INDUSTRY & IS A CALIFORNIA CORPORATION NOT AFFILIATED WITH APPLE COMPUTER INC. APPLE IS TRADEMARK OF APPLE COMPUTER INC.

Call us . . . we can help! (800) 222-2602 Tech. Info., Order Status Call (619) 765-0239

P.O. Box 1099, Julian, Calif. 92036

Apple Country, Ltd. is a DISCOUNT MAIL ORDER HOUSE for the micro computer industry and is a California corporation not affiliated with Apple Computer Inc. Apple is a trademark of Apple Computer Inc.

Arcade-Quality Apple

Third Millennium Engineering has introduced the Arcade Board, which generates arcade-quality color graphics and sound effects on Apple II, II+, and IIe computers.

The board uses many of the same video and sound chips used in coin-operated video-

games.

The Arcade Board comes with more than 20 program demos, games, and utilities, and it adds more than 40 commands to Applesoft BASIC. These commands make it possible to create action with the convenience of BASIC, but with the speed of machine language. The Arcade Board sells for \$225.

Third Millennium Engineering Corp. 1015 Gayley Ave., Suite 394 Los Angeles, CA 90024 (213) 473-2102

Speech In Many Voices

Don't Ask Software has produced a version of its Software Automatic Mouth (S.A.M.) for the Commodore 64 computer. In addition, the Apple and Atari versions of the program have been enhanced to include KNOBS, a feature that provides a range of different voices.

S.A.M., which occupies 2K of user memory, will convert phonetic spellings to speech. A text-to-speech Reciter program, available on the S.A.M. disk, will convert English spelling to speech; it takes 8K of user RAM. KNOBS gives the program access to a variety of voices, so characters can be made to converse.

The Commodore 64 version of the program and the updated Atari version sell for \$59.95. The Apple II version, which contains a digital-to-analog converter and

audio amplifier, sells for \$124.95. Present owners of the program can receive the updated versions for a small fee, provided they have sent in their owner registration cards.

Other new products from Don't Ask include Chatterbee, a spelling game that includes a version of the S.A.M. voice synthesizer. Chatterbee is available for Atari and Commodore 64 for \$49.95.

Wordrace for Commodore 64 is a vocabulary game with 2600 words. It is available in a gamepack that includes Claim to Fame, a history game, and Sports Derby, a sports fact game. The Wordrace gamepack is available on disk or cassette for \$34.95.

Add \$2 for shipping and handling for Don't Ask products.

Don't Ask Computer Software 2265 Westwood Blvd., Suite B-150 Los Angeles, CA 99064 (213) 477-4514

CASSETTES!!

FOR YOUR COMPUTER DIGITAL

- Computer Grade
 Wide Dynamic Range 5 Screw Housing
- 100% Error Free Fully Guaranteed
- Carefully Packed
- All Prices Include U.S. Shipping *Phone Orders Add \$2.50 C.O.D. Fee *

COMPUTER TAPE PRICES

Length	25 LOT	100 LOT	1000 LOT
C-5	.45/11.25	.35/35.00	30/300.00
C-10	.50/12.50	.35/35.00	30/300.00
C-20	.55/13.75	.40/40.00	35/350.00

BASF DPS Tapes Add .05 Cents Per Tape - Custom Lengths Available -... Write For Volume Prices ...

 Norelco Cassette Cases and Labels — [with Cassette Orders Only]

12-249 Cases/ .20 Ea. 12 Labels for .20

250- .13 Ea. 120 for 1.70

1000 Pinfeed Labels

14.50

PAT. PEND.

SEND MONEY ORDERS OR CHECKS TO:

CASS-A-TAPES

Box 8123-C Kansas City, MO 64112 816-444-4651

*DOUBLES DISKETTE STORAGE SPACE!!

REDUCE YOUR DISKETTE **COSTS BY 50%**



*The back of your 51/4" single sided diskette has recording medium. All you need is an ACCURATELY placed "write enable notch"

to use it, on many systems. NIBBLE NOTCH™ is a precision engineered tool designed for this purpose.

IT'S A MONEY SAVER! IMMEDIATE SHIPMENT!

ONLY \$14.95

Add \$1.50 Postage/Handling (\$4.50 Foreign)

Florida Residents Add 5% Sales Tax -

ORDER TODAY! SEND CHECK OR MONEY ORDER TO

NIBBLE NOTCH Division of Cortran International 4211 N.W. 75th Terrace, Dept. 1211 Lauderhill, Florida 33319

EDUCATIONAL PROGRAMS FOR ATARI

Written by James Maykak "Written By A Math Teacher for His Children"

- Large number & letter displays along with color, songs, graphics, sounds & positive statements.
- Complete solutions shown when errors are made.
 Easily obtainable scores, selected levels of difflculty in most programs.

 Student, parent and teacher tested and sold around
- the world.

 8 cassettes currently available written in BASIC and running on 16K or more.

LEVEL I: Counting/ABC's/Counting Things/Next Letter (Preschool, Early

Elementary, Joystick).

LEVEL 2: Adding/Subtracting (Grades K-4, Joystick).

LEVEL 3: Clocks/Numerals/Counting by 2's, 3's, etc. (Grades K-4, Joystick). LEVEL 4: Fractions/Money (Grades 1-5,

LEVEL 5: Story Problems (Grades 2-6, Keyboard).

LEVEL 7: Addition/Subtraction/Both (Grade 2-8, Keyboard).

LEVEL 8: Multiplication/Memory (Grades 2-8, Keyboard).

LEVEL 9: Division/Memory (Grades 2-8, Keyboard).

Each cassette (Level) is \$14.95 Plus \$2.00 Shipping & handling. (Michigan residents please enclose 4% sales tax.) Please indicate Level(s).

The Emporium Go.

201 East Douglass Street, Bangor, Michigan 49013 U.S.A.

HARMONY VIDEO & COMPUTERS 800-221-8927

COMMODORE
VIC 20
COMMODORE 64
VIC 2N DATASETTE
COMMODORE DISC DRIVE
1525P PRINTER
COMMODORE MONITOR
VIC TELEPHONE MODEM
102 BASIC PROGRAM
FLOPPY DISCS SS/DD
VIC 8K MEMORY PAC
VIC 16K MEMORY PAC
DISC LIBRARY
VIC 3K SUPER EXPANDER
1212 PROGRAMMER'S AID
JOYSTICK
INTRO TO BASIC I & II

APPLE 2 PLUS 999.95 APPLE DISC 2 319.95

79.95

89.95

54.95

97.95 97.95 09.95 67.95 35.95 14.95

39.95 84.95 14.95 64.95 59.95 10.00 69.95



EPSON	
MX 80 PRINTER	
399.95	
OKIDATA	
92A PRINTER	
499.95	

ATARI

ATARI	400 W16K	69.95
ATARI	800 W48K	249.95
ATARI	1200 XL W64K	349.95
ATARI	410 RECORDER	69.95
ATARI!	1010 RECORDER	73.95
ATARI	NEW 1050 DISC DRIVE	349.95
ATARI	830 ACOUSTIC TEL. MODEM	139.95
ATARI	600 XL	CALL
ATARI	800 XL	CALL
ATARI	1400 XL	CALL
ATARI	1450 XL	CALL
ATARI	16K MEMORY EXPANDER	84.95
ATARI	JOYSTICK	10.00
ATARI	PROGRAMMER KIT	49.95
ATARI	1020 40 COL PRINTER	199.95
FLOPP	Y DISCS SS/DD	14.95

WE CARRY A FULL LINE OF SONY TV & PROFEEL

VCR PRICES TOO LOW TO PRINT!

439.95 SONY 1901 PROFEEL 529.95 399.95 SONY KV 1746 **SONY KV 1917 SONY KV 1313** 299.95 929.50 **SONY KV 1222 SONY KV 1918 SONY KV 2654** 349.50 399.95 SONY 2501 PROFEEL

SEND \$2.00 **FOR**

QUASAR

HITACHI

ZENITH

PROFEEL

SONY

PANASONIC

JVC

LATEST

C

0

G

U

E

659.95 ALL VCR's IN STOCK CALL FOR

G.E.

■ SANYO ■ SONY PROJECTION

TDK	
FUJI	
MAXELL	
MEMOREX	
SCOTCH	
SONY	
JVC	
DO4	

TDK	8.25
FUJI	8.50
MAXELL	8.25
MEMOREX	8.25
SCOTCH	7.99
SONY	
JVC	8.15
RCA	7.55
PANASONIC	7.25

VIDEO TAPE (By case of 10 only				
/HS		VHS	HIGH	BETA

VHS -	VHS	HIGH	BETA	BETA
T120	T160	GRADE	L500	L750
8.25	11.75	10.25	6.50	7.99
8.50	14.75	11.75	6.50	7.99
8.25	11.75	10.25	6.50	7.99
8.25	11.75	10.10	6.50	7.99
7.99	11.75	9.95	6.50	7.99
		10.25	6.80	7.85
8.15	11.75	10.35		
7.55				
7.05	TOVI	POFFECTION	MAL TION	

TDK PROFESSIONAL T120	15
XELL PROFESSIONAL L750 OR T120	15
SCOTCH PROFESSIONAL	14

LO

BETA L830 9.25

9.25

9.25

9.25

.95

.95

95

WEST	
P	FUJI
R	
1	SCOTCH
C	ICH
E	

FOR THE LOWEST PRICES ON VIDEO CALL 800-221-8927

To order simply dial toll free 800-221-8927 with your Master Card or VISA and your order will arrive via UPS or send certified check or money order only to: HARMONY VIDEO AND ELECTRONICS, 2357 Coney Island Ave., Brooklyn, N.Y. 11223, and add approximate shipping postage and insurance charges. Credit cards for phone order only. For customer service please dial (212) 627-8960. All pries and availability subject to change without notice. All orders shipped out of state. Dealer inquires invited!!! For sales info dial (212) 627-6989. Open Sun. 10-4 Mon.-Thur. 9-7 Fri. 9-3.

COMMODORE

ATARI

APPLE

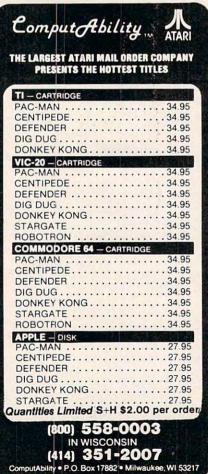
MA

TEXAS INSTRUMENTS

EPSON

S





Holiday Adventures

Chartscan Data is producing bitCards, text and graphic adventures designed as holiday gifts. bitCards are customized with personal references to the recipient, and the player's reward for completing the adventure is a personal message chosen by the sender.

The first bitCard, A Christmas Adventure, is available on disk for 48K computers in the Apple II series, and on tape for Atari 400/800, Radio Shack Color Computer, Commodore 64, unexpanded VIC, and VIC with 8K expansion. All versions sell for \$16.95.

bitCards 120 South University Drive, Suite F Plantation, FL 33317 (305) 473-4741

Games Converted For Atari

Activision has converted two of its best-selling home videogames of Dynacomp, Inc. 1427 Monroe Activision has converted two of Dynacomp, Inc. 1427 Monroe Activision has converted two of Dynacomp.

The games, River Raid and Kaboom!, have been enhanced to make use of the increased power and memory availability of the Atari computers.

In River Raid the player pilots a B1 Strato-wing Assault Jet over a constantly changing river course. New twists added to the game include hovering hot-air reconnaissance balloons, helicopters and tanks that shoot back, vivid graphics and battle sounds, an expanded control panel, a pause feature, and the ability for more advanced players to select more difficult river sections.

Kaboom! features the Mad Bomber, a convict who roams the rooftops dropping bombs. The player maneuvers water buckets to catch the falling bombs. New additions to the game include a variation that

allows one player to be the Mad Bomber and the other to catch the falling bombs, a high-score table, and a musical score which features the 1812 Overture.

Both games retail for \$34.95.

Activision, Inc. 2350 Bayshore Frontage Road Mountain View, CA 94043 (415) 960-0410

Software Assortment For Timex/Sinclair

Dynacomp has introduced an assortment of software products for the 16K Timex/Sinclair computer.

The new programs are: Blackjack, \$12.95; Checkbook, \$14.95; Data Filer, \$19.95; Graphics Drawer, \$14.95; Phone Book, \$12.95; Pixel Drawer, \$14.95; Tic-Tac-Toe, \$9.95; and Word Scramble, \$9.95.

Each of the programs is described in the free product catalog available from Dynacomp.

Dynacomp, Inc. 1427 Monroe Ave. Rochester, NY 14618

Game Cartridges For The TI

Funware, which recently was acquired by Creative Software, has added to its list of available cartridge software for the TI-99/4A.

Among the new games are: St. Nick, in which the player helps Santa fly through a maze and pick up toys while avoiding flying witches.

Schnoz-ola, a game based on a tale about a Mayan prince with tremendous jumping powers and a tremendous nose. The prince must climb a four-tiered pyramid to collect sacred flowers, while dodging fireballs tossed at him by angry gods.

Cwww.commodore.ca

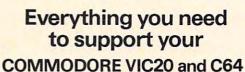




VIC 1701 COLOR MONITOR COMMODORE 64

PICK YOUR BEST COMMODORE COMPUTER PACKAGE AND SAVE EVEN MORE...

C 64	\$209.00	or	C 64	\$209.00
VIC 1541	239.00		VIC 1530	65.00
VIC 1701	249.00		VIC 1701	249.00
Total SAVE	\$680.00		Total	



DATASSETTE



Micro Software International Inc.

PractiCalc 20
For the Commodore VIC-20
16K RAM required

ION NAIVITEQUITEU	
Tape (CV2T10)\$2	8.00
Disk (CV2D10) 3	3.00
PractiCalc 64-For the Commodore 64	
Tape (C60T11)\$3	7.00
Disk (C60D11)	

Cardco, Creative Software, EPYX, HES, UMI, WICO, Romox.





INSTRUMENTS

T.I. PERIPHERAL EXPANSION UNIT PHP 4000 includes:

PHP 1200 Peripheral Expansion • PHP 1240 Disk Controller Card • PHP 1250 Expansion System Disk Drive • PHP 1260 Memory Expansion Card 32K.

> AT THE NEW LOW PRICE OF ONLY \$455.00 Original Retail \$1,199.80

With the purchase of PHP 4000 package receive one of the following modules FREE!

• PHP 3111 T.I. Writer • PHP 3113 Microsoft Multiplan • PHM 3109 T.I. Logo II

EACH A \$99.95 Retail Value!

T.I. will give you a Speech Synthesizer a \$99.95 retail value-FREE-when you buy six solid state software cartridges. Offer expires January 31, 1984. Ask for coupon.

GET A T.I.

FREE

SPEECH SYNTHESIZER

PHP 1220 RS 232 Card \$ 83.95 PHP 2500 T.I. Printer

We carry in stock all hardware and software for T.I. HOME COMPUTERS.

QUANTITIES LIMITED!



1782 Marietta Blvd., N.W., Atlanta, Georgia 30318

Order Toll Free 1-800-241-2682 In Georgia (404)-351-8459

For a complete listing of all SAVE's products, send \$5.00 for our catalogue (refundable with your first order).

Enjoy the convenience of in-home shopping. Call our toll free number today for orders only.

Use your American Express. VISA, Mastercard, check or money order. Minimum order of \$50.00. Outside continental U.S.A. minimum order \$250.00 U.S. currency. Shipping and handling charges are extra. All prices are subject to change without notice. Allow 2-4 weeks for delivery. Prices good through Assemble 15/1983 dore. ca





TS1000 catalog will take you where no one has dared go before ! You will view the widest selection of upto-date software, books and hardware add-ons available to get the most from your personal computer This exciting new 34 page color catalog lists arcade, fantasy and family games, business and educational programs; books for beginners as well as experienced users: hardware add-ons and other peripherals for use with ZX81/TS1000 Home Computer

Electronics! Our ZX81

below and send for your FREE catalog TODAY!

City

New! Write for yours Today! Complete and mail now for your FREE copy! For information call (716) 874-5510

GLa	DSTO	NE Electronics	C-11

Please rush me this exciting new ZX81/TS1000 catalog.

Name _____

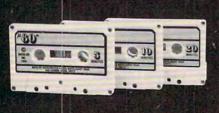
Mail to: 1585 Kenmore Ave., Buffalo, N.Y. 14217 In Canada: 1736 Avenue Rd., Toronto, Ont. M5M 3Y7

State

Zip

COMPUTER CASSETTES

100% Error-Free • Fully Guaranteed



		PA DE
	12	24
LENGTH	PACK	PACK
C-05	.79¢	69¢
C-10	.89¢	79¢
C-20	.99¢	89¢
Boxes	.26¢	21¢
UPS \$3.00 Pkg.	\$18.00	Case

C-10's 39¢ (Min. 500 Case Lot) Wlabels ADD 4¢, W/boxes ADD 13¢



MICRO-80™ INC.

2665-C Busby Road Oak Harbor, WA 98277 Ambulance, in which the player serves as an ambulance driver helping sick people get treatment. The player must decide who needs help first and whether the patient should be taken to the hospital or an emergency center.

Driving Demon, a game in which the player tries to drive as far and as fast as possible within a time limit. Problems include oil slicks, other cars, and engine troubles; navigational aids include a tachometer, speedometer, and a long-range scanner.

Funware's cartridge games sell for \$44.95, and are guaranteed to work in all present and future versions of the TI-99/4A home computer.

Funware, Inc. 230 East Caribbean Drive Sunnyvale, CA 94089 (408) 745-1655

Pinball Simulation For The 64

Brøderbund Software has converted *David's Midnight Magic*, a pinball simulation game, into Commodore 64 format.

The game, described as the next best thing to a real pinball machine, simulates dual flipper controls, bumper action, rollovers, sounds, and lights. The player can even put English on the ball, but too much will result in a tilt.

David's Midnight Magic, originally sold in Apple and Atari versions, is available for the Commodore 64 on disk for \$34.95.

Brøderbund Software 500 Fifth Ave. New York, NY 10110

Apple Graphics Program

T & G is an Apple graphics system from C & C Software. The

program does not rely on shape tables, so execution is faster than for many other graphics programs.

T & G includes three character sets, the largest of which is 1½ times the size of standard Apple characters.

The characters can be placed on the screen using one of two commands. One is similar to BASIC's PRINT command; the other permits greater control over text placement. Lowercase is available in the two larger character sets, and the ability to print superscripts, subscripts,

and text overlays is provided.

The program also is a powerful utility for producing static or animated graphics. The editor program supports full color and includes a command for clearing a precisely defined area of the screen.

T & G is available for \$65.

C & C Software 5713 Kentford Circle Wichita, KS 67220 (316) 683-6056

Hardware/Software Combo For Atari 800

MEM/EX is a memory expansion device for the Atari 800 computer. It replaces the operating system board and includes 4K of low-power CMOS static RAM mapped to the unused \$C000 address space.

Included with the board is a powerful command-extender program called *COM/EX*. This adds ten edit-mode commands to the standard BASIC or Assembler cartridges, including the most used disk commands.

MEM/EX is compatible with all standard Atari 800 configurations; COM/EX requires at least one disk drive and DOS 2.0. The package is available for \$129.95.

Prairie Physics P.O. Box 2369 Wichita, KS 67201

©www.commodore.ca

Warehouse Outlet

MEETING YOUR SOFTWARE NEEDS FOR LESS!!!

COMMODORE 64E

COMMISSIONE OFFE	
Broderbund Chaptiffor (CT)	30.40
Choplifter (CT) Sea Fox (CT)	27.00
Serpentine (CT)	27.00
David's Midnight Magic (D)	27.00 27.00
Sky Blazer (D)	27.00
A F (D)	27.00
A.E. (D) Load Runner (D)	27.00
Commodore	
Assembler 64 (D)	16.90
Logo (D)	47.90
Logo (D) Pilot (D)	47.90 47.90
Pet Emulator (D)	16.90
Screen Editor (D;	16.90
Bonus Pack (D,C)	16.90
CP/M 2.2 Operating	diamen.
System (CT)	69.00
Super Expander VSP (CT)	16.90
Easy Finance (1-5) (D)	19.35
Easy Finance (1-5) (D) Easy Calc 64 (D)	73.75
The Manager (D)	43.00
Easy Script (D)	43.00
Easy Mail 64 (D)	16.90
Easy Spell 64 (D)	16.90
Word/Name Machine (D)	16.90
Intro to Basic I (C)	19.35
Gortek & The Microchips (C)	24.80
Easy Lesson / Easy Quiz (D)	16.90
Music Machine (CT)	16.90
Codewriter (D)	47.90 29.50
Zork 1,2,3 (D) Inventory Mgmt. (D)	
Payroll/Checkwriting (D)	43.00 43.00
Acete Payable (D)	43.00
Accts. Payable (D) Accts. Receivable (D)	43.00
General Ledger (D)	43.00
Continental	
The Home Accountant	50.72
Creative Software	
Car Costs (C) 10.15 (D	0)13.50
Decision Maker (C) 10.15 (D	
Household	
Finance (C) 13.50 (D) 16.90
Finance (C) 13.50 (D Home Inventory (C) 10.15 (D Loan Analyzer (C) 10.15 (D	13.50
Loan Analyzer (C) 10.15 (D) 13.50
Moon Dust (CT)	23.65
Astroblitz (CT)	23.65
Trashman (CT) Save New York! (CT)	23.65
Save New York! (CT)	23.65
Datasoft	115130
Moonshuttle (D, C)	20.30
Poo Yan (C, D) Genesis (D)	20.30
Genesis (D)	27.00
O'Riley's Mine (D)	20.30
Ерух	07.00
Temple of Apshal (D)	27.00
Upper Reaches of	12 55
Apshai (D)	13.55
Curse of Ra (D)	13.55
Sword of Fargoal (D)	20.30
Jumpman (D, C)	27.00
Hes Software Hes Mon 64 (CT)	27.00
Turtle Graphics II (CT)	40.60
Tuttle Graphics II (CT)	40.00

Hes Writer 64 (CT)	30.45
Gridrunner (CT)	20.25
Retro Ball (CT)	20.25
Benji Space Rescue (D)	30.45
Coco (D, C)	27.00
Micro Prose	-
Floyd of the Jungle (D)	20.80
Helicat Ace (D)	20.80
Sieraa On Line	
Frogger (D, C)	23.65
New Jawbreaker (D)	20.30
Crossfire (D)	20.30
Sirius Software	
Squish 'Em (D)	23.65
Repton (D)	27.00
Blade/Blackpoole (D)	27.00
Critical Mass (D)	27.00
Type Attack (D)	27.00
Spinnaker	22.05
Face Maker (D)	23.65
Hey Diddle Diddle (D)	20.30
Kindercomp (D)	27.00
Snooper Troops 1 (D)	23.65
Fraction Fever (D)	27.00
Amazing Thing (D)	21.00
Synapse	23.70
Ft. Apocalypse (D, C) Protector (D, C)	23.70
Survivor (D, C)	23.70
Shamus (D, C)	23.70
Timeworks	20.10
Dungeons of Algebra	
Dragons (D, C)	19.10
Robbers of the Lost	
Tomb (D, C)	19.10
Wall Street (D, C)	19.10
Money Manager (D, C)	19.10
Electronic Checkbook (D, C)	19.10
Word Pro 3 +	65.00
31-7-31-5-5	
	-
Party Control of the	

JL ATARI

	Daniel Land	
	Broderbund	23.90
	David's Midnight Magic (D)	
	Apple Panic (C, D)	20.30
	Choplifter (D)	23.70
	Serpentine (D, C)	23.70
	A.E. (D)	23.70
	Sea Fox (D)	20.30
	Labyrinth (D, C)	20.30
	Genetic Drift (D, C)	20.30
	Continental	
	The Home Accountant	50.72
	The Tax Advantage	40.58
	Datasoft	
	Micropainter (D)	22.65
	Pac. Coast Hwy. (C, D)	16.90
	Text Wizard (D)	33.80
	Canyon Climber (C, D)	16.90
	Clowns and Balloons (C, D)	16.90
	Basic Compiler (D)	54.00
	Spell Wizard (D)	27.00
	Sands of Egypt (D)	20.30
	Zaxxon (D, C)	27.00
	Moon Shuttle (D, C)	20.30
	O'Riley's Mine (D, C)	20.30
	Rosen's Brigade (D, C)	11.50
	Poo Yan (D, C)	20.30
	Bruce Lee (D, C)	27.00
	Genesis (D, C)	27.00
	Epyx	
	Temple of Apshai (D)	27.00
	Crush, Crumble and	
	Chomp (D, C)	20.30
	Jumpman (D)	27.00
	Crypt of the Unclead (D)	27.00
	First Star	
	Call for Availability and Price	cina
	Micro Prose	on g
	Chopper Rescue (D, C)	20.75
	Floyd of the Jungle (D, C)	20.75
	Hellcat Ace (D, C)	20.75
	Helical Ace (D, C)	20.70
-	The second secon	-

	Wingman (D, C)	25.00
	Synapse	
	Shamus II (D, C)	23.70
	Pharoah's Curse (D, C)	23.70
ľ	Ft. Apocalypse (D, C)	23.70
	Nautilus (D, C)	20.30
1	Blue Max (D, C)	23.70
1	Dimension X (D, C)	23.70
	Zeppelin (D, C)	23.70
	Spinnaker	
	Facemaker (CT, D)	23.65
	Snooper Troop 1 or 2 (D)	30.20
	Hay Diddle Diddle (D)	20 30

Zeppelin (D, C)	23.70
Spinnaker	and the same of
Facemaker (CT, D)	23.65
Snooper Troop 1 or 2 (D)	30.20
Hey Diddle Diddle (D)	20.30
Story Machine (D)	23.65
Thorn E.M.I.	
Jumbo Jet Pilot (CT)	30.45
Sub Commander (CT)	30.45
Figure Fun (CT)	20.30
Soccer (CT)	30.45
Kickback (CT)	30.45
Home Fin. Mgmt. (CT)	20.30
Darts (CT)	20.30
Parker Bros.	

apple

Frogger Q Bert Astro Chase

Broderbund	
Serpentine (D)	23.70
A.E. (D)	23.70
Arcade Machine (D)	40.80
Apple Panic (D)	20.30
Choplifter (D)	23.70
David's Midnight Magic (D)	23.70
Continental	
The Home Accountant	50.72
The Tax Advantage	40.58
FCM (Form Letter)	67.64
Datasoft	
Zaxxon (D)	27.00
Canyon Climber (D)	16.90
Sands of Egypt (D)	20.30
Fathom 40 (D)	23.70
Lisp (D)	67.50
Micro Painter (D)	23.70
Poo Yan (D)	20.30
Bruce Lee (D)	27.00
Genesis (D)	27.00
Moonshuttle (D)	20.30
Sirius	
Call for Availability and Price	ing
Spinnaker	

Bruce Lee (D)	27.00
Genesis (D)	27.00
Moonshuttle (D)	20.30
Sirius	
Call for Availability ar	nd Pricing
Spinnaker	
Facemaker (D)	23.65
Story Machine (D)	23.65
Hey Diddle Diddle (D)	20.60
Programs for all Syste	ms
Avalon HIII	Call for
Strategic	Availability
Simulations	and Price

VIC 20, T.I. 99 4A, RADIO SHACK, IBM-PC SOFTWARE LISTS AVAILABLE

Crommodo	re	BASF Soft Box (10) Joysticks	23.80
Commodore 64	239.95	Pointmaster	10.95
1541 Disk Drive	239.95	Pointmaster Pro	18.55
1530 Datasette	61.30	Fire Control	7.85
1525 Printer	214.75	Wico Command Ctrl.	19.50
1701 Color Monitor	239.95	Wico "Boss"	13.50
1600 Modem	50.50	Wico Red Ball	20.75
Parallel Interface	60.00		988
3 Port Expander	30.00	COLECO	
6 Port Expander	75.00	Coleco	
64 Prog. Ref. Guide	17.00	Adam Computer System	595.00
Diskettes		Adam Computer Module	445.00
BASF 514" SSDD 2 pak	5.50	Adam Computer Module	440.00

For additional information and to order, call Toll free:

Outside Texas

Inside Texas

Terms and Ordering Information:

To order call 1-800-527-8698 and send certified checks, money orders or personal checks (allow 2 weeks to clear), or use your VISA, Master Card or American Express. Inside Texas call 1-800-442-8717. Include \$2 for postage and handling. (C.O.D.orders add \$1.50) UPS Blue Label \$3, Canada \$6. Other countries include 10% for P&H. All products factory sealed with manufacture's warranty. All returns require R.A.#. Prices subject to change without notice. Order desk hours: Mon-Fri 8-5, Sat 9-1 CST.





802 N. HIGH LONGVIEW, TX.

Games For The VIC And 64

Creative Software has produced *In the Chips*, an educational game for the VIC-20.

In the game, one or two players are given \$100,000 with which to organize a software company, research and develop a product line, and plan marketing strategies. The winner will be the one who assesses the market correctly and turns the largest profit.

The game, which is available in a cartridge, sells for \$29.95.

Another new offering from Creative is *Crisis Mountain*, previously available for Apple and Atari. The game, licensed to Creative from Synergistic Software, is an adventure in which the player must guide mine explorer Kip Armstrong to treasure while avoiding traps, bombs, and bats.

Crisis Mountain, sold in cartridge format, is available for \$34.95 for the 64, and \$29.95 for the VIC.

Creative Software 230 East Caribbean Drive Sunnyvale, CA 94089 (408) 745-1655

Touch-Sensitive Input Device

The Chalk Board PowerPad is an easy-to-use device that replaces the keyboard as a means of computer input.

The PowerPad has a 12-inch by 12-inch active surface that can handle input from multiple points.

The device, which can be used with the Commodore 64, VIC-20, Atari, Apple, and IBM computers, sells for \$99.95.

Selections from "Leonardo's Library" are designed to be used with the PowerPad. Programs presently available include Leonardo's Logo, Leo's 'Lectric Paintbrush, and Micro Maestro. Programs from the library, which is expected to grow to as many as 30 selections, range in price from \$24.95 to \$49.95.

Miller Communications 607 Boylston St. Copley Square Boston, MA 02116 (617) 536-0470

New Product releases are selected from submissions for reasons of timeliness, available space, and general interest to our readers. We regret that we are unable to select all new product submissions for publication. Readers should be aware that we present here some edited version of material submitted by vendors and are unable to vouch for its accuracy at time of publication.

COMPUTE! welcomes notices of upcoming events and requests that the sponsors send a short description, their name and phone number, and an address to which interested readers may write for further information. Please send notices at least three months before the date of the event, to: Calendar, P.O. Box 5406, Greensboro, NC 27403.

POWERBYTE MENU

BUSINESS AND HOME SOFTWARE

Commodore 64 – Vic 20 TRS Color – Adam

The Accountant	\$29.95	Utility Bills	14.95	
Accts. Rec./Pay.	26.95	Budgeting	15.95	
Order Tracker	21.95	Screen Dump	12.95	
Business Inventory	21.95	Calendar	16.95	
The Bidder	18.95	Present Value	13.95	
Calendar-Data Base	e 18.95	Checkbook	12.95	
Billing solver	21.95	Home Budget	12.95	
Client Tickler	21.95	Home Inventory	12.95	
Vicky Calc.	14.95	Club Lister	16.95	
Cash Flow	16.95	Medical Records	16.95	
Linear Regression	18.95	Credit Cards	15.95	
Depreciator	16.95	Super Shopper	12.95	
Bar Chart	9.95	Savings Accounts	13.95	
Mortgage Calculate	or 9.95	Travel Time	13.95	
Mortgage Compare		Tape Geni	14.95	
P.E.R.T. My VIC	18.95	Tape Worm	14.95	
Amortizer	24.95	Dear Diary	14.95	
Taxman	18.95	Mother's Recipes	12.95	
Loan Repayer	12.95	Metric Brain	12.95	
Statistics	18.95	Track My Weight	14.95	
Phone Directory	12.95	Jogger's Logger	14.95	
Net Worth	16.95	Grade My Kids	16.95	
Investments	14.95	Nuismatic Phanatic		
Stock Ticker Tape	18.95	Lightning Sort	14.95	
Profit Sharing Plan	18.95	Golf Scorecard	14.95	
Syndicator	18.95	Math A Magician	15.95	
Mailman	12.95	Temp. Converter	9.95	

Specify Cassette or Disk (Disk \$5.00 Extra)
Check, COD or Charge (Add \$1.50 Post. & Hdl.)

FREE CATALOG

Powerbyte Software Box 579-905 Lorien Drive Gwynedd Valley, Pa.:19437 609-424-5485

THRILL YOUR FRIENDS THIS CHRISTMAS



with a gift from

bitCards PERSONALIZED

SOFTWARE
Only \$18.50



Santa has disappeared. The player can solve the mystery using the available clues. Along the way he'll discover that this is no ordinary adventure game. In a storage room, he'll find a shimmering package addressed to him. And in Santa's coat pocket, a note signed by you. Santa's computer will call upon him by name to help solve the mystery. And each bitCard will contain your own personal greeting message—right in the program! And other surprises too.

A **bitCard** is the perfect gift for everyone on your list who has access to a micro. They'll love the graphics, the humor, the action sequences. And they'll love you for stuffing their stocking with this Christmas delight.

BitCards. A personalized greeting card. A gift that will be the hit of the season. Now isn't that better than a polka-dot tie?

16K cassette versions available for Commodore-64™ & Atari 400/800. 5K or 5K with 8K expander versions for Vic 20™
Also available for Apple™ II/+/e (48K disk) and TRS-80® models I/III & C.C. (16K cassette)

ORDER INFORMATION: BY PHONE: (MasterCard or Visa required) call 1-800-555-1212 and ask for the TOLL FREE number for BITCARDS. BY MAIL: (money order or MasterCard/Visa number & exp. date) use separate sheet for each bitCard ordered. Give your name and address and following into about recipient: (1) name (2) address (3) computer(e.g., TRS 80* Model I (4) his/her phone number (item 4 optional.) Also include your personal message to recipient (25 word max.) (We'll supply standard message if you prefer). Indicate if you want bitCard sent to you or directly to friend. Order before Dec. 12. Send order or requests for info to. bitCards, 120 S. University Dr., Suite F-2, Plantation, FL 33317

Eric Martin's Where prices are born, not raised!



Atari 1400XL

ATARI	WEWEWEWENEN EN
Atari 1400XL 64K CALL	MEMEMEMEMEM
Built-in phone modem, expandable to 256K, and more goodies	EMEMEMEMEME EMEMEMEMEME
810 Disc Drive CALL 1010 Program Recorder (NEW) S79 00 1025 Printer (NEW) \$410 00 CX85 Numeric Keyboard \$109 00 CX419 Bookkeeper Kit CALL CX488 Communicator Kit CALL ATARI Software	MEMEMEMEMEN
CXL 4025 Defender \$39 00 RX8026 Dig Dug \$39 00 RX8039 Eastern Front (ROM) \$44 00 CLX 4027 Oix \$39 00 RX8037 Star Trux \$39 00 DX5049 Visicalc \$159 00 CA01655 Technical Reference Notes \$29 95	HEMEMEMEMEME
Third Party Software CALL	EMEMEMEME ME
Chop Lifter \$29.00 Apple Panic \$23.75 Baha Buggies \$23.75 Submarine Commander (ROM) \$35.95 Jumbo Jet Pilot (ROM) \$35.95 Soccer (ROM) \$36.95 Gamestar Football CALL	MEMEMEMEMEME
When new ATARIS are born, Eric Martin's will have them at newborn prices. For the latest from Atari, call or visit our store. One of the largest Atari Dealers in the U.S.	MEMEMEMEMEMEMEMEM
We take TRADE-INS. Call for your price.	EMEMEMEN
MATARI SERVICE	NEMEMEMEN
Prdery Shipped in 24 hours For last delivery, send certified or cashier checks, money orders, or direct bank wire transfers. Personal checks allow 2 to 3 weeks to clear. Prices reflect cash discount and are subject to change. Add 2% for credit card purchases. Shipping—Software \$2 Minimum. Hardware—call. Foreign inquiries invited—add 15% for shipping. Ohio residents add 6.5%	VEWBWEWEWEWE



Eric Mari

5485 Warrensville Center Road Maple Heights. Ohio 44137

Call Toll Free 1-800-482-7254 In Ohio 216/663-2032

Mon.-Sat. 10-6 EST

commodore

********************** HANNA ENTERPRISES

1303 Columbia Dr. Suite 207 Richardson, Texas 75081

******* TO ORDER CALL

(IN TEXAS) 214-231-2645 (OUTSIDE TEXAS) 800-527-1738

MasterCard & Visa accepted — add 3% surcharge for credit cards

F.O.B. Dallas, Texas

9:30 a.m. - 6:30 p.m. (m-f)

10:30 a.m. - 2:30 p.m. sat.

COMMODORE COMPUTERS

B-128k-80							1	\$7	77.20
B-256k-80							-	\$9	78.13
BX-256k-80/dual drive								8	2895
PET 64 (educational) .							1	\$6	27.50
8032							1	\$6	27.50
8096									
9000 super pet							\$	10	71.25
c-64									
Executive 64 portable									CAL

COMMODORE DISK DRIVES

1541	(170k)											 	\$	250.50
2031												 		\$311
4040	(340k)					. ,	٠						\$	657.85
8050	(1mg)									,			. \$	981.90
8250	(2mg)												\$1	226.50
	hard d													
9090	hard d	isk	(7.5	im	ng)							\$2290

COMMODORE PRINTERS

1525 (30cps)	\$238.75
1526 (100cps)	\$343.95
4023 CBM (100cps)	
8023 (160cps)	\$537.95
6400 daisy wheel CBM	
new! 1520 plotter printer	\$178.50

COMMODORE PERIPHERALS

•				\$249.95
				\$246.95
		,		\$488.95
				. \$34.95
				. \$42.95
				\$69
				\$109.95
	 			\$150
				. \$64.95

OTHER PRINTERS

Epson MX-80FT (dot Matrix)	\$455
Okidata 82a, 120 cps (serial & parallel,	
dot Matrix)	\$425
Star Gemini 10	\$328
Star Gemini 15	\$495
Diablo 620, 25 cps (letter quality)	\$949

COMMODORE SOFTWARE FOR CBM

Wordpro4+ or 5+	 \$305
Visicalc (Expanded)	 \$195
BPI G/L A/R A/P Inv. etc	 \$320 ea.
MANAGER (database)	 \$195

COMMODORE c64 SOFTWARE

Easy script \$	49.95
Easy mail \$	49.95
Easy finance	49.95
The manager \$	49.95
NEW c64 110-cp/m 2.2 \$	99.95
Super expander c64 \$	29.95
Nevada Cobol	59.95
Logo \$	59.95
Pilot \$	
Music machine	19.95
Music composer	

SMALL c64 **BUSINESS SYSTEMS**

c64 General Ledger							\$49.95
Accounts Receivable .							\$49.95
Accounts Payable							\$49.95
Payroll/Check Writing							
Inventory Management							
Codewriter							

c64 RECREATION CARTRIDGE

Jupiter Lander									\$24.95
Kickman				٠					\$24.95
Tooth Invaders									\$24.95
Omega Race									\$39.95
Wizard of War									\$34.95
Gorf									\$34.95
Speed/Bingo Math									

INTERFACES & ACCESSORIES

The state of the s	
RS-232 printer interface (Okidata,	
Diablo)	\$59.95
Parallel interface	
80 Column Expander	159.95
TEC typewriter/c64 conv	200.95
Vic Switch (Connect 8 64's or Vics to	
printer, drivers)	. \$149
Super Cord	

CAPUTE!

Modifications Or Corrections To Previous Articles

Atari Caves Of Ice

Due to a problem with variable initialization, the Atari version of this game from the September issue (p. 60) provides more exits the longer the game is played. To insure there is always only one exit from the Caves, reader Jim Vail suggests that the A\$(750) = "O" in line 100 be changed to:

A\$="O":A\$(750)="O":A\$(2)=A\$:

Also, Ohio reader Neil Morris notes that the program can be modified to run in less than 16K of memory by changing the GRAPHICS 8 in line 305 to GRAPHICS 6, then dividing all the numbers after the PLOT and DRAWTO commands in lines 32-85 by two (dropping any fractions).

VIC Diamond Drop

Some Commodore 64 color controls slipped into the VIC version of this game from the September issue (p. 84). For proper operation, change the **E63** in line 50 to **ERN** (CTRL-6 for green) and the **E73** in lines 100 and 102 to **ELU** (CTRL-7 for blue).

Mystery Spell For TI And VIC

The TI version of this educational game from September (p. 117) stores word lists properly to disk. However, tape users need to make the following changes:

1810 DISPLAY AT(23,1): "PLACE TAPE O R DISK IN DEVICE" :: ACCEPT AT (11,3):F\$

1815 IF SEG\$(F\$,1,1)="C" THEN 1842 ELSE OPEN #1:F\$, INTERNAL, UPDAT E,FIXED 50

1842 IF J=0 THEN 1846

1844 OPEN #1:F\$,OUTPUT,INTERNAL,FIX
ED 50 :: FOR I=1 TO 20 :: PRIN
T #1:B\$(I):: NEXT I :: CLOSE #
1 :: GOTO 230

1846 OPEN #1:F\$, INPUT , INTERNAL, FIX
ED 50 :: FOR I=1 TO 20 :: INPU
T #1:B\$(I):: NEXT I :: CLOSE #
1 :: CALL CLEAR :: GOTO 1760

Also, there is a minor typo in the VIC version (p. 127). In line 2170, LEFRT\$ should be LEFT\$.

VIC PILOT

There is a minor flaw in the turtle graphics feature of the PILOT interpreter in BASIC from the September issue (p. 166). If the turtle goes off the graphics screen during a loop, subsequent graphics commands are not interpreted properly. If you are using Program 1, make this change:

128 IFOS%=1THENPRINT"*PLOT WENT OFF SCREE N":D=Ø

If you are using Program 2, the Super Expander version, make this change:

143 GOSUB127:IFOS%=1THEND=Ø:GOTO11

Cracking The Kernal

The instructions for using Kernal ROM routines to LOAD data from tape or disk into the 64 (September 1983, p. 270) are incorrect. The proper series of machine language instructions to OPEN logical file 2 from device 8 (disk) with secondary address 0 and LOAD a file into memory starting at address 8192 (\$2000) is:

LDA #\$02 LDX #\$08 LDY #\$00 ISR SETLFS LDA #\$04 LDX #L,NAME LDY **#H,NAME** ISR SETNAM LDA #\$00 LDX #\$00 LDY #\$20 ISR LOAD RTS NAME .BY 'FILE'

Note that the accumulator must be set to 0 for a LOAD and 1 for a VERIFY, not vice versa as stated in the article. Our thanks to Lewis Kleinsmith for pointing this out.

Atari Dragon

Program 2 (August 1983, p. 88) fails to leave the current score on the screen at the end of the game. To eliminate this minor flaw, Stuart Goldenberg suggests the following correction and addition:

410 COLOR 32:PLOT Ø, Ø:DRAWTO 19, Ø:PL OT Ø, 1:DRAWTO 10, 1:POSITION Ø, Ø: ? #6;"GRME OUER SCOPE "; W 435 POSITION Ø, Ø:? #6; "(20 SPACES)"

TI Towers

The program for this article was renumbered before it was listed. As a result, the line numbers of the program do not agree with those mentioned in the article. However, the program will work as listed.

64 Ultrasort

When using Program 4 to test the 64 version of this machine language sorting routine (September 1983, p. 202), you should replace line 300 with:

300 SYS 49152, N, AA\$(1)

The REM statement in line 291 is incorrect.

VIC Dots

In line 560 of this program from the September issue (p. 132), the spurious question mark should be removed. The first part of the line should read:

560 IFFNBX(ML+22)=...

COMPUTE! Back Issues

Here are some of the applications, tutorials, and games from available back issues of **COMPUTE!**. Each issue contains much, much more than there's space here to list, but here are some highlights:

May. 1981: Named GOSUB/GOTO in Applesoft, Generating Lower Case Text on Apple II, Copy Atari Screens to the Printer, Disk Directory Printer for Atari, Realtime Clock on Atari, PET BASIC Delete Utility, PET Calculated Bar Graphs, Running 40 Column Programs on a CBM 8032.

June 1981: Computer Using Educators (CUE) on Software Pricing, Apple II Hires Character Generator, Ever- expanding Apple Power, Color Burst for Atari, Mixing Atari Graphics Modes 0 and 8, Relocating PET BASIC Programs, An Assembler In BASIC for PET, QuadraPET: Multitasking?

July 1981: Home Heating and Cooling, Animating Integer BASIC Lores Graphics, The Apple Hires Shape Writer, Adding a Voice Track to Atari Programs, Machine Language Atari Joystick Driver, Four Screen Utilities for the PET, Saving Machine Language Programs on PET Tape Headers, Commodore ROM Systems, The Voracious Butterfly on OSI.

August 1981: Minimize Code and Maximize Speed, Apple Disk Motor Control, A Cassette Tape Monitor for the Apple, Easy Reading of the Atari Joystick, Blockade Game for the Atari, Atari Sound Utility, The CBM "Fat 40," Keyword for PET, CBM/PET Loading, Chaining, and Overlaying.

October 1981: Automatic DATA Statements for CBM and Atari, VIC News, Undeletable Lines on Apple, PET, VIC, Budgeting on the Apple, Switching Cleanly from Text to Graphics on Apple, Atari Cassette Boot-tapes, Atari Variable Name Utility, Atari Program Library, Train your PET to Run VIC Programs, Interface a BSR Remote Control System to PET, A General Purpose BCD to Binary Routine, Converting to Fat-40 PET.

December 1981: Saving Fuel \$\$ (multiple computers: versions for Apple, PET, and Atari), Unscramble Game (multiple computers), Maze Generator (multiple computers), Animating Applesoft Graphics, A Simple Printer Interface for the Apple II, A Simple Atari Wordprocessor, Adding High Speed Vertical Positioning to Atari P/M Graphics, OSI Supercursor, A Look At SuperPET, Supermon for PET/CBM, PET Mine Maze Game.

January 1982: Invest (multiple computers), Developing a Business Algorithm (multiple computers), Apple Addresses, Lowercase with Unmodified Apple, Cryptogram Game for Atari, Superfont: Design Special Character Sets on Atari, PET Repairs for the Amateur, Micromon for PET, Selfmodifying Programs in PET BASIC, Tinymon: a VIC Monitor, Vic Color Tips, VIC Memory Map, ZAP: A VIC Game.

May 1982: VIC Meteor Maze Game, Atari Disk Drive Speed Check, Modifying Apple's Floating Point BASIC, Fast Sort For PET/CBM, Extra Atari Colors Through Artifacting, Life Insurance Estimator (multiple computers), PET Screen Input, Getting The Most Out Of VIC's 5000 Bytes.

August 1982: The New Wave Of Personal Computers, Household Budget Manager (multiple computers), Word Games (multiple computers), Color Computer Home Energy Monitor, Intelligent Apple Filing Cabinet, Guess That Animal (multiple computers), PET/CBM Inner BASIC, VIC Communications, Keyprint Compendium, Animation With Atari, VIC Curiosities, Atari Substring Search, PET and VIC Electric Eraser.

September 1982: Apple and Atari and the Sounds of TRON, Commodore Automatic Disk Boot, VIC Joysticks, Three Atari GTIA Articles, Color Computer Graphics, The Apple Pilot Language, Sprites and Sound on the Commodore 64, Peripheral Vision Exerciser (multiple computers), Banish INPUT Statements (multiple computers), Charades (multiple computers), PET Pointer Sort, VIC Pause, Mapping Machine Language, Editing Atari BASIC With the Assembler Cartridge, Process Any Apple Disk File.

January 1983: Sound Synthesis And The Personal Computer, Juggler And Thunderbird Games (multiple computers), Music And Sound Programs (multiple computers), Writing Transportable BASIC, Home Energy Calculator (multiple computers), All About Commodore WAIT, Supermon64, Perfect Commodore INPUTs, Atari Autonumber, Copy VIC Disk Files, Commodore 64 Architecture.

March 1983: An Introduction To Data Storage (multiple computers), Mass Memory Now And In The Future, Games: Closeout, Boggler, Fighter Aces, Letter And Number Play (all for multiple computers), VIC Music, Direct Atari Disk Access, TRS-80 Color Computer Data Base, Apple Subroutine Capture, PET Quickplot, TI Graphics Made Easy, VIC and Atari Memory Management.

April 1983: Selecting The Right Word Processor, Air Defense (multiple computers), Scriptor: An Atari Word Processor, Retirement Planner (multiple computers), TI-99 Match-Em, Dr. Video For Commodore, Atari Filefixer, Video 80: 80 Columns For The Atari, VICword, Magic Commodore BASIC.

May 1983: The New Low Cost Printer/ Plotters, Jumping Jack (multiple computers), Deflector (multiple computers), VIC Kaleidoscope, Graphics on the Sinclair/Timex, Bootmaker For VIC, PET and 64, VICSTATION: A "Paperless Office," The Atari Musician, Apple Fast Sort, TI BASIC One-liners.

June 1983: How To Buy The Right Printer, The New, Low-cost Printers, Astrostorm (multiple computers), The Hawkmen Of Dindrin (multiple computers), MusicMaster For The Commodore 64, Commodore Data Searcher, Atari Player/Missile Graphics Simplified, TI Structured BASIC, UnNEW For The VIC and 64, Atari Fast Shuffle, VIC Contractor, Sinclair/Timex Screen Splitter.

Home and Educational COMPUTING!
(Fall 1981 and Summer 1981 – count as one back issue): Exploring The Rainbow
Machine, VIC As Super Calculator, Custom
Characters, Alternate Screens, Automatic
Line Numbers, Using The Joystick (Spacewar
Game), Fast Tape Locater, Window, VIC
Memory Map.

Back issues are \$3 each or six for \$15. Price includes freight in the US. Outside the US add \$1 per magazine ordered for surface postage. \$4 per magazine for air mail postage. All back issues subject to availability.

In the Continental US call TOLL FREE 800-334-0868 (In NC Call 919-275-9809)

Or write to **COMPUTE!** Back Issues, P.O. Box 5406, Greensboro, NC 27403 USA. Prepayment required in US funds. MasterCard, Visa and American Express accepted. North Carolina Residents add 4% sales tax.

A Beginner's Guide To Typing In Programs

What Is A Program?

A computer cannot perform any task by itself. Like a car without gas, a computer has *potential*, but without a program, it isn't going anywhere. Most of the programs published in **COMPUTE!** are written in a computer language called BASIC. BASIC is easy to learn and is built into most computers (on some computers, you have to purchase an optional BASIC cartridge).

BASIC Programs

Each month, **COMPUTE!** publishes programs for many machines. To start out, type in only programs written for your machine, e.g., "TI Version" if you have a TI-99/4. Later, when you gain experience with your computer's BASIC, you can try typing in and converting certain programs

from one computer to yours.

Computers can be picky. Unlike the English language, which is full of ambiguities, BASIC usually has only one "right way" of stating something. Every letter, character, or number is significant. A common mistake is substituting a letter such as "O" for the numeral "0", a lowercase "I" for the numeral "1", or an uppercase "B" for the numeral "8". Also, you must enter all punctuation such as colons and commas just as they appear in the magazine. Spacing can be important. To be safe, type in the listings *exactly* as they appear.

Brackets And Special Characters

The exception to this typing rule is when you see the curved bracket, such as "{DOWN}". Anything within a set of brackets is a special character or characters that cannot easily be listed on a printer. When you come across such a special statement, refer to the appropriate key for your computer. For example, if you have an Atari, refer to the "Atari" section in "How to Type COMPUTE!'s Programs."

About DATA Statements

Some programs contain a section or sections of DATA statements. These lines provide information needed by the program. Some DATA statements contain actual programs (called machine language); others contain graphics codes. These lines are especially sensitive to errors.

If a single number in any one DATA statement is mistyped, your machine could "lock up," or "crash." The keyboard, break key, and RESET (or STOP) keys may all seem "dead," and the screen

may go blank. Don't panic – no damage is done. To regain control, you have to turn off your computer, then turn it back on. This will erase whatever program was in memory, so always SAVE a copy of your program before you RUN it. If your computer crashes, you can LOAD the program and look for your mistake.

Sometimes a mistyped DATA statement will cause an error message when the program is RUN. The error message may refer to the program line that READs the data. The error is still in the DATA statements, though.

Get To Know Your Machine

You should familiarize yourself with your computer before attempting to type in a program. Learn the statements you use to store and retrieve programs from tape or disk. You'll want to save a copy of your program, so that you won't have to type it in every time you want to use it. Learn to use your machine's editing functions. How do you change a line if you made a mistake? You can always retype the line, but you at least need to know how to backspace. Do you know how to enter inverse video, lowercase, and control characters? It's all explained in your computer's manuals.

A Quick Review

1) Type in the program a line at a time, in order. Press RETURN or ENTER at the end of each line. Use backspace or the back arrow to correct mistakes.

2) Check the line you've typed against the line in the magazine. You can check the entire program again if you get an error when you RUN the program.

3) Make sure you've entered statements in brackets as the appropriate control key (see "How To Type COMPUTE!'s Programs" elsewhere in the magazine.)

We regret that we are no longer able to respond to individual inquiries about programs, products, or services appearing in **COMPUTE!** due to increasing publication activity. On those infrequent occasions when a published program contains a typo, the correction will appear on the CAPUTE! page, usually within eight weeks. If you have specific questions about items or programs which you've seen in **COMPUTE!**, please send them to Readers Feedback, P.O. Box 5406, Greensboro, NC 27403.

How To Type COMPUTE!'s Programs

Many of the programs which are listed in **COMPUTE!** contain special control characters (cursor control, color keys, inverse video, etc.). To make it easy to tell exactly what to type when entering one of these programs into your computer, we have established the following listing conventions. There is a separate key for each computer. Refer to the appropriate tables when you come across an unusual symbol in a program listing. If you are unsure how to actually enter a control character, consult your computer's manuals.

Atari 400/800

Characters in inverse video will appear like:

REMORED Enter these characters with the Atari logo key, (**)

when you see	Type	See	
(CLEAR)	ESC SHIFT <	rs	Clear Screen
(UP)	ESC CTRL -	+	Cursor Up
(DOWN)	ESC CTRL =	+	Cursor Down
(LEFT)	ESC CTRL +	+	Cursor Left
(RIGHT)	ESC CTRL #	+	Cursor Right
(BACK S)	ESC DELETE	4	Backspace
(DELETE)	ESC CTRL DELETE	C.	Delete character
(INSERT)	ESC CTRL INSERT		Insert character
(DEL LINE)	ESC SHIFT DELETE	0	Delete line
(INS LINE)	ESC SHIFT INSERT		Insert line
(TAB)	ESC TAB	-	TAB key
(CLR TAB)	ESC CTRL TAB	13	Clear tab
(SET TAB)	ESC SHIFT TAB		Set tab stop
(BELL)	ESC CTRL 2	E	Ring buzzer
(ESC)	ESC ESC	€.	ESCape key

Graphics characters, such as CTRL-T, the ball character • will appear as the "normal" letter enclosed in braces, e.g. {T}.

Commodore PET/CBM/VIC/64

Generally, any PET/CBM/VIC/64 program listings will contain words within braces which spell out any special characters: { DOWN } would mean to press the cursor down key. { 5 SPACES } would mean to press the space bar five times.

To indicate that a key should be *shifted* (hold down the SHIFT key while pressing the other key), the key would be underlined in our listings. For example, S would mean to type the S key while holding the shift key. If you find an underlined key enclosed in braces (e.g., {10 N}), you should type the key as many times as indicated (in our example, you would enter ten shifted N's). Some graphics characters are inaccessible from the keyboard on CBM Business models (32N, 8032).

For the VIC and 64, if a key is enclosed in special brackets, K > , you should hold down the *Commodore key* while pressing the key inside the special brackets. (The Commodore key is the key in the lower left corner of the keyboard.) Again, if the key is preceded by a number, you should press the key as many times as indicated.

Rarely, you'll see in a Commodore 64 program a solitary letter of the alphabet enclosed in braces. These characters can be entered by holding down the CTRL key while typing the letter in the braces. For example, {A} would indicate that you should press CTRL-A.

About the *quote mode*: you know that you can move the cursor around the screen with the CRSR keys. Sometimes a programmer will want to move the cursor under program control. That's why you see all the {LEFT}'s, {HOME}'s, and {BLU}'s in our programs. The only way the computer

can tell the difference between direct and programmed cursor control is the quote mode.

Once you press the quote (the double quote, SHIFT-2), you are in the quote mode. If you type something and then try to change it by moving the cursor left, you'll only get a bunch of reverse-video lines. These are the symbols for cursor left. The only editing key that isn't programmable is the DEL key; you can still use DEL to back up and edit the line. Once you type another quote, you are out of quote mode.

You also go into quote mode when you INSerT spaces into a line. In any case, the easiest way to get out of quote mode is to just press RETURN. You'll then be out of quote mode and you can cursor up to the mistyped line and fix it.

Use the following tables when entering special characters:

When Yo	u			When Y	ou		
Read:	Pre	SS:	See:	Read:	Pres	s:	See:
{CLEAR}	SHIFT	CLR/HOME		[GRN]	CTRL	6	#
{HOME}		CLR/HOME		[BLU]	CTRL	7	
[UP]	SHIFT	CRSR		{YEL}	CTRL	8	
[DOWN]		A CRSR		{F1}	f1		
{LEFT}	SHIFT	CRSR -		{F2}	f2		
[RIGHT]		CRSR -		{F3}	f3	line i	
{RVS}	CTRL	9		{F4}	f4		
{OFF}	CTRL	0		{F5}	f5		
{BLK}	CTRL	1		{F6}	f6		
{WHT}	CTRL	2		{F7}	f7		
{RED}	CTRL	3		{F8}	f8		
{CYN}	CTRL	4		4	•		
{PUR}	CTRL	5		1	SHIFT	4	m

All Commodore Machines

Clear Screen {CLR}	Cursor Left {LEFT}
Home Cursor { HOME }	Insert Character { INST}
Cursor Up {UP}	Delete Character { DEL}
Cursor Down [DOWN]	Reverse Field On (RVS)
Cursor Right (RIGHT)	Reverse Field Off (OFF)

Apple II / Apple II Plus

All programs are in Applesoft BASIC, unless otherwise stated. Control characters are printed as the "normal" character enclosed in brackets, such as {D}/for CTRL-D. Hold down CTRL while pressing the control key. You will not see the special character on the screen.

Texas instruments 99/4

The only special characters used are in PRINT statements to indicate where two or more spaces should be left between words. For example, ENERGY {10 SPACES} MANAGEMENT means that ten spaces should be left between the words ENERGY and MANAGEMENT. Do not type in the braces or the words 10 SPACES. Enter all programs with the ALPHA LOCK on (in the down position). Release the ALPHA LOCK to enter lowercase text.





VIC 20™/COMMODORE 64™

Investment Portfolio Manager - for the Commodore 64 with disk drive or tape (printer optional), is menu driven and provides one sumorive or tabe (primer optional), is menu driven and provides one summary page and nine detail pages. Each page can accept nine entries of up to \$99,999 each. The program can handle over \$8 million. The IPM is quick and makes it easy to track volatile assets such as stocks and stock options. The summary page displays the grand total and the per cent of grand total for each of nine investment categories. Price: \$14.95

Price: \$14.95

Disk Directory Manager — for the VIC 20 or Commodore 64 with 1540/41 disk drive and 1525 printer. The DDM is a handy utility which will read directly from the directories of diskettes and sort into an ordered list, over 1500 file names, file sizes, file types and disk ID's; and print a hard copy master directory. It is written completely in fast and efficient machine language, Price: \$19.95

Dungeons — for the VIC 20 with 16k expansion and tape or disk. Create characters to expore a twelve level duringon which contains

Create characters to explore a twelve level dungeon which contains 1200 individual rooms. After you purchase your weapon and armor, you will find vast treasures and do battle with over fifty types of monsters which you must slay for experience points. Your character also has the ability to cast numerous spells and you are given the option of saving the game to tape or disk as your character gains strength and experience. Excellent sound and three dimensional graphics add to the excitement. Price \$19.95

Pak Alien — for the unexpanded VIC 20 with tape or disk. 100% machine language arcade-style game. Custom graphic characters and 100 levels of increasing difficulty. Guide your alien through a maze of interplanetary space particles dodging the seven evil-aliens and clear the board before the bonus timer runs out. Joystick or keyboard. In-cludes pause feature. Price: \$14.95

BYTES and BITS 524 E. Canterbury Ln. Phoenix, AZ 85022

(602) 942-1475 Please specify tape or disk Add \$2.00 for postage and handling

VIC 20 and Commodore 64 are trademarks of Commodore Electronics Ltd.

PD/BL all features of Promqueen less mimic mode Software enhanced to include EPROM QC utilities, RS-232 communication, printouts. 28 pin ZIF socket.

Reads, edits runs and programs all 5 volt 2500 and 2700 series EPROMS plus variety of EEPROMS all without personality modules. Commodore C-64 host computer. Inquire about the mimic mode capability in our VIC Promqueen.



\$299.00

ROM Packs Industrial quality circuit cards are socketed, solder masked, fully bypassed, and include a ground plane for low noise operation. Includes 1 EPROM. 8K & 16K models for VIC-20 and C-64. Specify 2732 or 2764 EPROM type. Molded \$39.00 plastic case.

GLOUCESTER COMPUTER 1 Blackburn Center, Gloucester, MA 01930 617-283-7719

COMMODORE 64 **USERS GROUP MEMBERSHIPS**

With software purchase, Send for your FREE DIS-COUNT software cataloge today! Group benefits include:

- Newsletter (full of programs, reviews & ideas)
 Access to extensive club library
 Questions hot-line
- Free ads for members
- Contests
- Software and hardware locator service
 Members only repair service
 AND MUCH MUCH MORE!!!

MEMBERSHIPS ALSO AVAILABLE WITHOUT SOFTWARE PURCHASE

Write or call today for FREE Cataloge 803/797-1533 LORDS OF BASIC P.O. Box 459, Dept. 101 Ladson, SC 29456 Distributor & Dealer Inquiries Invited VIC-20 • Commodore 64 are Reg. TM of CBM

'PUBLIC DOMAIN' - SOFTWARE -

Supporting all COMMODORE computers Written by users, for users

★ GAMES ★ UTILITIES ★ EDUCATIONAL ★

VIC 20™

collection #1 - collection #2 - collection #3 collection #4 - collection #5 70+ programs per collection - Tape/Disk - \$10.00

COMMODORE 64™

64 collection #1 - 64 collection #2 64 collection #3 - 64 collection #4 25+ programs per collection - Tape/Disk - \$10.00

PET® / CBM®

5 Utility - Tapes/Disks - \$10.00 each 11 Game - Tapes/Disks - \$10.00 each 6 Educational - Tapes/Disks - \$10.00 each

DINSET": Reset Switch Works on Vic 20 or Commodore 64 - \$5.00

All prices include shipping and handling. CHECK, MONEY ORDERS, VISA and MASTERCARD accepted.

For A Free Catalog Write:

Public Domain, Inc

5025 S. Rangeline Rd., W. Milton, OH 45383 10:00 a.m. - 5:00 p.m. EST - Mon. thru Fri. (513) 698-5638 or (513) 339-1725 VIC 20", CBM* and Commodore 64" are Trademarks of Commodore Electron PET" is a Registered Trademark of Commodore Business Machines, In

QENERAL SYSTEMS CONSULTING

2312 Rolling Rock Drive
Conley, Georgia 30027
CASSETTE SOFTWARE
SINCLAIR ZX61
TIMEX SINCLAIR TX06
TIMEX SINCLAIR T500
COMMODORE VIC20
TIMEX SINCLAIR 1500
T199/4A
TRS80 COLOR
COMMODORE 54
DESIGNED TO HELP MONITOR
YOUR FINANCES
16K MINIMUM FOR
T/S 1000 & ZX81
EXTENDED OR NOR-EXTENDED
FOR TIA TRS80



"At least 3K expension ""At least 8K expension	ZX81 T/S 1000 T/S 1500	VIC 20	TRS 80	TI 99/4A	COMM 64	YOUR
AMORTIZATIONS (LOANS)	14.95	15.95	16.95	17.95	18.95	
BAR CHARTS	15.95	1115.95	17.95	18.95	19.95	-
ANNUITY EVALUATION	14.95	15.95	16.95	17.95	18.95	
FILE MANAGER	14.95	*15.95	16.95	17.95	18.95	
BANK STATEMENT BALANCER	14.95	15.95	16.95	17.95	18.95	
CHECKBOOK SIMULATOR	14.95	NA	NA	NA	NA	
DEPRECIATION STRAIGHT LINE	14.95	15.95	16.95	17.95	18.95	
DEPRECIATION DECLINE BALANCE	15.95	16.95	17.95	18.95	19.95	
DEPRECIATION ACRE	16.95	*17.95	18.95	19.95	20.95	
DIET PLAN	12.95	NA	NA	NA	NA	
HOME BUDGET	15.95	**16.95	17.95	18.95	19.95	
HOME INVENTORY	14.95	15.95	16.95	17.95	18.95	
HOME PAYABLES	14.95	NA	NA	NA	NA	
HOME EQUITY EVALUATION	14.95	15.95	16.95	17.95	18.95	
REAL ESTATE INVESTING	15.95	**16.95	17.06	18.95	19.95	
SAVINGS INVESTIGENT ANALYSIS	15.95	**16.96	17,96	18.95	19.95	
IRS 1040 LONG FORM	29.95	**32.95	34.95	37.96	39.95	
IRS 1040A SHORT FORM & 1040EZ	24.95	**27.96	29.96	32.96	34.95	
INCOME TAX PROJECTIONS	16.95	**17.95	18.95	19.95	20.95	
IRA ANALYSIS	14.95	15.95	16.96	17.95	18.95	
DISK FILE CONCEPTS	NA	**24.95	NA	HA	29.95	
	TOTAL Y	OUR PRI	CE			
	1ST CLA	38 POST	AGE H	ANDLIN	ю	3.00
NAME	GA RES	DENTS 3	% SAL	ES TAX		
ADDRESS	ADD 5.0	O FOR DE	SK (Co	mmodo	re Only)	
CITYSTATE	TOTAL	PRICE				

VIC-20/C-64 TERMINAL SOFTWARE

OUTPUT TO PRINTER
UPLOAD/DOWNLOAD PROGRAMS

Store your data on tape, read it back, download, or make a printed copy off line, Save on line time. Requires 8K or more EXP on VIC. (Disk Version \$27°5)

\$2495 ON CASSETTE SPECIFY VIC OR C-64

Also Available - Math Tutor (more than mere drill) add subtract - multi. - div. - 4.95 ea. or all 4 - 12.95 Now Available! Christmas (Graphics & Sound)



"EASY-BYTER" EPROM PROGRAMMER FOR VIC & 64 \$8995 ON CASSETTE

Programs 2758, 2716, 2732, 2732A, 2532, 2764 and 27128

Eproms. Fully buffered with built in po Fully buffered with built in power supplies. Double regulation design on VPP supply prevents spikes that can destroy Eproms. Utilizes USER PORT, leaving expansion port free.

Uses Personality Modules (3 of your choice included with order, others optional @\$5.00)

Checks crouse transfers ROA.

Checks erasure, transfers ROA data to RAM, verifies. Z.I.F. socket

ELECTROSHARP TECHNOLOGIES

1981 SANDALWOOD DR., SANTA MARIA, CA 93455 Check, Money Order, or C.O.D. 805-922-4095 Calif. Residents Add 6% 805-736-0288

HEXADECIMAL DESK CLOCK



Solid mahogany timepiece represents the time in base sixteen. Features include: handrubbed finish, gold tone characters and hands, and a quartz movement accurate to within 10 seconds per month. Clock measures 4½ in. square, can be hung (bracket included), and runs for over 1 year on a standard AA battery. An attractive addition to the work area of any computer professional or hobbyist. Only \$18.95 plus \$1.50 shipping & handling.

PA residents add 6% sales tax Please allow 3-5 weeks for delivery. Send check or money order to:

TITITME

P.O. Box 403, Ambler, PA 19002

CARD NO. ____

CHARGE MY: VISA MC

1/2 PRICE INTRODUCTION

VIC • C-64 • TI-99

Spreadsheet	19.95
File Manager	19.95
Word Processor	14.95
Payroll	14.95
Mailing List	14.95
Inventory	14.95
Statistics	14.95
Personnel File	14.95
Checkbook	9.95
Budget	9.95

California Residents add 6.5% Tax For FREE Catalog Write:

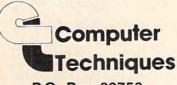


ME24K

24K RAM memory expansion unit for Commodore Vic 20th

\$94.99 + \$3.00 for shipping and handling

Address orders and inquiries to:



P.O. Box 80756 Sioux Falls, S.D. 57116

Vic 20 is a trademark of Commodore Electronics Ltd.



VIC-20

MATH MENACE\$9.00

Kids fight off alien invaders while drilling in ADDITION, SUBTRACTION, MULTI-PLICATION and DIVISION.

BLACKJACK \$9.00 GREAT GRAPHICS! Las Vegas style. All options: Split Pairs, Double Down,

LETTER WRITER\$9.00
For use with your VIC PRINTER.

CHARACTER DESIGNER..\$9.00 Design CUSTOM CHARACTERS for

use in your own game programs. ALL PROGRAMS RUN ON UNEXPANDED

VICI (3.5K)

• BUY ALL 4 PROGRAMS FOR \$30.00 AND RECEIVE A BONUS PROGRAM FREE!

ADD \$1.00 FOR POSTAGE

MarshMallow Software Box 3810 Bozeman, MT 59772

VIC-20 Trademark of Commodore Business Machines

KINDER KONCEPTS

30 PROGRAMS FOR KINDERGARTEN CHILDREN READING READINESS, MATH CONCEPTS, PERCEPTION, COLORS, SHAPES, ETC.

Disks \$39.50 for 5 programs* All 30 on 1 disk with Backup - \$175.00

For COMMODORE PET® and 64,TM and APPLEII +

We also carry "Master Grades", "Multiple Choice" 'Football Scout' and other useful programs for

Please add \$2.00 per disk for shipping & handling.

MIDWEST SOFTWARE BOX 214 • FARMINGTON, MI 48024

Phone: 313-477-0897 (4:00 pm - 11:00 pm)

Please send for complete descriptions and ordering

- Sample disk with 2 programs for \$10.00.
- and TM trademarks of Commodore Business Machines and Apple Computer Company

CREATIVE FINANCE FOR THE C-64

A FULL feature finance system that is truly PERSONAL. Check these Features!!!

- Keeps running totals of savings, charges, loans, etc.
- Stores all transactions for a complete record system.
- Sorts by 24 categories (easily expanded to 100 if you like).
- Sorts out tax deductible items.
- Complete budgeting system.
- · Easy and quick to use.

Best of all, CREATIVE FINANCE comes with a program listing and complete instructions on how to tailor the system to YOUR personal needs. Disk system only!

Send check or money order for \$34.95 to:

Creative Image

P.O. Box 9, Green Bay, Wi. 54305

Magreeable

STOCK HELPER™

Stock HELPER is a tool to maintain a history of stock prices and market indicators on diskette, to display charts, and to calculate moving averages. Stock HELPER was designed and written by a "weekend investor" for other weekend investors. Stock HELPER is available for \$30.00 U.S. or \$37.00 Canadian plus shipping.

(M)agreeable software, inc.

5925 Magnolia Lane • Plymouth, MN 55442 (612) 559-1108

HELPER is a trademark of (M)agreeable Software. Inc. Commodore is a trademark of Commodore Electronics Ltd

VIC-20 USERS CARTRIDGE BACK-UP

- PROTECT YOUR INVESTMENT
- BACK-UP YOUR CARTRIDGES ONTO CASSETTE OR DISK
- SAVES WEAR ON YOUR CARTRIDGES AND THE MEMORY PORT
- BACKED-UP CARTRIDGES RUN LIKE ORIGINALS (8K RAM REQUIRED)
- SYSTEM IS AN EASY TO USE PROGRAM AND A HIGH QUALITY CARTRIDGE INTERFACE BOARD

\$49.95 POST PAID CASSETTE BACK-UP

- PROTECT YOUR INVESTMENT
- BACK-UP ANY CASSETTE TAPE ONTO TAPE OR DISK
- **FASY TO USE PROGRAM**
- REQUIRES NO USER MEMORY

\$19.95 POST PAID

VISA/MASTERCARD ORDERS: PHONE (215) 269-4803 SEND CHECK OR MONEY ORDER TO: E-M TECHNOLOGIES

P.O. BOX 185 DOWNINGTOWN, PA. 19335 PA RESIDENTS ADD 6%

6 MONTH REPLACEMENT GUARANTEE

FREE FREE FREE for C64/V20*

One 3 piece set of the finest quality, hand made computer covers for the C64/V20* printer and disk drive. A \$23.95 value!...When you enter your one year subscription to SOFTYPE...Why spend hours of typing?...Avoid frustrations!!! Let SOFTYPE do it for you!...for as little as \$3.99, we will send you one menu driven tape or diskette* a month with all the public domain programs for your C64/V20* printed in the monthly issues of this magazine. Order now!!!...before the Christmas rush.

C64* 1 year subscription to **SOFTYPE** V20* (with FREE covers) \$47.8 (with FREE covers) \$47.88

☐ Set of three covers... Only \$23.95 (Texas add 6% sales tax)

One month of **SOFTYPE**...
**Add \$1.75 for disk version per issue \$3.99

Send check or money order to:

SOFTYPE 1807 Cobble Creek Houston, Texas 77073

*TRADEMARK OF COMMODORE BUSINESS MACHINES YOU PAY ONLY FOR THE SERVICE AND TAPE. THE PROGRAMS ARE FREE.

Fwww.comprocore.ca



The Banner Machine™ —\$49.95

• For the Commodore 64, tape or disk (5 fonts)

• For the VIC-20 with 24K memory and disk

• For the TRS-80 1 & III with 32K tape or 48K disk

• Print on any Epson RX, FX, or MX with Graftrax;

CBM 1525; Gemini 10X; or 8510 Prowriter

• Uses dot graphics instead of block graphics

• Uses dot graphics instead of block graphics

Menu-driven program operates like a word processor
Makes signs up to 13" tall by any length (TRS-80: 10")
Makes borders of variable width up to ¼ inch

8 sizes of letters from 3/4" to 81/2" high (TRS-80: 10 sizes Proportional spacing

Automatic centering; Right and left justifying; Tab Specify equipment and configuration when ordering



Cardinal Software

Virginia Micro Systems 13646 Jeff Davis Highway Woodbridge, Virginia 22191 Phone (703) 491-6502



DISK DUPLICATOR FOR COMMODORE SINGLE DISK DRIVES

(1540, 1541 and 2031 used with a VIC-20, commodore 64, CBM 4000 or CBM 8000 computer)

DISK DUPLICATOR provides you a fast and easy way to make back-up copies of your precious, irreplaceable diskettes. Enjoy the convenience of a dual disk drive without the expense. DISK DUPLICATOR is 100% MACHINE LANGUAGE, 100% FAST, and most importantly, 100% AFFORDABLE!

Don't let an accident or mistake catch you without back-up copies of all your diskettes. ORDER "DISK DUPLICATOR" TODAY at the special introductory price of only \$14.95 postage paid (check or money order only please).

H&H ENTERPRISES DEPT. 123C 5056 NORTH 41st STREET MILWAUKEE, WISCONSIN 53209

GAMBLERS T1-99/4A PROGRAMS

Practice "Texas Holdem". A poker game that's the rage of the gambling casinos and card rooms. Written in standard basic by a gambler for a gambler. You can bet, check, fold and analyze what hand is needed to win the pot. Why play against the house? 'Holdem" is played at tables provided by the casinos. Practice at home then have the edge when you go to a casino or card room.

Also available "Keno". Practice the game with the big money payoff. Other casino games available soon.

Send \$21.95 check or mo. + \$2.00 shipping for each cassette and instructions. Washington residents add \$1.60 sales tax.

> **GAMBLERS HELPER** HOUSE OF SOFTWARE P.O. BOX 2797 TRI-CITIES, WA. 99302

"THE CAMBLERS FRIEND"

HOME BUDGET FOR

COMMODORE 64E

COMPLETE system for planning and track ing your home budget

RECORD tax deductable items, bank charges, deposits & expenses

RECALL data by catagory, month and amount

CALCULATION of all balances

POWERFUL tax tool

EASY to use documentation

MENU driven with PRINTER option

\$29.95

SPECIFY TAPE OR DISK

RMC SYSTEMS CO., INC. 244 Scherr Hills Berrien Springs, MI 49103 (616) 683-6829

Dealer Inquiries Invited.

Commodore 64 is a registered trademark of Commodore Business Machines.

DISKETTES

100% CERTIFIED

TO ORDER CALL 1-800-322-DATA

DISCOUNT DATA SUPPLY P.O. 02183 PORTLAND, OR 97202

LIMIT 100 DISKETTES PER ORDER

TI 99/4A

ENHANCE YOUR CHILD'S MUSIC EDUCATION

with fun skill-building games. Sound, color graphics -Progressing levels of play.

"Notes in a Nutshell"—5 finger patterns
"Lollipops and Lemons"—Note names
"Create a Creature"—Sightreading groups
"Ski with a Count"—Note values

Levels 2-4

"Artesian Escape"—8th or 16th note patterns
"On the Beating Path"—6/8 rhythm or 16th notes
"Extra-terrestrial Rescue"—Order of sharps or flats—(Joystick required)
"Pizza Go 'Round'—Major keys (Joystick

required)

"Dine with Dragons"-Minor keys

Disk or Cassette EXTENDED BASIC REQUIRED \$19.95 plus \$1.50 Shipping Colorado residents add 4% tax

SOUNDWARE P.O. Box 7026, Contract Stat. #6 Littleton, CO 80123

UP TO 30% OFF LIST FOR THE COMMODORE 64 ATARI 400/800/1200 VIC 20 · APPLE · TI99/4A

ALSO AVAILABLE AT LOW PRICES! GAME CARTRIDGES FOR COLECO-VISION AND ATARI 2600 AND 5200 MOVIES FOR VHS OR BETA UNITS.

Write for our FREE Catalog





354 Lancaster Ave., Suite 212 Haverford, PA. 19041

SOFTWARE COMMODORE 64

The Staff: Polyphonic Music Editor & generator. Enter up to 93 measures of 3 part harmony on easy to use graphic display. Disk: \$22.95 for 64, \$17.95 for VIC. Tape: \$19.95 for 64, \$14.95 for VIC. Add \$1.50 for Postage and Handling.

We have a large selection of software for the 64-Word Processors, Data Base, Mailing List, Accounting Package, Spread Sheet, Educational Applications, Home and Personal Record Keeping, Programmers Aids, Games

ASK FOR FREE CATALOG

Check or Visa, MasterCard accepted

PROFESSIONAL MICRO SERVICE 100 W. 22nd St., Baltimore, Md. 21218 301-366-0010 Dealer inquiries invited.

Centronics® 152-2



Replacement Ribbon

Manufactured by Aspen Ribbons, Inc. Buy direct from manufacturer & save.

Standard ink color is black. Red, green, blue, brown, & purple colors are available for \$2.00 extra per ribbon.

PRICES

Centronics® 152-2 \$3.75 to \$6.50 ea. Price depends on quantity ordered.

CALL FOR FREE CATALOGUE

Aspen Ribbons, Inc. is not affiliated with any company mentioned in this ad,

Aspen Ribbons, Inc. 1700 N. 55th St. Boulder, CO 80301 2796 (303)444-4054 Telex: 45-0055 End User: 800-525-0646 Wholes ale: 800-525-9966

GET THE MOST FROM YOUR VIC-20/C64

CASSETTE INTERFACE

- STANDARD CASSETTE ER TS TO THE CASSETTE



THE MODEM INTERFACE

- S TO THE USER I/O PORT BATTERIES/SOLDERING S ANY STANDARD
- DDEM AUTODIAL/ANSWER ES WITH A FREE TYPE IN ERMINAL PROGRAM 24 PS POSTPAID ADD ST IPPING OUTSIDE US



CHARGE OR COD ORDERS CALL 1-800-227-3800

ASK FOR OPERATOR 225

BYTESIZE PO BOX 12309 DEPTDM SEATTLE, WA 98111 [206] 236-BYTE
CALL OR WRITE FOR DEALER INFORMATION

FREE CATALOG!

HOME, EDUCATIONAL, AND **BUSINESS SOFTWARE** FOR THE VIC AND 64

New Items

Mailing List/64 Disk features sorting and mailing labels. \$16.00 Typing Practice improves typing speed and accuracy, 64/disk\$8.00 VIC/TAPE \$6.00

Over 50 other titles! Low-Priced! Practical! Put your VIC or 64 to work with quality software from

> Farthest Fringe S.A. 101 Highway Blvd. N. Pekin, IL 61554

EXCALIBER ENTERPRISES

carries

SOFTWARE

for your

- Commodore 64
- VIC-20
- Texas Instruments 99-4/A
- Timex Sinclair 1000
- Atari Home Computers

Official Company and Third Party Software Hardware Peripherals Also Available

For Your FREE Catalog Circle Reader Card Number Available in the Advertiser Index or Write



Excaliber **Enterprises**

Dept. N83 Box 4775 Riverside, CA 92514 (714) 359-8567

Zip

R.I.S.T. Inc. ANNOUNCES SPEECH ACT

Phrase Finder Program "55 VALUE FREE" Speech Synthesis Manual | 510 VALUE FREE

ORDER NOW

Apple II, II+

TRS80 Models I, III Commodore 64, VIC 20

ZX80/81 and TS1000

Regularly \$89.95

Now Only \$59.95 + \$4.00 sh/hd.

Complete or Starter Kits Available

Send check of M Oney-Back Guarantee **Send check of M O. COD add \$1.50 to R I S T. inc.
Dept G210. P O. Box 499 Ft. Hamilton Station
Brooklyn, NY 11209 212-259-4934.
N Y S. RESIDENTS ADD 8 % TAX

\$99 32K STATIC RAM 4 SLOT BUSS EXPANDER \$44 DIRECT CONNECT MODEM \$99 PROM BURNER

2716,2732,2764,27128

COMMODORE

DIRECT CONNECT MODEM \$99 7 SLOT BUSS EXPANDER \$69 BUFFERED EPROM BOARD \$69

WRITE FOR MORE INFO IBM APPLE CBM COMPATIBLE PRODUCTS AND BARE BOARDS

> **BAZ ELECTRONICS** PO BOX 4895

FEDERALWAY, WASH 98003 800-858-8020 MASTERCARD VISA

VIC 20/COMMODORE 64 ASSEMBLER

- Editor/Assembler Monitor Package
- Full Featured Assembler
- Outstanding Machine Language Text Editor
 Complete Machine Language Monitor including: Hex Dump, Dissassembler, Load, Save, Change, Trace, etc. indispensable for Assembly Language debugging.
- Full Documentation
- Fully Copyable

City

PRICE \$50.00 (U.S. FUNDS) COMPLETE, DISK OR CASSETTE

Minimum 8K Memory Expander required on VIC 20

16K _24K___32K___add on VIC 20 8K VIC 20 8K ____ 16K ___ 24K memory Commodore 64_ Disk __ Cassette ____ Name Address

> Send Check or Money Order to: (Allow 3 weeks for checks) MICOL Systems P.O. Box 5150 Whittier, CA 90607-5150

State

MICOL Quality Systems Software DEALER INQUIRIES WELCOME

* MUSIC

WORDPROCESSING FOR THE VIC-20 AND C-64



- Screen edit
 Up to 10 tabs
 Search and replace Save/load/merge
- 1024 color combinations
- Be more creative and efficient by using the Scribe's easy-to-learn menu-driven features. Within minutes use:
- Move
- Insert
 Scroll
- Word wrap • Center
- Formatted printing; Margin adjust; right justify; Single, double, or triple space
 With some printers: graphics, underline, and special characters

For a limited time you can obtain the Scribe at a Special Introductory Price:

VIC-20 (Specify 16K or 24K version) Commodore 64 version

\$29.05 \$16.95 \$19.95 Add \$3.00 for discs. Specify your type and

model printer. Send a check or money order (including \$3.00 for mailing) to:

Scribe Associates
P.O. Box 292648, Dayton, OH 45429 Allow 3 weeks for personal checks Ohio residents add 6% sales tax

VIC-20 and C-64 are trademarks of Commodore Business Machines, Inc. Dealer Inquiries Welcomed



SAVE MORE THAN EVER ON Scotch DISKETTES!

5¼" DSDD (745) ---

Qty. 20

5¼" SSQD—96TPI (746) 5¼" DSQD—96TPI (747) \$3.95 ea (Specify soft, 10 or 16 sector.) \$2.07 ea 8" SSSD (740) SSDD (741) DSDD (743) \$2.54 ea. \$3.30 ea. (Specify soft or 32 sector.)

Save even more on quantity orders!

Minimum Order: 20 diskettes. Add \$3.00 shipping per 200 diskettes. C.O.D. charge \$1.65 additional.

Visa · Mastercard · Checks For fast service, call

DISK WORLD!

Nationwide: 1-800-621-6827 In Illinois: 312-944-2788
Suite 4806 • 30 East Huron Street • Chicago, Illinois 60611

Authorized Distributor Information Processing Products

And now for your

Note Pro

Call

301-366-8138

Note Pro I-Starter sound and music editor. Tape-\$24.95, Disk-\$27.95

Note Pro II - Advanced sound and music editor. Tape-\$46.96, Disk-\$49.95

Powerful Utility Software

for creating

* SOUND EFFECTS

* HI-RES GRAPHICS

Note Pro Bridge-Copyable machine language routine which can be added to your programs to give high speed SID control and play of Note Pro files.



Plot-a-lot - Hi-res drawing board. Use hi-res screens in your own Tape-\$14.95, Disk-\$17.95

+ Order Today

* Dealer Inquiries Welcomed

Tape-\$24.95, Disk-\$27.95

Electronic Industries

P.O. box 7167 100 W. 22nd Street Balto., Md. 21218

Free **Brochure!**

-www.econqqqqdare.ca

BEAT THE HIGH COST OF SOFTWARE

Before you buy any more software, you owe it to yourself to join S♥FTRADERS™ the fastest growing worldwide trading network. Members swap software and info for all computers.

Annual membership includes:

- Quarterly trading directories
- Monthly and flash updates
- Personalized trader listings
- Trader support systems
- Plus much more

Imagine having access to hundreds, even thousands of programs, each costing no more than the price of a stamp or phone call. Join now to beat the price increase and find out about the new member \$\$ offer, \$49.95 U.S. \$64.95 FOREIGN, SASE for info. Indicate computer model.

S₩FTRADERS™ INTERNATIONAL

1610 Shomaker Dr. Murphysboro, IL 62966

ATARI AND VIC-20

CONFRONTATION AT VEGA THREE: The spacewar strategy-adventure game that transforms your computer into a starship. Realistic tactical displays, intelligent enemy ships and full-blown command logic make this one a galactic commander's dream! (16K required) \$12.95 on cassette
TRIPLE PLAY: Three games for less than the

price of one: X-Patrol, Pickups, and Balls! (no expansion required) \$9.95 on cassette

Send check or m/o to:

Jacksonville Beach, FL

Prices include postage/handling. Florida residents add 5% sales tax. Atari & VIC-20 are registered



FLIGHT SIMULATOR GAMES

Sky Pilot (8K VIC-20) \$18.00 Runway 20 (16K VIC-20) \$25.00 Runway 64 \$25.00 Micro-Pilot (EPSON HX-20) \$18.00

ADD \$200 FOR DISK VERSION

TORPEDO!



Submarine Battle Games 8K VIC-20 or Commodore 64 \$25.00

SUSIE SOFTWARE

709 Wilshire Dr. Mt. Prospect, IL 60056

(312) 394-5165

AAAAAAAAAAAAAAAAAA HAVING LOADING PROBLEMS?



GET A Z-DUBBER

CHARGE OR COD ORDERS CALL 1-800-227-3800

ASK FOR OPERATOR 225

BYTESIZE PO BOX 12309 DEPT DM SEATTLE, WA 98111 MIGRO TECHNOLOGY (206) 236-BYTE CALL OR WRITE FOR DEALER INFORMATION

JUKI 6100



- Word processing and graphic functions
- Proportional spacing control
- Uses IBM Selectric ribbons
- Compatible with Kaypro, IBM, Apple, Osborne, and others.

Free shipping in U.S. V/5/

2420 University Ave., San Diego, Ca. 92104

more (619) 291-1442

SAVE 35%, 50% OR MORE

on your computer purchase. Dealer close-out on micros, printers, programs, and accessories.

FOR EXAMPLE	RETAIL	YOUR
CBM 4022 Printer	695.00	395.00
Smith Corona TPI	995.00	595.00
CBM 64K Expansion	500.00	290.00
BPI A-R	495.00	195.00
Eagle III	4995.00	3995.00
Okidata 83A Printer	995.00	595.00
DESCRIPTION	Your Price	Save
NEC 9" green monitor	189.00	138.00
NEC 9" green monitor NEC general acct	189.00 395.00	138.00 237.00
NEC 9" green monitor NEC general acct. NEC DBASE II	Charles Strong	Charles and the same
NEC general acct	395.00	237.00
NEC general acct	395.00 700.00	237.00 450.00
NEC general acct. NEC DBASE II EBS A/R CBM	395.00 700.00 1000.00	237.00 450.00 500.00

Catalog lists hundreds of good buys from various dealers. You can make your own deal via phone.
TO ORDER current catalog send \$5.00 check or VISA/MC number with expiration date.

> CompuAd Enterprises 1537A Fourth Street, Suite 125 San Rafael, California 95401

8 S and Visuals X Full Chord Capability 8

Excellent Song Reproduction Spectacular Full Color Graphics

Silent Night. We Three Kings, Joy To The World, It Came Upon A Midnight Clear. The First Noel, Jingle Usells. Hark The Herald Angels Sing, O' Little Town of Sethlehem. Away In A Manger, O Come All Pelisthiul. God Rest Ye Merry Gentlemen, We Wish You A Merry Christmas. Deck The Halls, O Christmas Tree. Plus A Mystery Songle For Use With

TI 99/4A (Cassettes only) Comodore 64 (Cassettes & Disks) CASSETTE: \$19.95; DISK: \$24.95

> Plus S2.- for postage & handling Personal Checks, allow 2 weeks extra for delivery Washington Residents add sales tax. Dealer Inquiries Welcome

O.Box 9204 Dept. C10, Renton WA 98055, (206) 228-1249 C

BUSINESS PACKAGE

- Accounting Ledger
- Letter Writer
- · Mail-Out

IBM (Peanut) VIC-20 TI-99/4A COM-64

In Ga. 1-404-925-4686

BIZWARE, INC. 5014 Hwy. 29 Lilburn, Ga. 30247

Reg. \$159

Features:

- Inventory Control

Toll Free 1-800-221-7171

ATTENTION TEXAS INSTRUMENTS TI-99/4A **OWNERS**

We have hundreds of 3rd party independent software programs on cassette and disk ready to run on your TI-99/4A. Games, business, and educational programming at discount prices as low as \$8.95 ea. Plus all TI hardware and software at incredibly low, low prices, including the new TI-99/2 and CC-40 computers. We also have dust covers, heavy duty joysticks with TI adapters, and many more accessories. Call or write now for a FREE listing. We ship your order U.P.S. the same or next business day to insure fast service. Visa and MasterCard accepted (NO service charges) or C.O.D. is okay

THE MUSIC WORKSHOP

59 E. Tioga St. Tunkhannock, PA 18657

CALL 1-717-836-4522

Swww.commodore.ca

DUST COVERS

For Personal Computers, Peripherals. Game Units - Protective, Long-Lasting Vinvl Resists Both Dust and Liquids.

- CHOICE OF COLORS -

IBM PC Amdek Mattel Apple Atari Rana Systems вмс Sanyo Commodore Star Micronics TI 99/4 Coleco Timex Sinclair Epsom Franklin Ace **TRS 80**

FOR FREE BROCHURE WRITE:

ENCHANTED FOREST P.O. Box 5261, Newport Beach, CA 92662 (1129 W. Balboa Blvd.)

FREE CATALOGI

JEWEL THIEF JEWEL IHIEF
ADVENTURE GAME - \$19.95
CAN YOU BREAK INTO THE CRYSTAL CITY
MUSEUM AND STEAL THE 'BLUE VALLABY'
DIAMOND WITHOUT BEING CAUSHT?
FOR: VIC28 - REQUIRES BK EXPANDER
ZX81/TIMEXI888 - REQUIRES 16K
COMMODORE 64 (\$29.95)
KAYPRO II (\$29.95) KAYPRO II (#29.95 ATARI 888 (#29.95)

ANDROID

STRATAGY GAME - \$24.95
RETREIVE THE S.S.R. FROM THE ALIEN
ANDROIDS. GET PAST INTERCEPTERS,
DESTROYERS. AND THEN GEORGE.
FOR: VIC29 - REQUIRES 16K EXPANDER
ZYSTYTHEXISSS - REQUIRES 16K
COMMODORE 64

AVAILABLE ON CASSETTE OR DISK.
ADD #1.88 FOR EACH DISK ORDERED.
CHECK OR MONEY ORDER (NO C.O.D.).
FORIEGN ORDERS ADD #2.88.
ORDERS PROCESSED IN 1-3 DAYS.

DEALER INQUIRIES INVITED. *

MORE PROGRAMS AVAILABLE. SEND FOR FREE CATALOG.

CRYSTAL MICROSOFT LTD.



P.O. BOX 440852 HOUSTON, TX. 77244

Makes checks as welcome as cash

THE WORLD'S FIRST PRO-STRENGTH AEROSOL COMPUTER PROGRAM DEBUGGER



IF PROGRAMS ARE DRIVING YOU BUGGY THEN

Let Us Zzzap You A 12 oz. Can. Just Send \$5.12 (of course) Plus \$1.00 (For Postage And Handling.) NAME

ADDRESS_

CITY

STATE_ Check Or Money Order Payable To:

STARKK ENTERPRIZES P.O. BOX 5367

LYNNWOOD, WA 98036-0880

(WA. Residents Add 7.3% Sales Tax)

COM-64

40/80 Columns

are now available from Sound Software. These unique programs work with your computer's operating system. Color, double-wide characters and graphics make these packages much more versatiph than expensive hardware devices.

SOFTSPAN 40-

For the VIC-20, 40 columns to write and run programs. Hi-res graphics and text can be easily combined. Includes manual. Requires 8K (or more) memory expansion.

cassette \$29.95 disk\$34.95

SOFTSPAN 80-

For the Commodore 64, 25x80 column display for all your programming needs (requires monitor). Great for business applications. Includes manual cassette \$29.95 disk \$34.95

> Sound Software 2845 Alpine St. SE Auburn, WA 98002

Send check or money order. Sorry, no COD's. Add \$2.00 postage and handling. WA residents add 8.1% sales tax.

— DEALER INQUIRIES INVITED—

VIC-20 and Commodore 64 are registered tresomarks of Commodore Electronics, Ltd.

C-2

FIVE COMPLETE UTILITY PROGRAMS FOR THE HOME OR SMALL BUSINESS

- 1. MAILING LIST
- HOME INVENTORY
- 3. CHECKBOOK ORGANIZER
- 4. IRA PLANNER
- 5. PERSONAL FINANCE

ALL FIVE FOR ONLY:

(ON CASSETTE) SEND CHECK OR MONEY ORDER TO:

> DISCOUNT SOFTWARE 122 FRANCIS AVENUE RIVERSIDE, RI 02915

You wouldn't buy a computer with part of it missing, would you?

Then you shouldn't buy less than a complete compiler!



Our compiler compiles the full basic set for the 64, and it's only \$29.95

SEND CHECK OR MONEY ORDER TO:

JO W LABORATORIES

2116 EAST ARAPAHO, SUITE 371 RICHARDSON, TX 75081

> PERSONAL PERIPHERAL PRODUCTS presents: SPEAKEASY

VIC-20 SPEECH



COM-64 SPEECH

Cartridge, Instructions & Dictionary...........\$59.00
FALL SPECIAL: Cassette Editor & Extension Speaker, Reg. \$19.95, with SPEAKEASY. FREE\$12.95 BARE BONES BOARDS

Assembled Kit 8K Ram/VIC-20 Block Switched \$29.95 \$24.95 16K Ram Expander for VIC-20 \$49.95 \$44.95 3 Slot Switched & Fused Board/VIC-20 \$24.95 \$19.95 NEW: 4 Slot Switched & Fused Board/COM-64 \$44.95 \$34.95 COMING SOON: Mighty Modem

VIC-20/COM-64 . S79.95
ADD \$2.00 Total Order Handling/III.Residents Add: 6 % Sales Tax
PERSONAL PERIPHERAL PRODUCTS
P.O. BOX 3423
FOX VALLEY MALL
AURORA, IL 60505 • (312) 961-2347
COM-64 & VIC-20 IS A TRADEMARK OF COMMODORE

COMMODORE-64 米 I OAN 米 MORTGAGE

- MONTHLY PAYMENT.
- LOAN AMORTIZING.
- CALCULATE YOUR SAVING.

• FOR ONLY \$ 19.95

ALL THREE IN ONE PROGRAM IT IS VERY EASY TO RUN. THE PROGRAM WILL HELP YOU MAKE DECISIONS ON BUYING OR SELLING YOUR HOME BY FINDING OUT MONTHLY PAYMENTS FOR VARIOUS INTEREST RATES IT ALSO FINDS THE INTEREST OF YOUR MORTGAGE FOR INCOME TAX ATTHE END OF THE YEAR AND FINDS THE FUTURE SUM OF YOUR SAVINGS TO ORDER, PLEASE SEND \$19.95 FOR CASSETTE (ADD \$3.00 FOR DISC. WASHINGTON RESIDENTS ADD 7.6% SALES TAX) PLUS \$1.50 FOR SHIPPING TO:

SIMPLE SOFTWARE

P.O. BOX 1618 - RENTON WA 98057

MAKE YOUR OWN CARTRIDGES!

 Complete System Programs 8K Cartridge to "AUTO-RUN" (opt) at Power-up — YOUR BASIC or Machine-Code Prgm.

 Prototype GAMES
 EDUCATIONAL use — NO Load Delay

Blank 2764 EPROMS

OS-3721 plugs into VIC-20

 Expansion socket on board Carts. Erasable & BLK Locatable

OS-3723 ZIF socket module \$24.50 Allows programming 2764, 2732A, 2732, 2716, 2564, 2532, 2516 EPROMS OS-37A System (Pgmr., 8K Cart) \$88.50 OS-37B System (Pgmr., ZIF mod) \$88.50 (Software Tape incl. Disk add \$2) OS-3722 Blank 8K Carts. \$24.50

> **OTTO SYSTEMS** 8135 ENGINEER ROAD SAN DIEGO, CA 92111 (619) 569-5665

Add \$4 Shipg. & Hndlg. — CA res. 6% tax

WWW.commodore.ca

\$11.50

Advertisers Index

Re	ader Service Number/Advertis	er Page	Re	ader Service Number/Advertis	er Page
400	A 4 Computer Sendent	210			
102	A-1 Computer Services		141	Electronic Lab Industries	333
403	Aardvark LT.D. AB Computers	252 253		Electronic Software, Inc.	
				Electrosharp Technologies	
404	Abacus Software	126	442	E-M Technologies Enchanted Forest	335
105	Academy Software	145	142	The Emporium Co.	318
	Activision Inc.	26.27	143	Encore Video Software	332
106	Advanced Processor Systems	219		EPYX	
107	Adventure International	157		EPYX	
108	Adventure International	79		Eric Martin's	
	Allen Macroware	206	144	Excalibur Enterprises	333
	Alphacom			Expando-Vision	31
	American Peripherals		145	Farthest Fringe SA	333
	Amlist, Inc.	229	146	Festive Fare	278
109	Animax Computer			First Star Software	
440	Apple Country Limited	307	148	French Silk	
110	Apropos Technology	467		Frontrunner Computer Industries	
	Artworx	107		Gamblers Helper House of Software	
	Artworx	110		General Systems Consulting	
111	Aspen Ribbons, Inc.	332		Genesis Computer Corporation	
-	Astra Systems	206	149	Gladstone Electronics	
	Atari Home Computers			Gloucester Computer	
112	Avalon Hill Game Company	69	150	H & H Enterprises	
	Batteries Included	56,57		Hanna Enterprises	325
	BAZ Electronics	333		Happy Computing	197
	Big Bytes	302	151	Harmony Video & Computers	319
113	Big Five Software	70,71		Hayden Book Company, Inc	153
	Bit Cards	324		Hayaen Book Company, Inc.	163
	Bizware, Inc. Boston Educational Computing, Inc.	454		Hayes Microcomputer Products, Inc.	
444	Brøderbund Software		450	Holub Enterprises, Inc. HomeSpun Software	270
. 14	Bytes and Bits	330	152	Human Engineered Software	107
115	Byte-Ryte	312	153	Hytec Systems	299
116	Bytesize Micro Technology	333		Indus Systems	198.199
	Bytesize Micro Technology	334		Infocom	50,51
117	Cardco, Inc.	87		Institutional Computer Development Corp.	210
118	Cardinal Software	332		Interesting Software	209
	Cass-A-Tapes	318		Jou Laboratories	
	Cedar Island Software	334		K-12 Micro Media	
119	Century Micro Products			K-2 Electronics Design Corp.	
	Cimaron Corp. Cinquedea Sóftware	220	154	Kalglo	
	City Software			Kangaroo, Inc. Kiwisoft Programs	03
120	Collins International Trading Corporation			Koala Technologies Corporation	
120	Comm*Data Computer House, Inc.			Krell Software Corp.	125
	Commodore Business Machines			Leading Edge Products, Inc.	IFC
121	Compatible Systems Incorporated			Leading Edge Products, Inc.	
	CompuAd Enterprises			Letco	214
	CompuCards	78		Link Marketing	182
122	CompuServe	29	155	Logistic Engineering Associates	78
	ComputAbility	104		Lords of Basic	330
	ComputAbility		156	Lyco Computer Marketing & Consultants	290,291
400	ComputAbility		157	(M)agreeable Software, Inc.	
	Computer Case Co. Computer Discount			MarshMallow Software	
125	The Computer Express	330	458	Maximus, Inc.	
120	ComputerFood Press	309		Micol Systems	
	Computer Humor Inc.	270	,	Micro Dimensions, Inc.	
126	Computer Marketing Services, Inc	35	160	Micro-80 Inc	
127	Computer Marketing Services, Inc	55	161	Microbits Peripheral Products	149
	Computer Marketing Services, Inc			MicroClear	
	Computer Mail Order		162	MicroGraphic Image	99
	ComputerMat			The Microperipheral Corporation	169
	Computers and More			Micro Merchant	
132	The Computer Network Computer Outlet	254.257		Micro Systems Development, Inc.	
133	Computer Outlet, S.D.	261	104	Micro-Ware Distributing Inc. Micro World Electronix, Inc.	300
	Computer Software Associates, Inc.	262	165	Midwest Micro Inc.	
	Computer Techniques	331	103	Midwest Software	
	CompuTron Business Systems	261		Mirage Concepts, Inc.	239
134	ComStar	250		MMG Micro Software	101
135	Continental Software	41		Monarch Data Systems	135
	Continental Software	85		Mosaic Electronics, Inc.	
	Control Data Publishing	123		Mosaic Electronics, Inc.	4
	Cosmic Computers	296,297		Mountain Micro Electronics	
	Counterpoint Software	224		The Music Workshop	033
	Creative Image			M. W. Ruth Company National Programming and Software Newport Controls	334
136	Crystal Microsoft Ltd	335	166	Newport Controls	288
.00	Crystal Microsoft Ltd. Data Equipment Supply Corp.	293	167	New World Computer	144
	DataMaster Industries	2/6		Nibbles & Bits Inc.	226
	Datamost	59		Nibble Notch	318
	Datamost			Nüfekop Olympic Sales Company	147
137	Datasoft			Olympic Sales Company	294
420	DigiTime Discount Data Supply	330	168	Osiris	
138	Discount Data Supply Discount Software	332		Otto Systems PACE	350
	Disk World	333		Pacific Exchanges	
	Doryf Systems, Inc.	229		Pacific Exchanges	284
	Don't Ask Computer Software			Peachtree Software	
	Dorsett Educational Systems, Inc	48		Percom Data Corporation	45
	Dovestar Creative Concepts	331		Persimmon Peripherals	330
	John T. Dow	316	169	Personal Peripheral Products	335
230	Dow Jones Investment Evaluator	37		PM Software	
139	Dymarc Industries, Inc.	53	-	Powerbyte Software	324
440	Dynacomp, Inc.	270	170	Precision Software	245
140	Eastern House Software Elcomp Publishing, Inc.		474	The Printer Store Professional Micro Service	310
	From the Language and the comment		1/1	TOTOGOSTOLIO INTICIO SOLVICO	

Re	ader Service Number/Advertiser Page
141	Electronic Lab Industries
	Electronic Software, Inc. 278 Electrosharp Technologies 330
	Electrosharp Technologies
142	Enchanted Forest 335
	E-M Technologies 331 Enchanted Forest 335 The Emporium Co. 318 Encore Video Software 332
143	Encore Video Software
	EPYX
	Erry 325 Eric Martin's 325 Excalibur Enterprises 333 Expando-Vision 31 Forthest Fringe SA 333 Festive Fore 278 Fest Star Software 05
144	Excalibur Enterprises
145	Expando-Vision
145	Festive Fare 278
147	First Star Software95
148	French Silk
	Festive Fare 278 First Star Software 95 French Silk 211 Frontrunner Computer Industries 316 Funsoff 151 Gamblers Helper House of Software 332 General Systems Consulting 330 Genesis Computer Corporation 276 Gladstone Electronics 322 Gloucester Computer 330 H & H Enterprises 332 Hanna Enterprises 325
	Gamblers Helper House of Software
	General Systems Consulting
149	Genesis Computer Corporation
149	Gloucester Computer 330
150	H & H Enterprises
	Hanna Enterprises
151	H & H Efferprises 332 Hanna Enferprises 325 Happy Computing 197 Harmony Video & Computers 319 Hayden Book Company, Inc. 153 Hayden Book Company, Inc. 163 Haydes Microcomputer Products, Inc. 33 Haydes Microcomputer Products, Inc. 34
151	Hayden Book Company Inc. 153
	Hayden Book Company, Inc
	Hayes Microcomputer Products, Inc
452	Homospur Software 270
132	Human Engineered Software
153	Human Engineered Software
	Indus Systems
	Infocom 50.51 Institutional Computer Development Corp. 210 Interesting Software 209
	Interesting Software
	Jou Laboratories 335 K-12 Micro Media 311
	K-12 Micro Media
154	K-2 Electronics Design Corp. 260 Kalglo 320
	Kanagroo Inc. 131
	Kiwisoft Programs93
	Kiwisoft Programs 93 Koala Technologies Corporation 42.43 Krell Software Corp. 125
	Leading Edge Products Inc. IEC
	Leading Edge Products, Inc. IFC Leading Edge Products, Inc. IBC
	Letco
455	Logistic Engineering Associates 78
100	Lefco 214 Link Marketing 182 Logistic Engineering Associates 78 Lords of Basic 330 Lyco Computer Marketing & Consultants 290,291
156	Lyco Computer Marketing & Consultants 290,291
157	IVIIdareeable sonware, Inc
	MarshMallow Software
158	Maximus, Inc. 127 Micol Systems 333
159	Micol Systems 333
160	Micro Dimensions, Inc. 261 Micro-80 Inc. 322 Microbits Peripheral Products 149
161	Microbits Peripheral Products
	MicroClear 311 MicroGraphic Image
162	The Microperinheral Corporation 460
	Micro Merchant
163	Micro Systems Development, Inc
164	
165	Micro World Electronix, Inc. 309 Midwest Micro Inc. 211
.00	Midwest Micro Inc. 211 Midwest Software 331
	Mirage Concepts, Inc
	MMG Micro Software
	Mosaic Electronics Inc. 194
	Mosaic Electronics, Inc
	Mountain Micro Electronics
	Monarch Data Systems 135 Mosaic Electronics, Inc. 194 Mosaic Electronics, Inc. 4 Mountain Micro Electronics 294 The Music Workshop 334 M. W. Ruth Company 232 National Programming and Software 334 Newport Controls 288 New World Computer 144 Nibbles & Bits Inc. 226 Nibbles Notch 318 Niffekop 147
	National Programming and Software
166	Newport Controls
167	New World Computer
	Nibble Notch 318
	Nüfekop147
	Nüfekop
168	Ostris
	PACE 259
	Pacific Exchanges
	Olympic Scies Company 244 Osiris 210 Otho Systems 335 PACE 259 Pacific Exchanges 232 Pacific Exchanges 284
	Peachtree Software
	Persimmon Perinherals 330
169	Personal Peripheral Products 335 PM Software 270 Powerbyte Software 324
	PM Software
170	Precision Software
.,,	The Printer Store

Reader Service Number/Advertiser Page

172	Professional Software Professional Software Professional Software Programmer's Institute Programmer's Institute Programmer's Institute Program Store Professional Store 24 Profecto Enterprises Profecto Enterprises Profecto Enterprises 15 Profecto Enterprises 16 Profecto Enterprises 17 Profecto Enterprises 18 Profecto Enterprises 19 Profecto Enterprises 10 Profecto Enterprises 11 Profecto Enterprises 11 Profecto Enterprises 12 Profecto Enterprises 14 Profecto Enterprises 15 Profecto Enterprises 16 Profecto Enterprises 17 Profecto Enterprises 18 Profecto Enterprises 19 Profecto Enterprises 19 Profecto Enterprises 10 Profecto	1
173	Professional Coffuses	0
173	Professional software	***
174	Programmers institute	114
175	Programmer's Institute	165
176	Programmer's Institute	305
	The Program Store	8.249
177	Protecto Enterprises 1	70.171
178	Protecto Enterprises	185
179	Projecto Enterprises	. 100
1/9	Protecto Enterprises	127/3
180	Protecto Enterprises	88,189
181	Protecto Enterprises	175
182	Protecto Enterprises 1	76.177
183	Protecto Enterprises	100
184	Protecto Enterprises	170
	Profecto Enlerprises	0,100
185	Protecto Enterprises	2,193
186	Protecto Enterprises	181
	Psycom Software International	48
187	Public Domain, Inc. Quality Computer QuinTech Systems, Inc. QuinTech Systems, Inc. Rainbow Computer Corp.	330
107	Quality Computer	274
	addily computer	. 2/0
	Quintech systems, Inc.	148
	QuinTech Systems, Inc.	. 182
188	Rainbow Computer Corp	. 225
	Raymiak	. 236
189	Rana Systems	2.3
	Paneoff Software Systems	263
	DEC Co	200
	RES CO.	. 214
190	Rainbow Computer Corp. Raymiak Rana Systems Rensoft Software Systems RES Co. Richvale Telecommunications RIST. Inc. R&L Products RMC Systems Co., Inc. SAUF.	. 160
191	R.I.S.T. Inc.	. 333
	R & L Products	. 104
192	RMC Systems Co., Inc.	. 332
	SAVE	321
	SAVE Scott, Foresman and Company Screenplay	120
	Scott, Folesman and Company	00.00
	Screenplay	82,83
	Scribe Associates	. 333
193	Scribe Associates Shelter Software	. 200
	Showcase Software	. 105
	Siorra On Lina	72
	Siorra On Line	444
	Clara On Line	442
	Sierra On-Line	113
	Simple Software	. 335
	Sirius Software, Inc.	. 158
	Sierra On-Line Sierra On-Line Simple Software Sirius Software, Inc. Sirius Software	. 159
	SJB Distributors Inc.	217
194	SJB Distributors Inc. Skyles Electric Works Skyles Electric Works	195
195	Slader Electric Works	223
	CNA Coff and los	. 220
196	SM Software Inc.	03
330	Softbyte Computer Co	114
197	SM Software Inc. Softbyte Computer Co. Softraders International	. 334
	Softype The Software Connection	. 331
198	The Software Connection	200
	The Software Co.on	111
	Coff and Dive	244
	Software Plus	. 314
	Software to Go	. 244
199	Software Warehouse Outlet	. 323
	Ine Software Connection The Software Co-op Software Plus Software Plus Software To Go Software Warehouse Ouflet Sound Software Soundware Southware Southware Southware Southware Southware Southware Southware Southware So	. 335
	Soundware	. 332
200	Southwest Micro Systems Inc	250
200	Coincolor	10 10
	Spinioker	10,17
	Spinnaker	23
1201	Spinnaker	21
201	Star Micronics Inc.	47
	Starkk Enterprizes	335
	Strategic Simulations Inc.	143
202	Such A Deall Software	155
202	Sundial Software Associator Inc	145
	Curio Coffuero	324
	Curio Coff uses	. 004
220	Susie software	93
203	System VII Furniture	. 200
204	Systems Management Associates	. 227
205	T&F Software Company	7
206	TG Products	141
	Terware Associates	220
	TUECIC	AFA
	I.H.E.O.LO.	. 104
	3G Company, Inc.	93
	Timex Computer Corp	25
	Spinnaker Spinnaker Spinnaker Spinnaker Spinnaker Star Micronics Inc. Starkk Enterprizes Strategic Simulations Inc. Such A-Deall Software Sundial Software Associates Inc. Susie Software Susie Software Susie Software System VII Furniture System VII Furniture System VII Furniture T& F Software Company TG Products Texware Associates THESIS. 3G Company, Inc. Timex Computer Corp. TIW Corporation Toronto Pet Users Group	. 313
207	TNW Corporation Toronto Pet Users Group Totl Software, Inc. Tranix	. 214
208	Toti Software, Inc.	. 260
	Tronix	11
	Unicorn Software	130
-	Unicom Software	. 104
209	United Microware industries, Inc.	81
210	Unlimited Software, Inc.	. 310
	Vaisala Inc.	. 148
	Valorum	. 331
	VIC Flic	311
244	Victory Software Inc.	263
211	Videobook Comoration	270
	Vales World	070
	Voice World	2/8
	York 10 Computerware	. 309
	Tronix Unicorn Software United Microware Industries, Inc. Unitenited Software, Inc. Vaisala Inc. Valorum VIC Flic Victory Software, Inc. Videobook Corporation Voice World York 10 Computerware Weekly Reader Family Software	117

COMPUTEI Back Issues	327
COMPUTEI Subscriber Services	260
COMPUTErs First Book of Atari Graphics	267
COMPUTE's VIC Library	221

COMPUTE!

Allow 4-5 weeks for delivery. For air mail outside US *\$5.00

For Fastest Service. Call Our Toll-Free US Order Line 800-334-0868

My Computer Is:					In NC call 919-275-9809			
PET Apple	Atari	OSI [VIC-20	□ TI 99/4A □	Sincl	air ZX	-81	
Radio Shack Co	olor Cor	mputer [Other_		Don't y	et hav	ve one	
\$20.00 One Yea \$36.00 Two Yea \$54.00 Three Ye	r US Sub	oscription	n s∈	readers outside dee our foreign re ard or inquire fo	aders s	subscr		
Name								
Address								
City		Sto	ite	Zip				
Payment Enclos	ed	☐ VISA		Bill r	ne			
MasterCard Account No.		Amer	ican Exp			7-		
Your subscription wil				Expires		/		
COMPUTE! Book	(S Price	S/H Total	Quan.	Title	Price	S/H	Total	
Machine Language	Price	S/H Total	Quan.	COMPUTE!'s First Book	Price	S/H	Total	
for Beginners Home Energy	\$14.95 +	\$2.00*	-	of Atari Graphics Mapping The Atari		+ \$2.00*		
Applications COMPUTE!'s First Book	14.95 +	2.00*		Inside Atari DOS	19.95	+ 2.00*		
of VIC	12.95 +	2.00*	_	Programmers Referen Guide for TI-99/4A	ce 14.95	+ 2.00*		
of VIC Games	12.95 +	2.00		COMPUTE!'s First Book of TI Games		+ 2.00*		
COMPUTE!'s First Book of 64	12.95 +	2.00*		Every Kid's First Book o Robots and Computer		+ 1.00*		
COMPUTE!'s First Book of Atari	12,95 +	2.00*	_	The Beginner's Guide t Buying A Personal				
COMPUTE!'s Second Book of Atari	12.95 +	2.00*	_	Computer	3.95	+ 1.00		
For Fastest Service Call (All orders must be prepaid add 4% sales tax. Payment enclosed Plea Aca't No.	(money o	rder, check, (or charge). A	II payments must be	in US fun			
Name			Expires					
Address								
City			State		Zip			
Country								

COMPUTE!

City

Country

Foreign Readers Subscription rates outside the US: ☐ \$25.00 Canada \$38.00 Europe, Australia/Air Delivery \$48.00 Middle East/Air Delivery \$68.00 Elsewhere/Air Delivery \$25.00 International Surface Mail (lengthy, unreliable delivery) Name Address Postal Code

Expires

33B101

The Editor's Feedback:

Account No.

Payment must accompany this card.

Computer: Pet Apple Atari OSI VC-20 TI 99/4A Sinclair ZX-81 Radio Shack Color Computer Other Don't yet have one... Are you a COMPUTE! Subscriber? Yes No I would like to see: Just More Right Fewer More Right Fewer Specific applications Games. programs. Reviews of game BASIC programs. software. Machine language Reviews of business programs. software. Tutorials. Reviews of educational Educational articles. software. Detailed explanations Reviews of hardware. of programs.

Payment in US Funds drawn on a US Bank; International Money Order; or

charge card: VISA MasterCard American Express

Your subscription will begin with the first available issue.

Please allow 6-12 weeks for delivery of first issue.

What do you like least?

11 12

What do you like best about COMPUTE!?

P.O. Box 914
Farmingdale, NY 11737

COMPUTE! Magazine
Post Office Box 5406
Greensboro, NC 27403



BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 2312 GREENSBORO, NC

POSTAGE WILL BE PAID BY ADDRESSEE

COMPUTE! Magazine

P.O. Box 914 Farmingdale, NY 11737



BUSINESS REPLY MAIL

EIRST CLASS PERMIT NO 2312 GREENSBORD NO

POSTAGE WILL BE PAID BY ADDRESSEE

COMPUTE! Books

Post Office Box 5406 Greensboro, NC 27403 NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES





Introducing the most logical place to store Elephant Memory Systems® (or lesser brands of disks): The Trunk.

With its alphabetized library index, you can file or retrieve up to 60 disks, instantly.

The Trunk is made of durable molded plastic with a hinged, one-piece lid, to keep disks safe from dust, dirt, and other detriments which disks despise.

And, it's portable. Because the lid doubles as a carrying handle so your Elephant Memory Systems® disks can go anywhere you do.

There's a model for 51/4" and 8" floppies, as well as a cassette-and-game file and a special Atari® version.

So if you're looking for the best disk storage system on the market ...

The Trunk is an open-and-shut case.

Elephant Memory Systems® Disks

A full line of top-quality floppies, in virtually every 5½ and 8″ model, for compatibility with virtually every computer on the market. Guaranteed to meet or exceed every industry standard, certified 100% error-free and problem-free, and to maintain its quality for at least 12 million passes for over a life-time of heavy-duty usel.

Marketed exclusively by Leading Edge Products, Inc., Information Systems and Supplies Division, 55 Providence Highway, Norwood, Massachusetts 02062. Call: toll-free 1-800-343-8413; or in Massachusetts call collect (617) 769-8150. Telex 951-624.

IF PERSONAL COMPUTERS ARE FOR EVERYBODY, HOW COME THEY'RE PRICED FOR NOBODY?

A personal computer is supposed to be a computer for persons. Not just wealthy persons. Or whiz-kid persons. Or privileged persons.

But person persons.

In other words, all the persons whom Apple, IBM, and Radio Shack seem to have forgotten about (including, most likely, you).

But that's okay. Because now you can get a high-powered home computer without taking out a second mortgage

on your home.

It's the Commodore 64. We're not talking about a low-priced computer that can barely retain a phone number. We're talking about a memory of 64K. Which means it can perform tasks most

\$1395*

APPLE® Ile 64K

\$999*

timminimini

other home computers can't. Including some of those that cost a lot more. (Take another look at the three computers above.)

By itself, the Commodore 64 is all the computer you'll ever need. Yet, if you do want to expand its capabilities some day, you can do so by adding a full complement of Commodore peripherals. Such as disk drives. Modems. And printers.

You can also play terrific games on the Commodore 64. Many of which will be far more challenging than those you could ever play on a game machine alone. And as great as all this sounds, what's

even greater-sounding is the price. It's hundreds of dollars less than that of our nearest competitor.

So while other companies are trying to take advantage of the computer revolution, it seems to us they're really taking advantage of something else:

Their customers.

*Manufacturers' suggested list prices, Monitor included with TRS-80 III only. Commodore Business Machines–PO. Box 500R, Conshohocken, PA 19428; Canada–3370 Pharmacy Avenue, Agincourt, Ont., Can. M1W 2K4.



