

INFO 64

THE QUARTERLY REVIEW & PRODUCT GUIDE FOR THE COMMODORE 64 COMPUTER

SPRING 1984

#3

\$2.95 U.S.

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- **INFO-64 VISITS C.E.S.**
- **HANDS-ON: THE SX-64 PORTABLE!**
- **BUYER'S GUIDE TO 1000 PRODUCTS!**

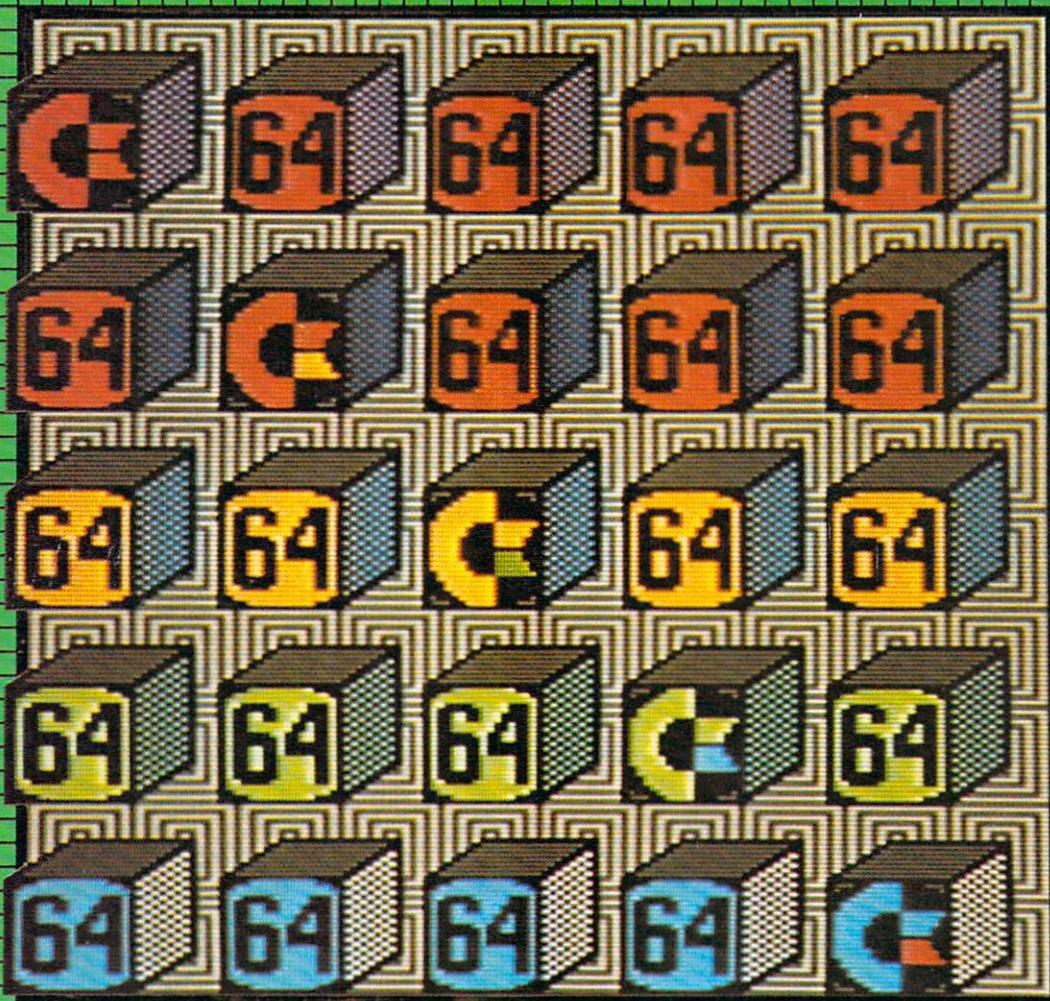
FEATURES:

APPLICATIONS GENERATORS - why you don't need them.

COMMODORE'S 264 & 364 - there's good news & there's bad news...

ALL NEW ERG-CARDS!

LUNAR TURTLE - an easy-to-type arcade game written in LOGO!



REVIEWS:

SUPERBASE 64
COMMODORE'S LOGO
C64 FORTH
MODEL DIET
COMPUTER MECHANIC

- **"GALLERY"** COLOR CLOSE-UPS OF MORE GREAT SOFTWARE.

- **READER CONTEST: DESIGN THE '64+'!**



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“Simply Awesome”

RUN Magazine

Sorcerer's Apprentice review



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Available only from:



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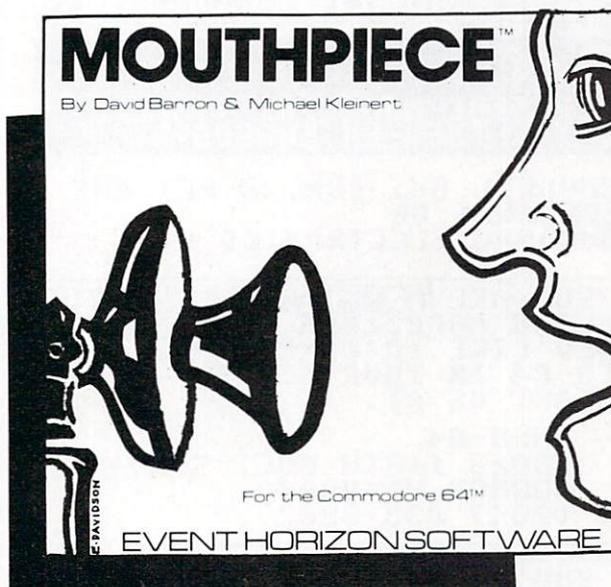
Box 1327 New York, NY 10028
212/535-0697

◆ INFO-64 MAGAZINE says that Sorcerer's Apprentice, written by Adam Bellin for Event Horizon Software, is a 'must' for anyone who has longed to turn their color monitor into an electronic easel and unleash the artistic animal within the 64. A delight to operate and virtually self explanatory. Rated . . .
FOUR STARS!

◆ FEATURES OF SORCERER'S APPRENTICE

16 Color Palette
Automatic Area Fill
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64!

"BENN"

ORIGINAL CYN™

INFO-64

PUBLISHER/EDITOR

BENN DUNNINGTON

ASSISTANT EDITOR

CEL DUNNINGTON

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EXCEPT THE MAGAZINE ITSELF
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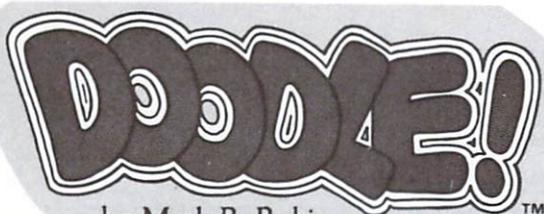
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**PRODUCTS USED TO PRODUCE
THE SPRING ISSUE OF INFO-64**

PAINT MAGIC

DATA MOST

COVER ART



by Mark R. Rubin™

LABELS/GRAPHICS



CARDCO, Inc.

Card/2B

WORDPROCESSING / INTERFACING



PRINTOUT

**THE TEXT AND GRAPHIC PRINTOUT
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STAR MICRONICS GEMINI-10X AND
DELTA-10 DOT-MATRIX PRINTERS.**



THE QUARTERLY REVIEW AND PRODUCT GUIDE FOR THE COMMODORE 64

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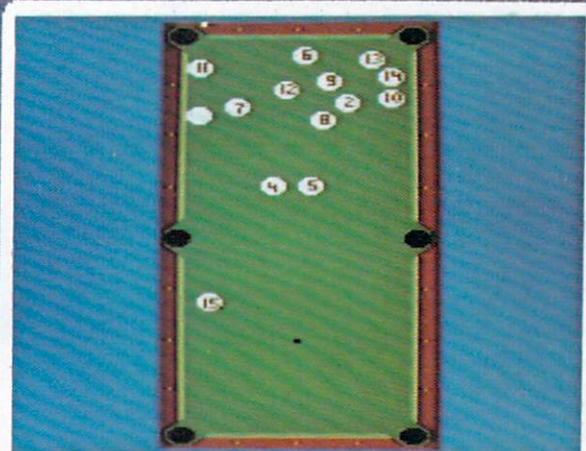
CONTEST!

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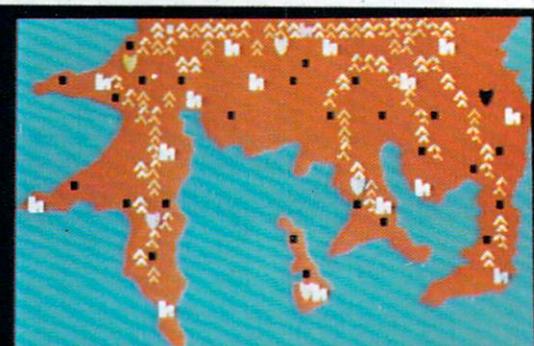
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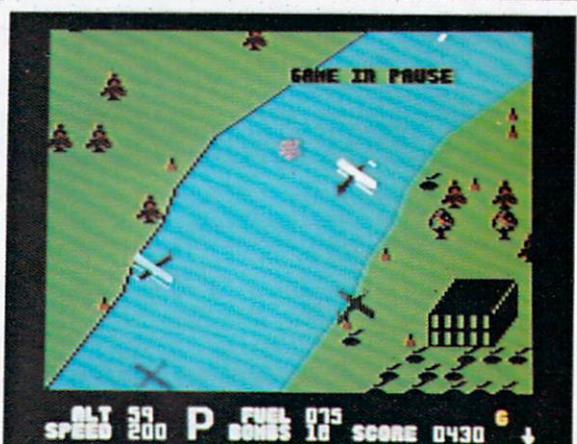


POOL-64



Thread is falling: OOREN HOLD
Bound to: TELGAR MEVE
Who is sending dragons?

DRAGONRIDERS OF PERN

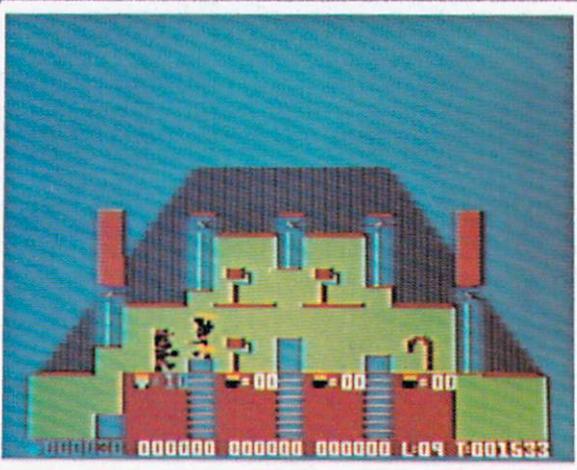


ALT 39 P FUEL 075
SPEED 200 BOMBS 10 SCORE 0430 ↓

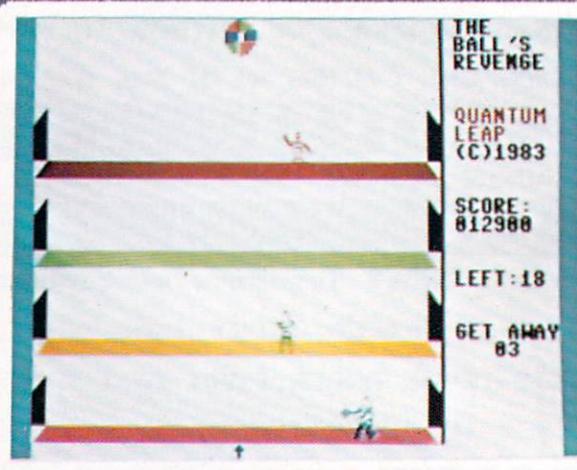
BLUE MAX



DUEL



BRISTLES



THE BALL'S REVENGE

QUANTUM LEAP
(C)1983

SCORE:
812988

LEFT: 18

GET AWAY
83

THE BALL'S REVENGE

POOL-64

D/T \$17.95/14.95 **-**

ABACUS SOFTWARE

=====
ABACUS HAS DONE A NICE JOB WITH A GRAPHICALLY ANIMATED POOL SIMULATION. THE PHYSICS ARE CONVINCING, AND THE CONTROLS ARE VERY EASY TO USE. THE ONLY THINGS I MISSED WERE THE STRIPES AND COLORS ON THE BALLS. MAYBE THAT WILL BE INCLUDED IN A SOME DELUXE VERSION DOWN THE ROAD. FOR NOW, WATCH THIS BANK SHOT!...
=====

DRAGONRIDERS OF PERN

DISK <\$40.00 ****

EPYX

=====
DRAGONRIDERS IS A COMBINATION STRATEGY, ADVENTURE, AND ARCADE GAME. IT MIGHT BE FUN TO READ THE NOVEL ON WHICH IT IS BASED TO FULLY ABSORB THE BACKGROUND AND COLOR OF THE WEYR LEADERS OF PERN. MULTIPLE SCREENS AND VARYING ACTIVITIES KEEP THIS GAME INTERESTING. LOOK FOR OTHER GAMES BASED ON NOVELS FROM Epyx.
=====

BLUE MAX

DISK \$34.95 *****

SYNAPSE SOFTWARE

=====
BLUE MAX IS A SORT OF WORLD WAR I VERSION OF ZAXXON. THE DIAGONAL SCROLLING WITH GROUND SHADOW IS VERY CONVINCING. STRAFING AND BOMBING HAVE NEVER BEEN MORE ENJOYABLE. LOTS OF ACTION AND SUPER ANIMATION ARE THE TRADEMARKS OF SYNAPSE SOFTWARE THESE DAYS. I LIKE THIS GAME AND ITS CAREFUL DETAIL, YOU WILL TOO.
=====

DUEL

DISK \$36.95 ****

PIONEER SOFTWARE

=====
WHERE I COME FROM WE CALL THIS GAME "JOUST". YOU WILL FIND 'DUEL' TO BE A GOOD CLONE OF THE ORIGINAL. THE CONTROLS ARE RESPONSIVE, AND THE ACTION PROGRESSES IN DIFFICULTY AT JUST THE RIGHT TEMPO. PLAY EITHER SOLITAIRE OR TOURNAMENT MODES. (SOMEONE WRITE ME WHEN YOU FIGURE OUT WHAT THAT OBJECT IN THE MIDDLE IS FOR!)
=====

BRISTLES

DISK <\$40.00 ****

FIRST STAR SOFTWARE INC.

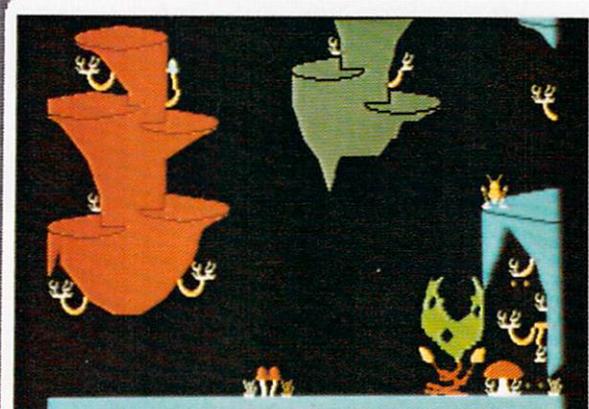
=====
BRISTLES IS A REALLY FAST, ALMOST FRENZIED ARCADE GAME IN THE CLASSIC TRADITION OF PAKMAN, DIG-DUG, ETC. THERE'S LOTS OF CLOSE TIMING, BOLD MOVES, NEAR-MISSES, AND THINGS MOVING IN ALL DIRECTIONS. PAINTING THE ROOMS, AND RIDING THE ELEVATORS WHILE AVOIDING ASSORTED NUISANCES WILL SET YOU SPINNING- UP TO 4 PLAYERS
=====

THE BALL'S REVENGE

DISK \$29.95 ****

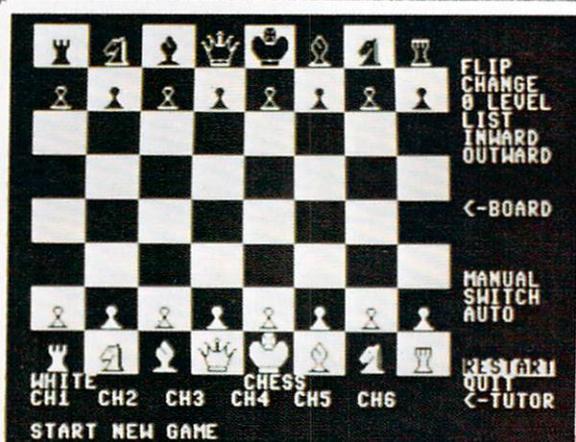
THE QUANTUM LEAP

=====
THIS IS AN UNUSUALLY ADDICTIVE LITTLE GAME FOR HOW SIMPLE THE PREMISE IS: BOUNCING A BALL OFF A VARIETY OF ATHLETES AS THEY GO SCURRYING ACROSS THE LOCKER-ROOM AT VARIOUS SPEEDS AND DISTANCES. MAYBE IT IS THE COMPELLING BACKGROUND MUSIC THAT KEEPS ME FASCINATED. GREAT GAME FOR KIDS- HAND-EYE, REFLEXES AND ALL THAT.
=====

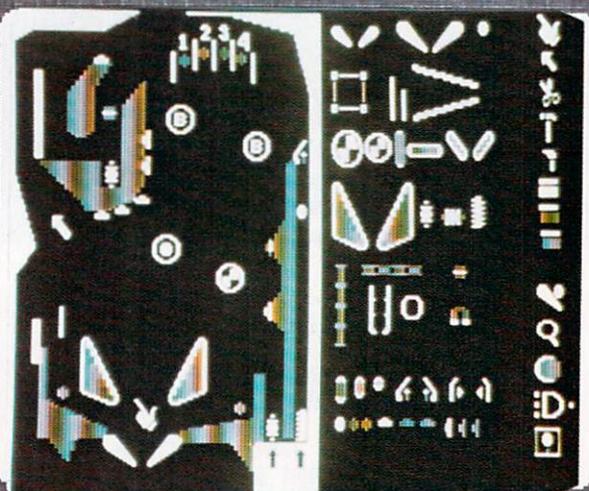


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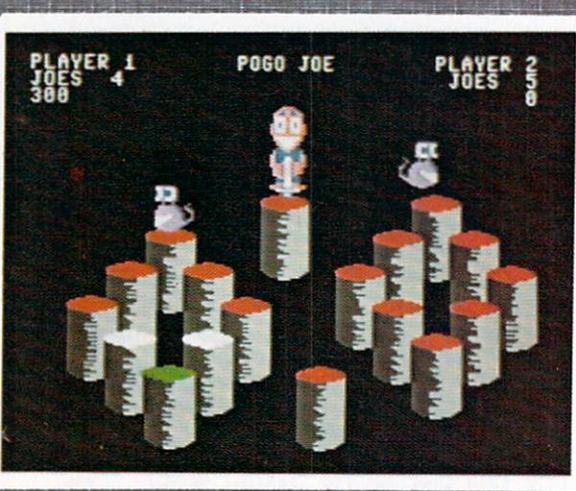
BUGABOO



HOW ABOUT A NICE GAME OF CHESS?



PINBALL CONSTRUCTION SET



POGO JOE



PERPLEXIAN CHALLENGER



DIG DUG

BUGABOO

D/T \$29.95/24.95 *****

QUICKSILVA INC.

=====

THIS IS DEFINITELY THE BEST GAME FROM QUICKSILVA SO FAR. TOTALLY UNIQUE, I DONT KNOW OF ANYTHING EVEN REMOTELY RESEMBLING BUGABOO. EASY ENOUGH FOR THE YOUNGEST CHILD TO PLAY, IT WILL TAKE SOME PERSISTANCE FROM ANY AGE-GROUP TO ESCAPE THE PTERODACTYL. DELIGHTFUL ANIMATION AND ORIGINAL MUSIC.

=====

HOW ABOUT A NICE GAME OF CHESS?

DISK \$29.95 *****

ODESTA

=====

I CAN'T EVEN IMAGINE WHAT COULD BE DONE TO IMPROVE ON THIS ELABORATE CHESS TUTOR/PLAYER. THE ON-SCREEN TUTORIALS ON MOST ASPECTS OF THE GAME ARE EXCELLENT. THIS INSTRUCTIONAL VERSION OF CHESS 7.0 CAN STILL WHIP ME EASILY (EVEN WITH ONE SUBROUTINE TIED BEHIND ITS BACK)! IF YOU LIKE TO PLAY, OR WANT TO LEARN CHESS, THIS IS THE NO-CONTEST CHOICE.

=====

PINBALL CONSTRUCTION SET

DISK \$39.95 *****

ELECTRONIC ARTS

=====

THIS WAS OUR CHOICE FOR BEST RECREATIONAL SOFTWARE OF 1983, & SO FAR I SEE NO REAL THREAT TO THE TITLE IN 1984. BILL, WHAT ELSE HAVE YOU GOT UP YOUR SLEEVE? GIVE US MORE! YOU CAN DESIGN YOUR OWN GAMES USING THE WONDERFUL PARTS BOX, WIRE THE TARGETS, FOOL WITH GRAVITY..FINISHED GAMES CAN BE INDEPENDENTLY SAVED & RUN

=====

POGO JOE

DISK \$40.00 *****

SCREENPLAY

=====

POGO JOE WILL MAKE YOU THINK OF Q*BERT AT FIRST, AND ACTUALLY THEY HAVE A LOT IN COMMON. JOE (A HOMELY DUDE COMPARED TO Q*BERT) RIDES A POGO STICK FROM CYLINDER TO CYLINDER WHILE BEING PURSUED BY ASSORTED NASTIES. THE NEAT THING ABOUT POGO JOE, IS THAT PERSONS GETTING TO THE HIGHEST LEVELS BECOME ELIGABLE TO WIN A \$10,000 PRIZE! (NO JOKE!)

=====

PERPLEXIAN CHALLENGER

DISK \$29.95 *****

PROGRESSIVE PERIPHERALS & SOFTWARE

=====

PERPLEXIAN CHALLENGER IS JUST DRIPPING WITH SLICK EFFECTS AND TASTY LITTLE DETAILS (LITTERALLY DRIPPING, WHEN YOU GET TO THE 'GAME-OVER' SCREEN!) THIS GAME HAS THE BEST SOUND EFFECTS I HAVE HEARD YET IN ANY COMPUTER GAME (I'D RECOMMEND THIS GAME ON THE SOUNDS ALONE) THE ANIMATION AND GRAPHICS ARE ALSO WELL DONE.

=====

DIG DUG

ROM \$44.95 *****

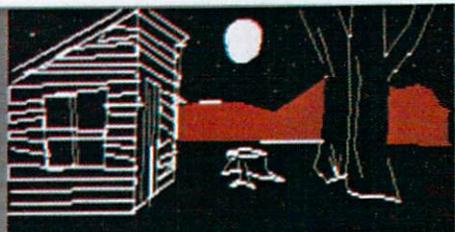
ATARISOFT

=====

WHAT CAN I SAY ABOUT ONE OF MY ALL-TIME FAVORITE ARCADE GAMES EXCEPT THAT THE 64 VERSION FAITHFULLY RECREATES THE SCREENS, PATTERNS, AND ALL DETAILS OF THE ORIGINAL! SUPERB ANIMATION AND PLEASING GAME-PLAY. A NICE EXTRA, IS THE ABILITY TO START AT ANY SCREEN AND PROCEED FROM THERE. HOURS OF FUN GUARANTEED!

=====

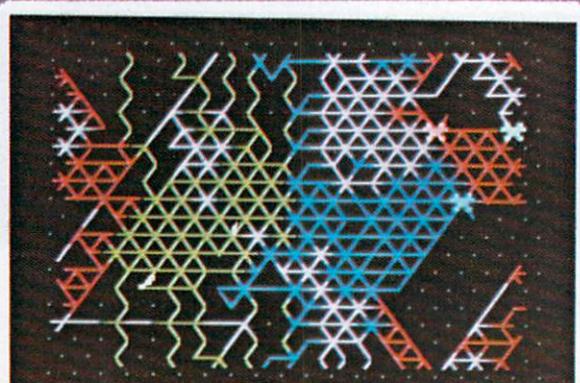




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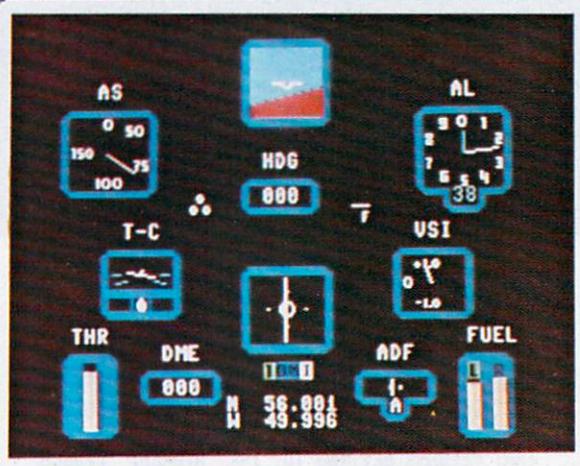
-----
---WHAT NOW ?
---WHAT NOW ? GET ROPE
O.K.
---WHAT NOW ?
---WHAT NOW ? INVENTORY
I am carrying:
Shiny Sword - Golden Ring -
MET Matches - Coil of Rope -
Oil sodden Rag - Cloak (worn) -
  
```

THE GOLDEN BATON

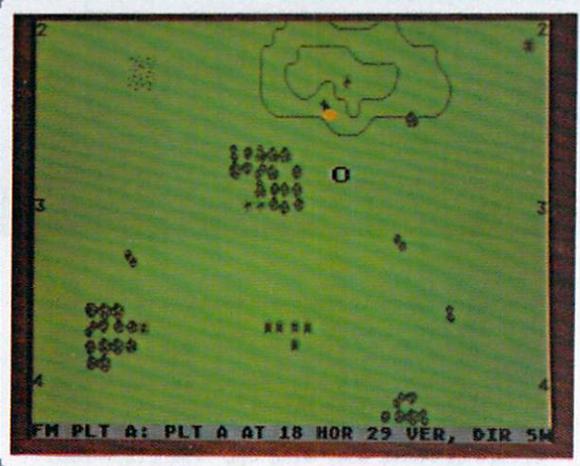


38 WILD 1010 WILD 48 WILD

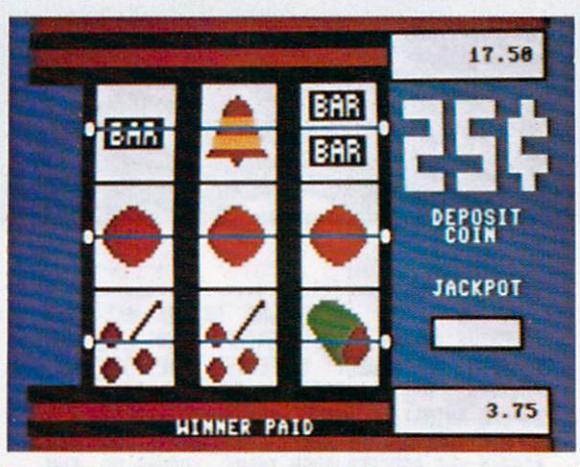
WORMS?



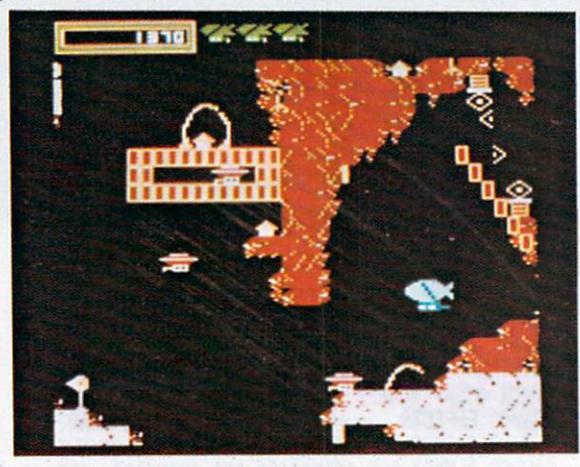
I.F.R.
(FLIGHT SIMULATOR)



COMBAT LEADER



CASINO-64!



ZEPELIN

THE GOLDEN BATON

DISK \$27.95 ***+

COMM*DATA COMPUTER HOUSE

=====

HERE'S AN INTERESTING APPROACH TO THE OLD GRAPHICS VS. TEXT ADVENTURE GAME QUANDRY: YOU GET BOTH! PLAY ALONG IN TEXT MODE (FOR SPEED), AND WHEN YOU WANT TO SEE HOW IT LOOKS WHERE YOU'RE STANDING, HIT A KEY AND A PICTURE IS PANTED BEFORE YOUR EYES. (THIS PAINTING IS QUITE SLOW, SO YOU MAY WANT TO USE IT SPARINGLY.)

=====

WORMS

DISK \$34.95 *****

ELECTRONIC ARTS

=====

WORMS IS ONE OF THE FIRST WAVE OF GAMES TO COME FROM ELECTRONIC ARTS. IT IS A CLASSIC IN ITS OWN RIGHT, AND A NICE PIECE OF AMUSEMENT. 'WORMS' APPEAL SPANS A RANGE OF INTEREST FROM IDLE CURIOSITY TO DEMENTED OBSESSION. I HOPE DAVID MAYNARD WILL WRITE US SOME MORE OF THESE OFF-THE-WALL BRAIN, EYE, & EAR TEASERS.

=====

IFR (FLIGHT SIMULATOR)

DISK/TAPE \$29.95 ****

ACADEMY SOFTWARE

=====

THIS FLIGHT SIMULATOR PROGRAM DOES NOT PROVIDE THE DAZZLING COCKPIT VIEW ADVERTISED IN SOME OF THE FLIGHT SIMULATORS COMING OUT THESE DAYS, BUT IT APPARENTLY HAS AN ESPECIALLY REALISTIC INSTRUMENTATION ENVIRONMENT (I AM NOT A PILOT) WHICH HAS EARNED SOME RAVE TESTIMONIALS FROM 747 PILOTS WHO HAVE FLOWN THIS SOFTWARE!

=====

COMBAT LEADER

DISK \$39.95 *****

STRATEGIC SIMULATIONS

=====

THIS IS A NICE, LEISURELY STRATEGIC TANK BATTLE SIMULATION THAT CAN BE PLAYED ON SEVERAL LEVELS BY NOVICES AS WELL AS HARDENED WAR-GAMERS. I LIKE THE SCROLLING TERRAIN AND THE ANIMATED TANKS. IF YOU LOOK CLOSELY, YOU CAN EVEN SEE THE SHELLS BURST (TO SCALE, I'LL BET) WHEN THEY LAND. ALLOWS PROGRAMMING OF CUSTOM SCENARIOS.

=====

CASINO 64

DISK \$19.99 ****

THE QUANTUM LEAP

=====

AFTER RETURNING FROM MY FIRST TRIP TO LAS VEGAS (OR LOST-WAGES), IT WAS FUN TO RUN THIS VERY GOOD ANIMATED SIMULATION OF A THE ELECTRONIC CASINO SLOT MACHINES. THE 5-CARD POKER-MACHINE SIMULATION IS ALSO FAIRLY REALISTIC, THO NOT AS FASCINATING AS THE COLORFUL ONE-ARMED BANDIT. PAYS IN ANIMATED COINS!

=====

ZEPPELIN

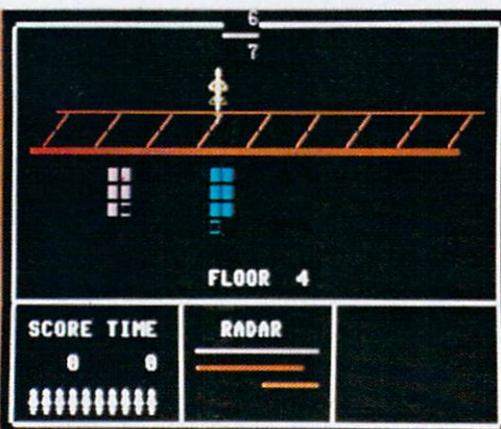
DISK/TAPE \$34.95 *****

SYNAPSE

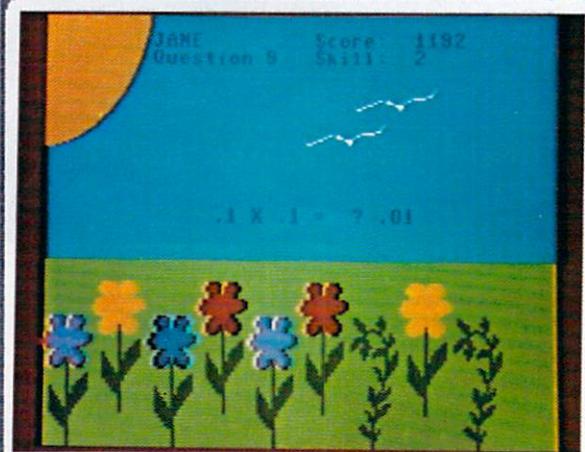
=====

ONE OF MY FAVORITE GAMES OF THE LAST FEW MONTHS. THERE'S A LOT GOING ON IN THIS FLY-THRU-THE-CAVERNS ARCADE GAME. SOMEHOW, ZEPPELIN AVOIDS BEING JUST ANOTHER DULL VERSION OF 'COBRA', THO AT FIRST GLANCE YOU MIGHTL NOT BE CONVINCED. THIS IS REALLY A SUPERIOR GAME OF ITS TYPE. MY KIDS GAVE IT A '5' TOO.

=====



FRACTION FEVER



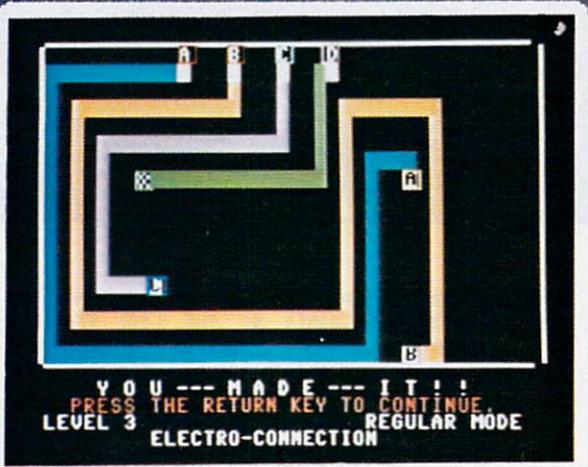
FLOWER POWER



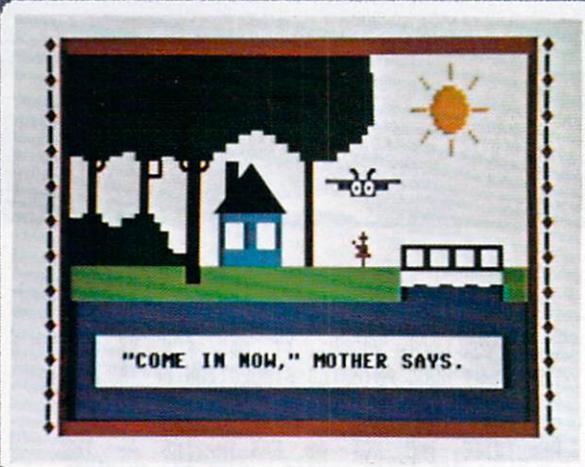
GOTCHA! MATH



THE FACTORY



ELECTRO-CONNECTION



BEDTIME STORIES, BOOK 1

FRACTION FEVER

ROM \$34.95 ***+

SPINNAKER

=====

I'M NOT CONVINCED THAT THIS PROGRAM HELPS KIDS LEARN ABOUT FRACTIONS, (THE VISUAL SCHEME IS FAIRLY CONFUSING IN TERMS OF NUMBERS) BUT THEY WILL PROBABLY HAVE FUN BOUNCING ALONG ON THEIR POGO-STICKS, RIDING UP THE ELEVATORS, AND EVEN FALLING THRU THE GAPS. OKAY EDU-GAME, BUT NOT ONE OF SPINNAKER'S BEST.

=====

FLOWER POWER

DISK \$19.95 ***+

SOFTWARE

=====

HERE'S ANOTHER MATH COACH THINLY DISGUISED AS A GAME. SOMEHOW IT WORKS, PARTLY BECAUSE I THINK KIDS LIKE THE IDEA OF GROWING GIANT COLORED FLOWERS AND DON'T MIND THE OCCASSIONAL WEED THAT SPRINGS UP IN RESPONSE TO AN INCORRECT ANSWER. WORKS WITH ADDITION, MULTIPLICATION, DIVISION, AND SUBTRACTION.

=====

GOTCHA! MATH

DISK/TAPE \$27.95 ***+

COMM*DATA COMPUTER HOUSE

=====

HERE THE MATH PROBLEMS ARE MIXED WITH SOME RANDOM CHANCE, AND DELIVERED IN A GAME-SHOW FORMAT. I LIKE THE GAME-SHOW IDEA, BUT I THINK THAT THE 'GOTCHA'S' COME SO FREQUENTLY THAT CHILDREN WILL GET DISCOURAGED.

=====

THE FACTORY

DISK \$39.95 *****

SUNBURST EDUCATION

=====

'THE FACTORY' IS A CLASSIC EXAMPLE OF WHAT EDUCATIONAL SOFTWARE CAN BE AND SHOULD MORE OFTEN BE. CHILDREN ARE IMMEDIATELY CAPTIVATED BY THIS FUN, BUT CHALLENGING PROBLEM-SOLVING LEARNING GAME. 'FACTORY' MUST HAVE A TREMENDOUS EFFECT IN THE AREA OF VISUALIZATION AND SPATIAL COMPREHENSION. (I JUST WISH THERE WERE MORE OF THE WONDERFUL MACHINES...MAYBE WE'LL GET A 'FACTORY II' WITH SAWS AND BENDING RIGS')

=====

ELECTRO-CONNECTION (FROM PERPLEXITY)

DISK \$29.95 ***+

DAYBREAK SOFTWARE

=====

ELECTRO-CONNECTION IS THE MOST INTERESTING PROGRAM ON THE 'PERPLEXITY' DISK. ANOTHER PROBLEM-SOLVING CHALLENGE, THIS ONE PERTAINS TO THE REAL PROBLEM OF ROUTING WIRING ON CIRCUIT BOARDS WITHOUT INTERSECTIONS. I WOULD HAVE LIKED TO SEE OPTIONS FOR MORE TERMINAL POINTS BEING PLACED ON THE BOARD.

=====

LITTLE RED RIDING HOOD

DISK/TAPE \$29.95 ****

PLAYGROUND SOFTWARE

=====

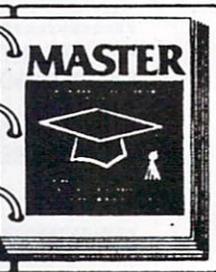
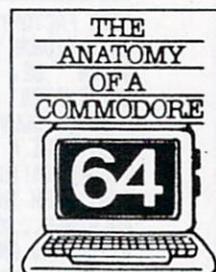
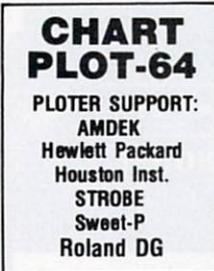
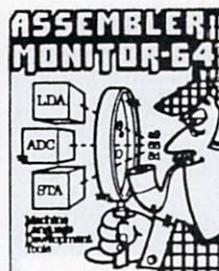
IF YOU HAVEN'T HEARD S.A.M. (SOFTWARE AUTOMATED MOUTH) YET, YOU'LL GET A CHUCKLE OUT OF LITTLE RED RIDING HOOD! THIS SOFTWARE SPEECH SYNTHESIZER TALKS THE CHILD THRU THE STORY, REQUIRING LIGHT-PEN INPUT ON THE PART OF THE CHILD FOR EACH SUCCESSIVE SCENE OF THE STORY. (I THINK THE VOICE SOUNDS A BIT LIKE A COMIC COUNT DRACULA!)

=====

GET THE MOST OUT OF YOUR COMMODORE-64 OR VIC-20 COMPUTER



ALSO AVAILABLE:
3 outstanding
Music Albums to
go with Synth-64
**Classical
Christmas and
Rag/Sing Along**
See below



ULTRABASIC-64...Add 50 commands: graphics, music, TURTLE and game features. Tutorial, demo plus. **TAPE \$39.95 DISK \$42.95**

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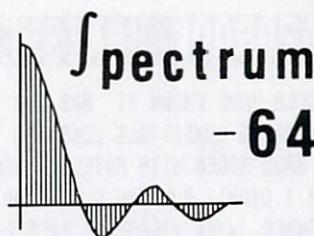
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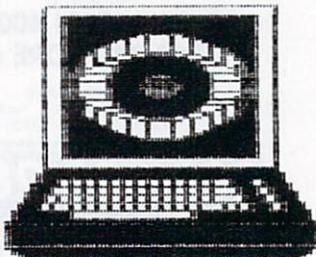
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NEWS & VIEWS

(MORE) NEW COMMODORE MACHINES



WELL, IT PROBABLY WON'T BE THE 264, THE B & P ARE PRESUMABLY DEAD, AND COMMODORE HASN'T HEARD ABOUT THE NEW '64+' THAT YOU WILL BE DESIGNING FOR THEM (SEE CONTEST ON PAGE 25), BUT THE MIND IS FULL OF NEW RUMORS ABOUT NEW MACHINES FROM COMMODORE. WITH UNSPECIFIED DEALS HAVING BEEN NEGOTIATED WITH BOTH ZILOG (Z80 & Z8000 CPU'S), AND BYTEC (PC-COMPATIBLE 'HYPERION' PORTABLE COMPUTER), COMMODORE IS CERTAINLY IN A POSITION TO COME OUT KICKING IN 1984 WITH.... IT COULD BE ANYTHING! MY BEST GUESS IS THAT WE SHOULD SEE A PORTABLE PC-COMPATIBLE AT AN UNHEARD-OF LOW PRICE. (WHY KEEP GUESSING, TURN TO PAGE 25, AND DESIGN IT YOURSELF!!!)

VIDEOBOOK VANISHES !!

I SHOULD HAVE KNOWN IT WAS TOO GOOD TO BE TRUE... A PC/64/APPLE COMPATIBLE COMPUTER UNDER \$500... A \$99, 2400 BAUD MODEM WITH SATELITE COMMUNICATIONS... ETC. AT LEAST I DIDN'T BUY THE SWAMPLAND IN TENNESSEE! I BEGAN TO WONDER, WHEN VIDEOBOOK PRESIDENT JERRY PIERSON COULD NEVER FIND THE TIME FOR AN INTERVIEW (BUT COULD TALK ON THE PHONE EXPANSIVELY FOR HOURS AT A TIME), WOULD NOT DISCLOSE THEIR OFFICE ADDRESS IN SEATTLE, & WAS UNABLE TO SUPPLY SAMPLES OR SHOW PROTOTYPES OF ANY OF A NUMBER OF DAZZLING PRODUCTS THAT PROBABLY NEVER EXISTED OUTSIDE OF MR. PIERSON'S ACTIVE IMAGINATION. DID ANYONE EVER BUY THEIR ONE ADVERTISED PRODUCT- THE PROMETHIUS I VIDEOD INTERFACE? IF SO, I HOPE ITS WORKING WELL BECAUSE, AFTER MOVING THEIR OFFICES TO HOUSTON TX, VIDEOBOOK HAS VANISHED, HAVING ONLY BRIEFLY RETAINED AN ANSWERING SERVICE THERE THRU WHOM OUR CALLS WERE NEVER RETURNED. BYE, JERRY, GOOD LUCK, & GIVE US A BUZZ IF YOU EVER GET YOUR ACT TOGETHER.

OPTIMUM FRAUD - NO PAL 'A MINE!

THE ULTIMATE 64 USER'S MAGAZINE

OPTIMIZER 64

A DIVISION OF PALAMINE LTD.
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Dave Norman

I WAS VERY UPSET TO FIND THAT AFTER PRINTING ONLY ONE ISSUE (AND APPARENTLY RUNNING OUT OF DOLLARS, OR ENERGY) THE NEW, WOULD-BE COMMODORE 64 MAGAZINE, 'OPTIMIZER 64' (PUBLISHED BY PALAMINE LTD.) FOLDED WITHOUT FURTHER ADD.

I WAS EVEN MORE DISTRESSED TO FIND THAT SOME OF OUR READERS HAD SENT CHECKS FOR SUBSCRIPTIONS TO 'OPTIMIZER', HAD THEIR CHECKS CASHED, & RECEIVED NOTHING IN RETURN. ATTEMPTS TO CONTACT THE COMPANY WERE UNSUCCESSFUL, AND THE PRESIDENT, VANCOUVER AREA RESIDENT KIRK SHAW, HAS APPARENTLY LOST HIS DESIRE FOR PUBLIC ACCESSIBILITY (HAVING REMOVED HIS NAME AND NUMBER FROM DIRECTORY ASSISTANCE).

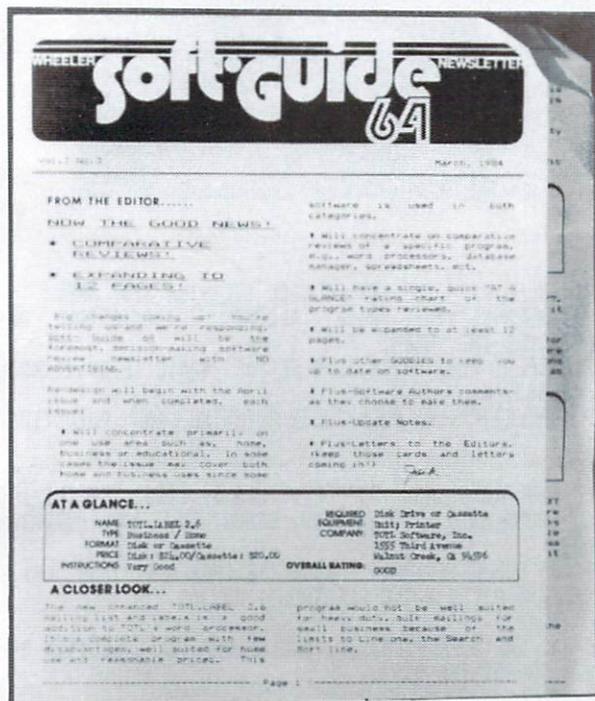
IF OUR ABUSED READERS FELT TAKEN, IMAGINE THE FEELINGS AT MICRON TECHNOLOGY, INC. WHEN MR. SHAW INFORMED THEM THAT OVER \$3000.00 WORTH OF THEIR SOLID-STATE CAMERA EQUIPMENT ON LOAN TO 'OPTIMIZER 64' WAS NOT GOING TO BE RETURNED! NEEDLESS TO SAY, MICRON'S LAWYERS HAVE A NEW PROJECT!

NEWS & VIEWS

BY WAY OF ASSISTING BOTH READERS & THE GOOD FOLKS AT MICRON (AFTER RUNNING THE 'OPTIMIZER' AD IN OUR FALL ISSUE), WE WOULD LIKE TO ASK ANY READERS WHO HAVE BEEN BURNED BY PALAMINE LTD., TO SEND A NOTARIZED STATEMENT TO THAT EFFECT, AND WE WILL FORWARD THESE TO THE PROPER AUTHORITIES IF IT LOOKS LIKE ANY KIND OF GROUP ACTION CAN BE TAKEN, EITHER WITH MICRON TECHNOLOGY OR INDEPENDENTLY, TO RECOVER DAMAGES.

UNDER NO CIRCUMSTANCES SHOULD YOU SEND MONEY FOR ANYTHING ASSOCIATED WITH ANY OF THE NAMES ON THE 'OPTIMIZER' MASTHEAD (THO THE STAFF WERE VERY LIKELY UNWITTING ACCOMPLICES, THEMSELVES WORKING FOR PROMISED WAGES). THE SAD THING IS, 'OPTIMIZER' COULD HAVE BEEN A FINE PUBLICATION- THE TALENT AND ENTHUSIASM WERE THERE -JUST NOT THE QUALITY LEADERSHIP.

WHEELER - DEALER (SOFT ON SUBSTANCE.)

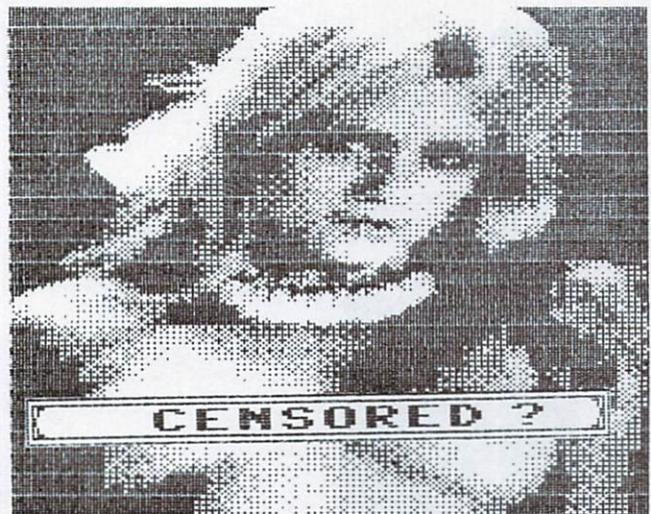


HERE'S A DIFFERENT KIND OF RIP-OFF (IN OUR ESTIMATION); MAYBE YOU'VE SEEN THE ADS- FOR \$19.95 (A NICKEL MORE GETS YOU A YEAR'S SUBSCRIPTION TO COMPUTE'S GAZETTE) YOU CAN GET THE 'WHEELER SOFT-GUIDE 64'. THIS DUBIOUS INVESTMENT WILL GET YOU A TYPED NEWSLETTER 12 TIMES A YEAR. WE RECENTLY RECEIVED OUR THIRD ISSUE: ALL EIGHT PAGES OF IT! IT CONTAINED 5 REVIEWS, NO PHOTOS, & THE EXCLAMATION, "EXPANDING TO 12 PAGES!" ON THE COVER.

SAVE YOUR MONEY.

CENSORED SOFTWARE? GET OUT THE MICROSCOPE!

WE WERE AMAZED TO HEAR THAT SOME DEALERS HAVE PULLED CARDCO'S DISK VERSION OF 'PRINTER UTILITY PROGRAMS' OFF THE SHELVES BECAUSE IT CONTAINS A SAMPLE HI-RES DIGITIZED PHOTO OF A YOUNG LADY'S TORSO (WITHOUT BENEFIT OF CLOTHING).



WHILE WE ARE NOT GOING TO RISK SIMILAR CENSURE BY REPRINTING THE HARDCOPY UNRETOUCHED, WE SUBMIT THAT (EVEN FORGETTING THE SUPREME COURT, FREE SPEECH, ETC.) IT IS QUESTIONABLE WHETHER ANYTHING CAN BE OBSCENE (OR EVEN STIMULATING) AT A RESOLUTION OF 320 X 200 DOTS! (NOW, IF IT WERE ON THE APPLE MACINTOSH.....)

64 GIVES A HAND WITH THE TILL



A POINT-OF-SALE SYSTEM FOR RETAILERS, THE CCI 'MERCHANDISER' (tm) SYSTEM COMBINES AN ELECTRONIC CASH--DRAWER WITH SOFTWARE FOR NUMEROUS INTEGRATED ACCOUNTING FUNCTIONS INCLUDING: TRACK INVENTORY (2000 ITEMS) AS SALES ARE MADE, SALES ANALYSIS, MANAGEMENT REPORTS, 2--PART SALES & CREDIT SLIPS, & MERCHANDISE LABELS AND STICKERS. OPTIONAL WORDPROCESSING, DATABASE MANAGEMENT, MAILING LABEL, AND TELECOMMUNICATIONS SOFTWARE AVAILABLE.

NEWS & VIEWS

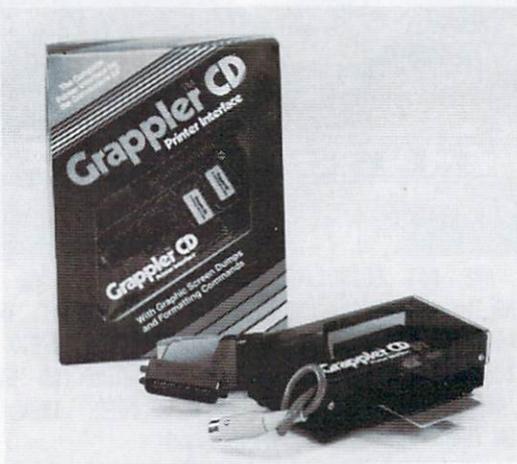
SYSTEMS CONSISTS OF: C64, 2 1541 DRIVES, MONITOR, OKIDATA 82A PRINTER, COMPUTER-CONTROLLED CASH DRAWER, AND SOFTWARE.

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NEW ORANGE NOT FOR APPLES



ORANGE MICRO, INC. (BEST KNOWN FOR ITS EXCELLENT 'GRAPPLER' PRINTER INTERFACES FOR APPLE COMPUTERS) IS INTRODUCING THE 'GRAPPLER CD' PRINTER INTERFACE FOR THE C64.

LOADED WITH FEATURES, THE NEW INTERFACE WILL PROBABLY CHECK IN AT AROUND \$120.00, THO FINAL PRICE WAS NOT SET AT PRESS-TIME. AMONG THE FEATURES ARE:

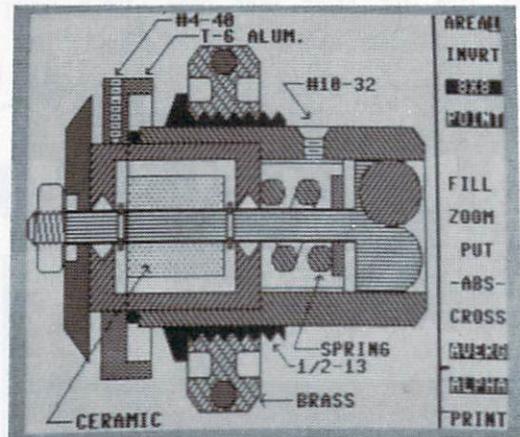
- * 100% 1525 EMULATION (INCLUDING KEYBOARD GRAPHICS)
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NEVER ONE TO REST ON PAST LAURELS, INKWELL SYSTEMS HAS BEEN BUSY UPGRADING THEIR FIRST-CLASS HI-RES LIGHT-PEN DRAWING SYSTEM. SINCE WE REVIEWED IT LAST ISSUE, FLEXIDRAW (tm) HAS BEEN VASTLY IMPROVED.

ESPECIALLY NOTABLE ARE THE NEW PATTERN FILL ROUTINES (SEE PHOTO) WHICH ALLOW SHADING OF ANY ENCLOSED AREA WITH ANY OF 14 FILL PATTERNS. THESE MAY BE SUPERIMPOSED FOR ADDITIONAL EFFECTS (270 COMMODORE CHARACTERS MAY ALSO BE USED FOR FILLS).



ALSO INCLUDED WITH THE NEW PACKAGE (VERSION 3.0) ARE:
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* 'FLEXILOT' (tm) WHICH IS A SET OF BASIC SUBROUTINES FOR GRAPHICS, &
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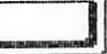
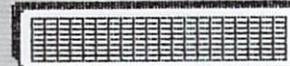
PRINTER FUNCTIONS NOW SUPPORT: CBM'S 1525, GEMINI-10 SERIES, EPSON MX & FX, C. ITOH PROWRITER, AND OKIDATA PRINTERS.

INTERFACES SUPPORTED ARE: CARDCO (SET FOR 8-BIT, NO LF), VICTREE, AND MICRO WORLD ELECTRONIX MW-302.

THE MANUAL HAS BEEN EXPANDED, AND SO HAS THE SELECTION OF FILES ON THE SYSTEM DISK.

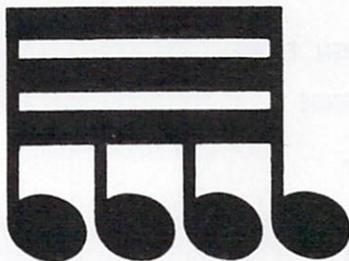
CONTACT:

INKWELL SYSTEMS
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SAN DIEGO, CA 92138
(619) 268-8792



NEWS & VIEWS

ENTECH: "MONEY" FOR YOUR MUSIC!



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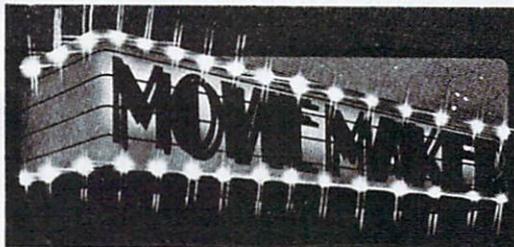
WINNERS WILL BE ANNOUNCED DEC. 15 1984, AND AWARDS WILL BE PRESENTED AT THE WINTER C.E.S. IN LAS VEGAS.

SONGS (UP TO 5 MIN. LONG) MUST BE WRITTEN (NATURALLY) WITH 'STUDIO 64', AND SUBMITTED ON DISK. JUDGING WILL BE FROM A PANEL OF INDUSTRY PROFESSIONALS.

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NEWS & VIEWS

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```

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COPY STATUS
-----
OK
-----
FUNCTION POSITION
LOADING- TRACK: 8 SECTOR: 8
-----
WARNINGS
-----
NONE
-----
SECTORS IN MEMORY SECTORS COPIED
155 OF POSSIBLE 172 800 OF 693
-----
PASSES COMPLETED 0.4
OF 4
-----
FOR ARCHIVAL
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USER INSTRUCTIONS
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INFO-64 DOES NOT CONDONE MAKING BACKUPS FOR FUN OR PROFIT, BUT WE FEEL LEGITIMATE OWNERS OF SOFTWARE (ESPECIALLY EXPENSIVE, BUSINESS-CRITICAL SOFTWARE) HAVE A RIGHT TO PERSONAL BACKUP COPIES OF ANY SOFTWARE THEY HAVE (OFTEN DEARLY) PAID FOR.

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WHAT EVER HAPPENED TO.....

APPLE EMULATOR

PRODUCTION, PACKAGING, & LEGAL SNAGS HAVE TEMPORARILLY DELAYED PIONEER SOFTWARE'S MUCH ANTICIPATED INTRODUCTION OF THE APPLE EMULATOR (THE 'AP MODULAR PAK'). WE FULLY EXPECT TO HAVE A PHOTO-STORY IF NOT A COMPLETE REVIEW OF THIS SYSTEM IN THE SUMMER ISSUE OF INFO-64.

MEGABYTE RAM

AGAIN, A CASE OF LAST-MINUTE HASSLES & INCIDENTAL GREMLINS ARE SAID TO BE THE CULPRITS HOLDING UP MOSAIC ELECTRONICS' 'ACCESS-M' ONE-MEGABYTE RAM EXPANSION FOR THE C64 (AS FIRST REPORTED HERE IN THE WINTER ISSUE). AND, AGAIN, WE WILL BRING THE STORY TO YOU LIVE AS IT BREAKS (PROBABLY IN THE SUMMER ISSUE).

'TURBO' SPEED-UP KIT

WE HAVE HEARD NOTHING FURTHER ABOUT THIS PRODUCT (FIRST MENTIONED IN TRANSACTOR MAGAZINE IN THE FALL OF '83). WE WILL TRY TO LOCATE THE ORIGINATORS OF THIS PROJECT BY THE NEXT ISSUE, AND GIVE IT TO YOU STRAIGHT FROM THE DESIGNER'S MOUTH.

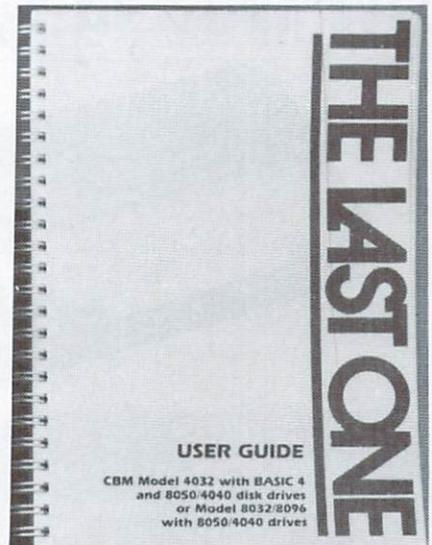




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BLUE SKY SOFTWARE
26 SPRINGDALE RD.
CHERRY HILL, NJ
08003
(609) 424-3337

WHY YOU DON'T NEED AN
APPLICATIONS
GENERATOR
\$99 - DISK
FROM:
DYNATECH
7847 N. CALDWELL
NILES, IL 60648
(312) 470-0700

BY: BENN DUNNINGTON

I HAD ORIGINALLY EXPECTED TO DO A "FACE-TO-FACE" EVALUATION OF THE TWO PICTURED SOFTWARE PACKAGES, "CODEWRITER" & "THE LAST ONE", TWO POPULAR 'APPLICATIONS GENERATORS'. AFTER SPENDING (TOO MUCH) TIME WITH BOTH OF THESE INTERESTING PROGRAMS, HOWEVER, IT BECAME EVIDENT THAT NOTHING SHORT OF A FULL-BLOWN 'SOFTWARE SERMONETTE' FROM UNCLE BENN WAS IN ORDER!

WHAT DO THESE PROGRAMS DO? WELL, IN BOTH CASES, IT DEPENDS ON WHETHER YOU'RE READING THE ADS OR THE MANUALS.

THE ADS SEEM TO SUGGEST THAT THESE PROGRAMS WILL SHIELD YOU FROM THE ANFUL PROSPECT OF WRITING 'CODE' IN BASIC (THAT ESPECIALLY CRUEL FORM OF SELF-TORTURE). THESE PROGRAMS WILL, INSTEAD, 'TALK' TO YOU IN PLAIN ENGLISH, FIND OUT WHAT YOU WANT TO DO, AND WRITE THE NECESSARY BASIC CODE FOR YOU-PAINLESS PROGRAMMING! SOUND GOOD? READ ON, TRAVELLER.

BY OFFERING TO WRITE BASIC CODE FOR YOU, THESE PROGRAMS ALSO SEEM TO BE SAYING THAT THEY ARE ABLE TO WRITE ANYTHING YOU COULD WRITE IN BASIC, WITHOUT WRITING IT IN BASIC. THE MORE IMPRESSIONABLE AMONG US MIGHT EVEN IMAGINE MANAGING SPRITES, GRAPHICS, AND SOUND WITHOUT WRITING ANY CODE. (THIS IS, OF COURSE, TOTALLY OUT OF THE QUESTION).

WHEN YOU READ THE MANUALS (AND I SHOULD SAY HERE THAT THESE PRODUCTS ARE VERY SIMILAR IN CAPABILITIES AND SCOPE), YOU WILL SEE THAT, AFTER ALL IS SAID & DONE, THESE TWO PROGRAMS WRITE DATABASE MANAGEMENT SOFTWARE IN BASIC. IT'S THAT SIMPLE. EXCEPT THAT IT ISN'T SIMPLE AT ALL:

IN FACT, IT'S DOWNRIGHT DIFFICULT! I FOUND BOTH OF THESE PRODUCTS TO BE COMPLEX AND HARD TO GET INTO ('THE LAST ONE' BEING THE WORST WITH ITS FLOW-CHARTS AND BRITISH SYNTAX), SO MUCH FOR PLAIN ENGLISH. THE PROBLEM IS, THAT WHILE YOU'RE SHIELDED FROM WRITING BASIC CODE, THERE'S NO WAY OF SHIELDING YOU FROM HAVING TO LEARN THE THEORY, TERMINOLOGY, AND IMPLEMENTATION OF DATABASE MANAGEMENT. SET ASIDE A WEEKEND, YOU'LL NEED IT.

I WILL AGREE, THAT AFTER FIGURING OUT THE CONTROLS (LIKE A 747), IT IS EASIER TO CREATE SEMI- POWERFUL DATABASE PROGRAMS THRU THESE PACKAGES THAN IT IS LEARN HOW TO WRITE THE FILE AND DISK ROUTINES FROM SCRATCH, BUT NOW I HAVE TO ASK, WHAT'S THE POINT?

UNLESS YOU FIND SOME MASOCHISTIC DELIGHT IN HAVING WRITTEN YOUR OWN DATABASE MANAGER, WHY SIT AROUND FOR DAYS FIGURING OUT HOW TO OPERATE THIS SOFTWARE, THEN STRUGGLE WITH THE CONCEPTUAL DESIGN OF YOUR DESIRED DATABASE, MOVE ON TO THE ACTUAL CREATION AND DEBUGGING PROCESS, AND FINALLY ARRIVE (IF YOU'RE STILL COHERENT) AT THE END WITH A DATABASE MANAGER WRITTEN IN BASIC?

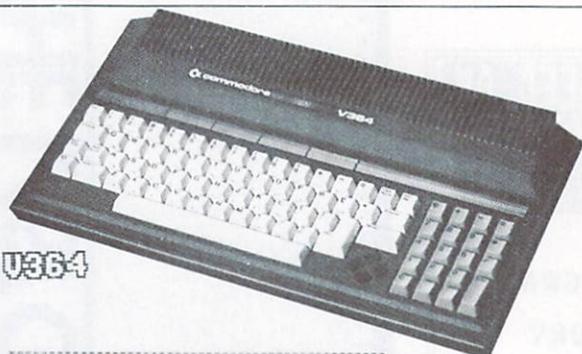
FOR THE SAME PRICE OR LESS, YOU CAN BUY AN EXCELLENT DATABASE MANAGER PROFESSIONALLY DESIGNED & WRITTEN IN MACHINE LANGUAGE (SUPERBASE-64, THE CONSULTANT, MIRAGE CONCEPTS DATABASE MANAGER, M'FILE, SOLIDEX, MAILPRO 64, ETC.) AND WITHIN A HALF HOUR BE USING YOUR DATABASE MANAGER INSTEAD OF DESIGNING IT (AND IT WILL GO AT M.L. SPEED!). THEN YOU CAN USE THE TIME YOU SAVE TO LEARN HOW TO PROGRAM IN BASIC (AND USE IT FOR THINGS IT'S REALLY GOOD AT- NOT DATABASE MANAGEMENT!)

IN ADDITION, ONCE YOU LEARN TO MASTER A GOOD DATABASE MANAGER, YOU WILL FIND THAT YOU DON'T NEED ANY OF THE OTHER PROGRAMS LISTED ABOVE (MAIL LISTS, CHECKBOOK MANAGERS, ETC.)- YOUR DATABASE MANAGER CAN DO IT ALL BETTER!

LISTEN TO ME! SHOP AROUND FOR A QUALITY DATABASE MANAGER, LEARN HOW TO USE IT, SAVE LOTS OF MONEY ON ALL THESE COSTLY SPECIALTY PROGRAMS, (AND IT WOULDN'T HURT YOU TO LEARN THE BASICS OF BASIC, EITHER).

BOTH "CODEWRITER", AND "THE LAST ONE" ARE FINELY CRAFTED, BUT IN MY OPINION, SUPERFLUOUS PRODUCTS. --B.D.





V364



THE 264



CES-CONSUMER ELECTRONICS SHOW

THIS WAS MY FIRST VISIT TO THE FAMOUS BI-YEARLY EXTRAVAGANZA KNOWN AS CES. IT WAS ALSO MY FIRST VISIT TO LAS VEGAS, NEVADA. (IT WAS ALSO THE SEATTLE SEAHAWKS' FIRST TRIP TO THE PLAYOFFS, SIGH). FRANKLY, I WAS LIKE A KID IN A CANDY STORE (I AM A SHAMELESS GADGET FREAK). MY RECURRING IMPRESSION WAS THAT I WAS AT SOME KIND OF MEDIEVAL TOURNAMENT: WITH LOGOS DISPLAYED LIKE COATS OF ARMS, TOWERING TWO-STORY BOOTHS LIKE SMALL CASTLES ON THE PLAINS OF BATTLE, AND DISTRESSING DAMSELS, WANDERING MINSTRELS, WHITE-FACED JUGGLERS, & SELLERS OF WARES... (ESPECIALLY SELLERS OF WARES). EVEN THE GOLD-PLATED MILLIONTH C64 IN ITS CASE REMINDED ME OF SOME PRIZE FOR LURING THE BEST ARCHER IN NOTTINGHAM.

AT CASTLE COMMODORE, MANY WONDERS MET THE EYE AND EAR. THERE WAS GOOD NEWS, AND THERE WAS BAD NEWS.

PAUL HIGGINBOTTOM, COMMODORE'S BEST-KNOWN SOUND AND SID AUTHORITY, GAVE ME THE SAD NEWS THAT THE LONG-AWAITED PIANO KEYBOARD FOR THE C64 HAS BEEN INDEFINITELY SHELVED DUE TO THE SCARCITY OF SID CHIPS. THIS WAS COUNTERED BY THE GOOD NEWS THAT ISLAND GRAPHICS' "MICRO-ILLUSTRATOR" WOULD SOON BE RELEASED FOR THE 64!

JIM BUTTERFIELD REVEALED SOME OF THE MARVELS HIDDEN WITHIN THE NEW 264/364 SERIES OF PERSONAL COMPUTERS. OH FOR THE 128 COLORS, THE KNOCK-OUT BASIC 3.5, THE WINDOWS, THE CURSOR PAD, THE 60K OF BASIC WORK-SPACE! BUT ALAS, WHAT HAD BECOME OF THE BELOVED SID CHIP, & THE CUNNING LITTLE SPRITES? THEY WERE NOT TO BE FOUND. OH, ONE OTHER MINOR DETAIL- THE 264 WILL NOT RUN ANY OF THE C64 SOFTWARE THAT'S NOW SITTING ON YOUR SHELF.

AND SO, AS IT BECOMES INCREASINGLY LIKELY THAT THE 264 WILL NEVER COME TO PASS, IT ALSO BECOMES CLEAR WHY: BECAUSE FOR ALL THAT GOT PUT INTO THE NEW MACHINE, TOO MUCH WAS LEFT OUT.

WHY WOULD COMMODORE DESIGN A COMPUTER WITH SO MUCH AND YET SO LITTLE? WHY INDEED; WHEN CONSUMERS WOULD FLIP OVER A 64-COMPATIBLE WITH MORE MEMORY AND FASTER, SMALLER DRIVES- OR A 64-COMPATIBLE LAP COMPUTER WITH LCD DISPLAY THAT THEY COULD TAKE TO TRADE SHOWS IN A BRIEFCASE, AND LATER PLUG INTO THEIR SYSTEM AT HOME, OR A DUAL-PROCESSOR 64/MS-DOS PORTABLE WITH A HARD-DISK AND 600X400 COLOR GRAPHICS! OR A 32-BIT MAC-LIKE APPLIANCE FOR \$900 (AND COMMODORE COULD DO IT!)- BUT A MACHINE THAT IS BASICALLY A SOUPED-UP 64 THAT CAN'T PLAY MUSIC, DISPLAY SPRITES, OR RUN WORDPRO III AND WAS EXPECTED TO SELL FOR ABOUT \$500?

A RELIABLE RUMOR THAT THE 'TED' CHIP (KEY TO THE 264'S STRENGTHS & WEAKNESSES ALIKE) WAS ORIGINALLY DESIGNED FOR AN \$80 LOW-END HOME COMPUTER MAY SUGGEST A POSSIBLE EXPLANATION (A NEW LOW-END COMPUTER WOULDN'T HAVE TO BE 64 COMPATIBLE): AFTER THE CONSIDERABLE COST AND EFFORT HAD BEEN PUT INTO THE 'TED', IT WAS FOUND THAT THERE WAS NO LOW END MARKET LEFT TO FIGHT FOR (MOSTLY DUE TO COMMODORE'S OWN DOMINANCE WITH THE VIC & 64).

WITH NO PLACE LEFT TO GO 'DOWN', SOME MARKETING GENIUS MUST HAVE SAID, "LETS PUT THE 'TED' IN A NEAT PACKAGE, WITH A KNOCK-OUT BASIC, AND BUILT-IN SOFTWARE, AND WHEN THE CRITICS ASK, 'WHERE'S THE SPRITES & MUSIC?', WE'LL TELL 'EM, 'YOU DON'T NEED SPRITES & MUSIC IN A 'PRODUCTIVITY MACHINE'!" AND THUS, A MILLION DOLLAR DEVELOPMENT PROJECT IS SAVED FROM THE GARBAGE CAN AND TURNED INTO A MARKETING COUP! THE ONLY PROBLEM IS THAT THE CRITICS DIDN'T BUY THE STORY, AND COMMODORE REALIZED THAT THE CONSUMER MIGHT NOT BUY THE 264.

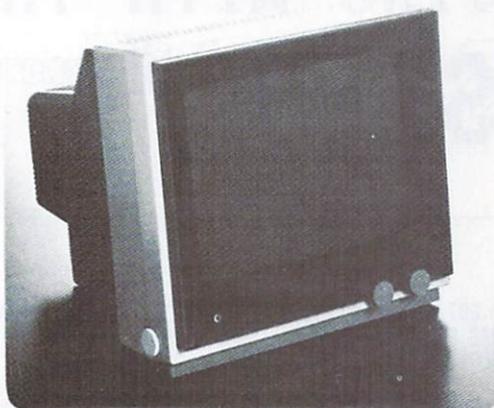
THERE'S GOOD NEWS IN ALL OF THIS: COMMODORE IS CLEARLY AS INNOVATIVE (AND CAGEY) AS EVER- BASIC 3.5 IS SENSATIONAL (AND SHOULD BE ADAPTED TO THE 64 EVENTUALLY), SOME EXCITING FEATURES FROM THE 264 WILL UNDOUBTEDLY BE INCORPORATED IN NEW, WORTHIER MACHINES, WHILE OTHERS WILL TRICKLE-DOWN TO THE 64. SO DON'T GET UPSET, JUST BE PATIENT, SIT BACK, AND ENJOY THE SHOW. THE BEST IS YET TO COME. --B.D.



NEEDS NO CAPTION

C 1703 COLOR MONITOR

THE NEW COLOR MONITOR IS ESSENTIALLY A COSMETIC RATHER THAN A FUNCTIONAL STEP FORWARD FROM THE 1701/1702 COLOR MONITORS. 13 INCH / 40 COLUMNS X 25 LINES / 320 LINE HORIZONTAL RESOLUTION / BUILT-IN AUDIO AMPLIFIER, SPEAKER / VIDEO AND AUDIO INPUTS (FRONT) / CHROMINANCE, LUMINANCE AND AUDIO INPUTS (REAR) / VIDEO CASSETTE RECORDER COMPATIBLE / 14 1/2 X 13 1/2 X 15 (W X H X D) INCHES / 25.6 LBS. / CHARCOAL GRAY WITH BLUE ACCENTS.

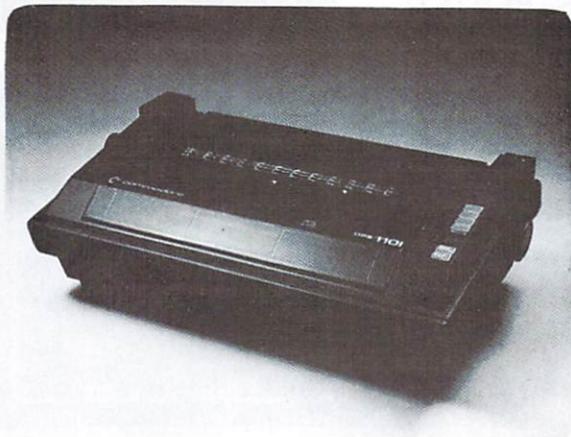


COMMODORE SPEECH MODULE

THE COMMODORE SPEECH MODULE (CSM) PRODUCES "TRUE-TO-LIFE" SPEECH FOR THE C64 AND SX-64 PORTABLE. THIS MODULE PLUGS INTO THE USER PORT AND PROVIDES ITS OWN PORT FOR ADDITIONAL STANDARD ROM CARTRIDGES. THE CSM CONTAINS A VOCABULARY OF 235 WORDS IN A FEMALE VOICE WITH 3 USER-CONTROLLED SPEEDS. ADDITIONAL WORDS CAN BE PROGRAMMED FROM BASIC & ASSEMBLER. MORE WORDS & VOICES ARE SOON TO BE AVAILABLE ON DISK & ROM. SOFTWARE WILL SOON BE RELEASED THAT INCORPORATES THIS SYNTHETIC SPEECH INTO THE GAME OR OTHER PROGRAM. // \$59.95

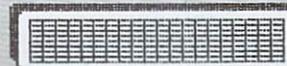
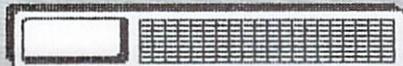
C 1542 DISK DRIVE

THE C-1542 DISK DRIVE IS BASICALLY A LATE--MODEL 1541 WITH A CHARCOAL GREY CASE. SAME SPEED, SAME STORAGE CAPACITY, SAME SPECS ALL-AROUND. IS IT JUST ME, OR IS EVERYONE BEWILDERED AT COMMODORE'S APPARENT LACK OF INTEREST IN DEVELOPING A STATE--OF--THE--ART LINE OF DISK DRIVES? SINCE 80% OF THE PEOPLE WHO BUY 64'S REPORTEDLY ALSO BUY SOME KIND OF DISK DRIVE, YOU'D THINK THIS WOULD BE A PRIORITY ITEM. WE CAN ONLY HOPE THAT COMPETITION FROM 3RD PARTY VENDORS WILL EVENTUALLY FORCE SOME ACTION IN THIS DIRECTION.



DP1101 DAISYWHEEL PRINTER

BI-DIRECTIONAL / TRIUMPH-ADLER COMPATIBLE PRINT WHEEL / 18 CPS / 10, 12, & 15 CPI PITCHES (FOR 110, 132, & 165 COLUMNS) / 82 TO 220 COLUMN PROPORTIONAL SPACING / 48 LINES PER INCH MAXIMUM SPACING / FRICTION FEED / 13" MAXIMUM PAPER WIDTH / PRINTS ORIGINAL PLUS 2 COPIES MAX. / 20 1/2 X 5 7/8 X 14 1/4 (W X H X D) / 27 LBS. 8 OZ. / CHARCOAL GRAY / PRICE AND AVAILABILITY TO BE ANNOUNCED.



LIVING WITH THE SX-64 BEN DUNNINGTON



WE FINALLY GOT AHOLD OF THE SX-64 A LITTLE MORE THAN ONE YEAR AFTER IT WAS FIRST ANNOUNCED. WAS IT WORTH THE WAIT? JUDGE FOR YOURSELF:

AT 27.6 LBS. THE SX-64 IS DEFINITELY PORTABLE (OR TRANSPORTABLE DEPENDING ON WHOSE DEFINITIONS YOU LIKE), IT FITS ALMOST ANYWHERE, AND HAS ALMOST EVERY FEATURE OF C64 + 1541 DRIVE + COLOR MONITOR. (I SAID ALMOST- MORE ON THIS LATER)

THE SETUP IS SIMPLE- RELEASE THE KEYBOARD (WHICH CLOSES OVER THE MONITOR AND DISK-DOOR) BY PRESSING TWO THUMB-BUTTONS, CONNECT THE KEYBOARD CABLE TO THE MAIN UNIT, AND PLUG IT IN!

THE KEYBOARD IS VERY LOW PROFILE PROVIDING A MORE COMFORTABLE HAND POSITION THAN THE C64 (WITHOUT AN ERGBOARD). THE KEYS ARE LAID OUT IDENTICALLY TO THE C64. COMPARED TO THE C64, THE SX-64'S KEYS HAVE A 'LIGHT' TOUCH. I PERSONALLY PREFER THE C64 KEY-FEEL.

THE DISK DRIVE WORKS VERY SMOOTHLY AND DOESN'T OVERHEAT DESPITE THE ABSENCE OF AN INTERNAL FAN. AFTER LOOKING INSIDE, IT APPEARS THAT ADDING A SECOND DRIVE WOULD BE EASY EXCEPT FOR TWO IMPOSSIBLY- PLACED SCREWS. NONETHELESS, I THINK YOU WILL BE ABLE TO DO IT YOURSELF IF YOU CHANGE YOUR OWN SPARK- PLUGS.

THE 5" COLOR DISPLAY IS AT THE FRINGE OF READABILITY FOR TEXT-INTENSIVE OPERATIONS. COLOR SELECTION IS IMPORTANT, AND IT'S EASY TO CONFUSE 'O'S AND 'B'S. COMPLETE VIDEO/AUDIO OUTPUTS DO ALLOW ROUTING THE IMAGE TO AN EXTERNAL MONITOR, WHICH IS PROBABLY THE WAY TO GO FOR PROLONGED WORDPROCESSING ETC. CONVENIENT UP-FRONT CONTROLS ARE PROVIDED FOR CONTRAST, BRIGHTNESS, COLOR, HUE, & VOLUME.

THE SOUND THRU THE BUILT-IN SPEAKER IS LO-FI, BUT YOU CAN MAKE MUSIC ON THE 60, AND THE EXTERNAL CONNECTIONS ALLOW HI-FI IF YOU NEED IT.

THE COIL-BOUND MANUAL IS WELL-DONE, LYING SOMEWHERE BETWEEN THE 64 USER'S GUIDE, AND THE PROGRAMMERS REFERENCE GUIDE IN SIZE AND COVERAGE.

REMEMBER I SAID "ALMOST" EVERY FEATURE OF THE C64 IS INCLUDED? WELL, INPUT/OUTPUT IS WHERE WE FIRST RUN INTO "ALMOST". YOU GET TWO JOYSTICK PORTS, ONE USER (CARTRIDGE) PORT (ON TOP), ONE SERIAL (DISK/PRINTER) PORT, ONE MODEM PORT, AND AN AUDIO/VIDEO PORT. JUST LIKE THE 64 EXCEPT- THERE'S NO CASSETTE PORT. WHATEVER THE REASON FOR THIS IS, IT'S NOT GOOD ENOUGH IF YOU WANT TO LOAD SOMETHING FROM TAPE. THIS OMISSION ALSO CAUSES OTHER PROBLEMS: PROGRAMS THAT USE CASSETTE DONGLES WON'T WORK, AND DEVICES THAT GET THEIR POWER FROM THIS PORT (LIKE THE CARDCO INTERFACES) HAVE TO BE MODIFIED TO GET POWER ELSEWHERE. WHAT ELSE? WELL THE MODEM PORT IS THERE, BUT IT IS POSITIONED SO THAT THE 1600 MODEM GOES IN FINE, BUT THE 1650 AUTO MODEM IS IMPOSSIBLE TO INSERT DUE TO THE PLACEMENT OF THE POWER CORD. YOU WILL HAVE TO BUY UP RIG UP A RIBBON CABLE CONNECTION IF YOU WANT TO GET AROUND THIS BAD PIECE OF DESIGN.

ONE LAST PROBLEM. THO DESIGNED TO BE FUNCTIONALLY IDENTICAL TO THE C64, THERE ARE APPARENTLY SOME PROGRAMS THAT WON'T LOAD OR RUN ON THE PORTABLE. EARLIER VERSIONS OF 'PAPERCLIP', 'WHEN I'M 64' MUSIC PACKAGE, AND SEVERAL SELECTIONS FROM TIMWORKS HAVE BEEN MENTIONED. THESE WILL MOST LIKELY BE UPGRADED TO RUN, BUT FOR NOW, YOU SHOULD TEST SOFTWARE ON AN SX-64 BEFORE YOU BUY IT.

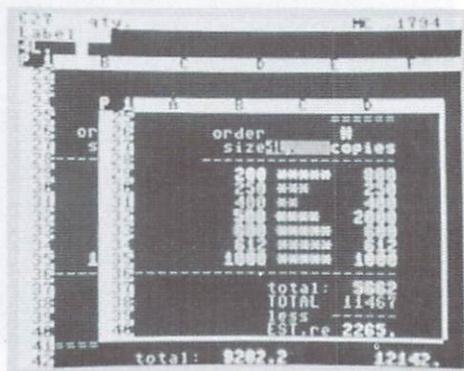
DO I LIKE THE SX-64? YOU BET I DO! I HAVE GROWN ATTACHED TO THE LITTLE GUY, AND IT WILL BE HARD TO SEND IT BACK TO NICHOLS' PHARMACY & ELECTRONICS FROM WHENCE IT CAME.

SX-64 PORTABLE: \$999.00 LIST FROM SELECTED COMMODORE DEALERS.

OUR THANKS TO: **NICHOLS PHARMACY**
FOR SUPPLYING **274 WAHCONAH ST.**
THE SX-64 FOR **PITTSFIELD, MA**
THIS REVIEW. **(413) 442-1564**



WHERE'S THE CASSETTE PORT?



~~READERS~~ HERE'S YOUR CHANCE TO DESIGN THE COMPUTER OF YOUR DREAMS! BEFORE TOO LONG, THE GOOD FOLKS AT ~~COMMODORE~~ WILL BE BRINGING OUT A NEW MACHINE TO EXPAND THEIR LINE AND FAN THE FLAMES OF CONSUMER LONGING & TECHNO-LUST IN US ALL! WE WANT OUR READERS TO HAVE SOME INPUT IN THE OUTCOME (AND SOME FUN TO BOOT). SO IS BORN INFO-64'S FIRST READER CONTEST

DESIGN THE C64+

THIS IS THE COMPUTER YOU HOPED THE 264 WAS GOING TO BE. THIS IS THE MACHINE THAT WILL KEEP COMMODORE THE LEADER IN ITS FIELD. THIS IS THE NEXT COMPUTER YOU WILL BUY.....

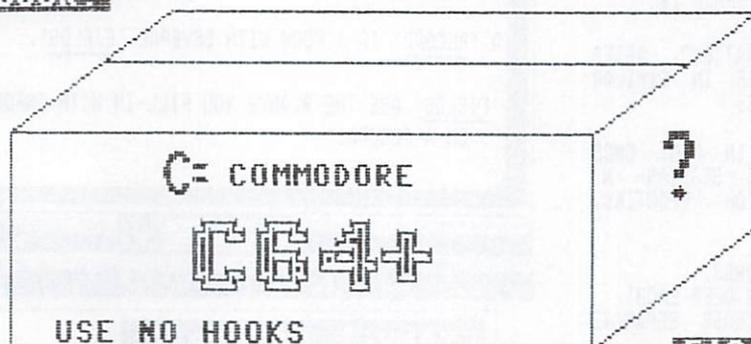
640 x 400
GRAPHICS?

PORTABLE?

LCD DISPLAY?

SEPARATE
GRAPHICS
PROCESSOR?

DUAL 3.5"
FLOPPIES?



NUMERIC KEYPAD?

16-BIT?

MS-DOS?

BASIC 3.5

5 BUILT-IN
LANGUAGES?

512 K RAM?

4 SID CHIPS?

WHAT WE NEED:

ENTRIES SHOULD CONSIST OF A "PRESS-RELEASE" PRAISING THE MANY FEATURES OF THE NEW ~~C64~~, & A 'SPEC-SHEET' LISTING SPECIFICATIONS SUCH AS "CPU, CLOCK SPEED, RAM, KEYBOARD, DISPLAY, GRAPHICS RESOLUTION, STORAGE TYPE & CAPACITY, SIZE, WEIGHT, I/O, FUTURE EXPANSION OPTIONS, OPTIONAL ADD-ONS, PRICE (KEEP IT UNDER \$1500.00), ETC.

PLEASE ENCLOSE AT LEAST A SKETCH OF THE C64+. WE WILL HAVE THE WINNING ENTRY WORKED-UP INTO A FINISHED DRAWING BY A TECHNICAL ILLUSTRATOR & PUBLISHED IN THE FALL '84 ISSUE.

WE WILL ALSO FORWARD THE CUMULATIVE RESULTS OF ALL ENTRIES TO COMMODORE SO THEY HAVE A CHANCE TO INCORPORATE YOUR IDEAS INTO THE NEW ~~C64~~ !!!

CONTEST!

1st PRIZE

\$64⁰⁰ CASH!

PLUS THE FABULOUS-
ERBOARD!

5 RUNNERS UP-

WILL EACH RECEIVE-
THE COVETED
ERBOARD!

SEND ENTRIES TO:

C64+ CONTEST
INFO-64
PO BOX 958
AUBURN WA 98071

ALL ENTRY MATERIALS
BECOME THE PROPERTY
OF INFO-64 AND CAN
NOT BE RETURNED.

ENTRIES WELCOME FROM
USER GROUPS AS WELL AS
INDIVIDUAL READERS!

CONTEST DEADLINE: 7/1/84



SUPERBASE 64

REVIEWED BY
BENN DUNNINGTON

IF THE INTRODUCTION OF SUPERBASE 64, MAY BE TAKEN AS A SIGN OF THINGS TO COME, THEN PERHAPS PRECISION SOFTWARE IS TO BE CONGRATULATED NOT ONLY FOR CREATING THE SINGLE BEST PIECE OF C64 BUSINESS SOFTWARE TO HIT THE SHELVES TO DATE, BUT FOR USHERING IN A NEW STANDARD OF APPLICATIONS SOFTWARE EXCELLENCE AS WELL!

I DON'T RAISE THIS CHEER LIGHTLY. FOR MOST BUSINESSES, A DATABASE MANAGER (OR DBMS) IS ONE OF THE MOST IMPORTANT PIECES OF SOFTWARE YOU CAN OWN, & SINCE THE INCEPTION OF INFO-64 (WITH OUR COMMITMENT TO PRODUCE & MANAGE THE MAGAZINE ONLY WITH C64-COMPATIBLE PRODUCTS), I HAVE SEARCHED AND HOPED FOR A WORTHY DBMS THAT WE COULD USE WITH EASE, POWER, & CONFIDENCE.

IN THIS QUEST I HAVE WORKED WITH "DELPHI'S DRACLE" (NOW "THE CONSULTANT"), "FLEXFILE 2.1" (AKA "PRACTIFILE"), "MFILE", COMMODORE'S "THE MANAGER", MIRAGE CONCEPTS' "DATABASE MANAGER", "SOLIDEX", "MINI-JINI", MICROSPEC'S "DATABASE MANAGER", & LOOKED MORE BRIEFLY AT "TOTL.INFOMASTER" AND "GREEN ARROW".

SEVERAL OF THESE PRODUCTS ARE RESPECTABLE ENTRIES (SOME MORE RESPECTABLE THAN OTHERS) WITH VARIOUS STRENGTHS & WEAKNESSES. NONE OF THEM BELONG ON THE SAME SHELF WITH SUPERBASE 64.

WHY AM I SO TAKEN WITH THIS PARTICULAR INCARNATION? AFTER ALL, MOST OF THESE PRODUCTS DESCRIBE THEMSELVES IN SIMILAR GLOWING TERMS. HERE ARE SOME OF THE HIGHLIGHTS:

- * ENTIRE PROGRAM (MACHINE LANG.) RESIDES IN RAM; ONCE LOADED, SYSTEM DISK IS NOT NEEDED DURING SESSION- NO FURTHER LOADING (IE: WAITING) REQUIRED FOR REPORTING, UTILITIES, RESTRUCTURING, ETC.
- * BACKUP SYSTEM DISK INCLUDED WITH PACKAGE.
- * FAST; KEY FIELD ACCESS IN LESS THAN 3 SECONDS.
- * SEARCHES AND SORTS MAY BE UP TO 127 FIELDS DEEP EACH!
- * ONLY DBMS FOR C64 WHICH ALLOWS LINKING ACROSS SEPARATE FILES (SEMI-RELATIONAL).
- * SIMULTANEOUSLY MENU & COMMAND DRIVEN.
- * PROGRAMMING INTERFACE SUPPORTS WIDE RANGE OF COMMANDS FROM BASIC WITH 50 ADDITIONAL SUPERBASE COMMANDS (MORE ON THIS BELOW). COMMANDS ACCEPTED IN WHOLE ENGLISH SENTENCES AS WELL AS ABBREVIATED FORMS.
- * SUPERB DOCUMENTATION: WELL ILLUSTRATED (IN A SMALL "NO--HANDS" 2-RING BINDER) WITH 5 TABBED SECTIONS; TUTORIAL, REFERENCE, PROGRAMMING, APPENDICES, & INDEX (ONE OF THE MOST COMPLETE I HAVE SEEN).
- * VIRTUALLY CRASH & GOOF-PROOF.
- * BUILT-IN HELP SCREENS AND SAMPLE APPLICATIONS FILES (MAY BE ADDED-TO, REPLACED, OR DELETED).
- * FIELDS MAY BE ADDED, AND (WITH SOME RESTRICTIONS) FIELD LENGTHS AND TYPES MAY BE CHANGED AT ANY TIME WITHOUT RESTRUCTURING THE FILE.
- * PROGRAM-WRITER FACILITY GENERATES COMPLEX REPORTS FROM USER RESPONSE TO SIMPLE PROMPTS.
- * RESIDENT SYSTEM UTILITIES (SEE FIG. 2)

GETTING UP AND RUNNING ON SUPERBASE 64 WAS AN UNUSUALLY PLEASANT EXPERIENCE. HAVING READ THE ADS (WHICH USUALLY OVER-SELL SUCH PRODUCTS) I WAS SURPRISED TO FIND DETAIL AFTER DETAIL THAT EXCEEDED BOTH THE PROMOTIONAL REFERENCES & MY OWN EXPECTATIONS.

SEVERAL THINGS WILL CATCH YOUR ATTENTION UPON REMOVING THE MANUAL FROM ITS DUST JACKET. FIRST IS THE HAPPY REALIZATION THAT THERE ARE TWO MASTER DISKS (ALONG WITH A DEMO). IT HAS ALWAYS IRKED ME THAT ALMOST EVERY OTHER BUSINESS PACKAGE FOR THE C64 REQUIRES A REGISTRATION CARD AND A CHECK BEFORE YOU CAN HAVE THAT ALL-IMPORTANT BACKUP MASTER (SOME GO SO FAR AS TO ACTUALLY REQUIRE YOUR DAMAGED ORIGINAL BEFORE THEY WILL SELL THE BACKUP) & WHILE SOME OTHER SYSTEMS USE 'DONGLES' (PLUG-IN CIRCUITS) FOR SECURITY, ENABLING YOU TO MAKE UNLIMITED COPIES OF THE SYSTEM DISK, I PERSONALLY PREFER THE SPARE DISK SYSTEM (MY DONGLES HAVE GOTTEN LOST, OR THEY SOMETIMES DON'T WORK ON ALL OUR 64'S HERE, PLUS, WITH A DONGLE YOU CAN ONLY RUN THE PROGRAM ON ONE MACHINE AT A TIME).

NEXT YOU WILL NOTICE THE CLEAR AND ORGANIZED APPEARANCE OF THE MANUAL ITSELF. THIS IS NOT JUST APPEARANCE: THE OWNER'S MANUAL HAS THAT RARE AND INVALUABLE QUALITY OF BEING AT THE SAME TIME THOROUGHLY DETAILED AND YET EASY TO READ. THE INDEX IS A MODEL OF COMPLETENESS. THIS COHERENCE IS FURTHER REFLECTED IN THE PROGRAM ITSELF.

WHAT IS A DATABASE MANAGER?

IT IS A PROGRAM WHICH MANIPULATES A 'DATABASE'.

A 'DATABASE' IS A COLLECTION OF 'FILES'.

A 'FILE' IS A GROUP OF IDENTICALLY STRUCTURED 'RECORDS'.

A 'RECORD' IS A FORM WITH SEVERAL 'FIELDS'.

'FIELDS' ARE THE BLANKS YOU FILL-IN WITH INFORMATION ON A RECORD.

EXAMPLE DATABASE (student records)

FILE #1

(academic records)

FILE #2

(extracurricular activities)

FILE #3

(personal data)

name: <Jesse >	key field
name: <Robyn >	
name: <Walker >	
age: <14 >	
add: <route 6 >	
ID# : <038 > +	
grade pt: <3.2 >	
record # 11	

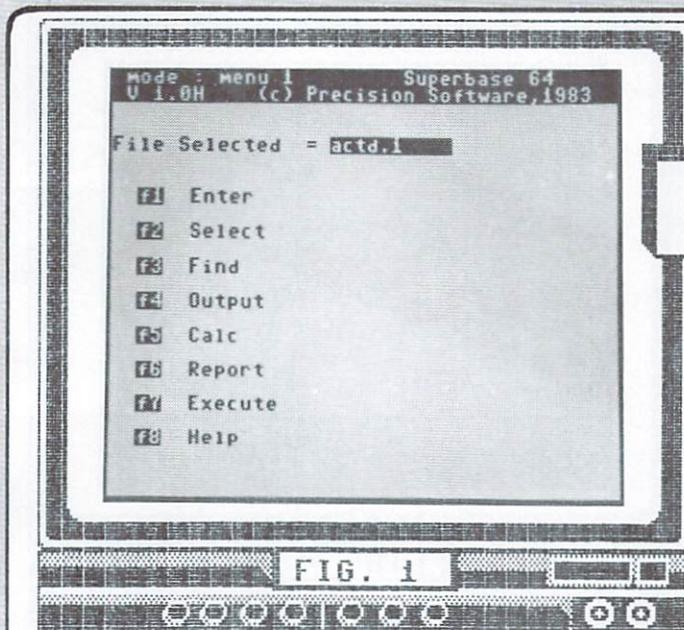
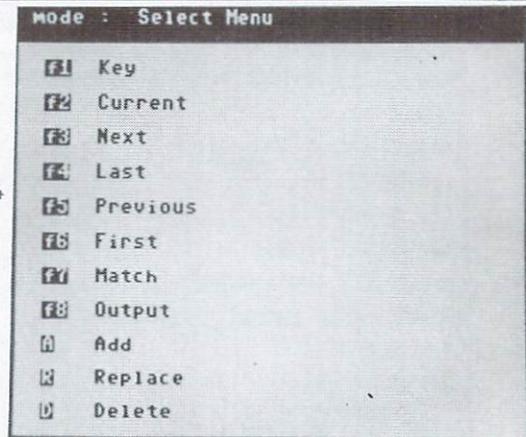


FIG. 1



IN MANY BUSINESS APPLICATIONS, THE OPERATOR WILL BE LOOKING AT A FORM SOMETHING LIKE THAT SHOWN IN FIG. 3. THIS IS WHERE YOU "FILL IN THE BLANKS" ADDING AND CHANGING RECORDS AS NEEDED. THIS MODE HAS SOME VERY NICE FEATURES: DESCRIPTIVE TEXT MAY BE MADE A PART OF THE SCREEN (I DESIGNED THIS SCREEN WITH A LEGEND AT THE BOTTOM TO HELP THE OPERATOR REMEMBER IN-HOUSE CODES FOR A FIELD WE NAMED 'TYPE'). IN ADDITION, SINCE WE USUALLY ENTER "RBSG" IN THIS FIELD, I MADE THIS A 'CONSTANT' FIELD WHICH MEANS THAT IT IS AUTOMATICALLY FILLED IN WITH "RBSG" ON EVERY NEW RECORD (THIS CAN BE TYPED OVER WHEN DIFFERENT CODES ARE REQUIRED). THIS IS A BIG TIME SAVER! ANOTHER TIME SAVER IS THE ABILITY TO REPLICATE THE CONTENTS OF A FORM WHEN A SERIES OF FORMS WILL CONTAIN SIMILAR DATA FROM ONE TO THE NEXT.

THO THE SCREEN IN FIG. 3 HOLDS A LOT OF INFORMATION, IT HAS ONLY BEEN USED TO ABOUT 50% OF ITS CAPACITY (SINCE WE LEFT SPACES BETWEEN EACH LINE), FURTHERMORE, IF NEEDED, A TOTAL OF FOUR SCREENS MAY BE USED FOR EACH RECORD! (* NOTE: THE FIELD NAMES, LENGTH, AND LAYOUT ARE UP TO YOU- THE FORM IN FIG. 3 IS JUST ONE WE CAME UP WITH FOR INFO-64'S NEEDS).

IN ADDITION TO 'STATIC' DATA, THESE FIELDS MAY ALSO HOLD CALCULATED RESULTS (SUCH AS "AVERAGE DAILY BALANCE" OR "DAYS SINCE LAST CHECKUP") BY USING THE SOFISTICATED MATH AND CALENDAR FEATURES. YOU CAN EVEN DO NON-PERMANENT 'WHAT-IF' OPERATIONS ON YOUR RECORDS IN THE 'CALC' MODE, TURNING YOUR RECORD INTO A KIND OF MINI-SPREADSHEET!

SETTING UP YOUR FIRST DATABASE IS A SNAP: A FIRST-TIMER STARTUP ROUTINE GUIDES YOU THROUGH AN AUTOMATED SEQUENCE WHICH FORMATS YOUR DATA DISK AND TRANSFERS TO IT NUMEROUS HELP SCREENS AND SAMPLE FILES (THESE CAN BE DELETED LATER IF YOU WANT THE SPACE).

THREE LEVELS OF TUTORIALS GUIDE YOU THRU CREATION OF A FAIRLY POWERFUL ACCOUNTING APPLICATION (COVERING ALL BUT THE MOST ADVANCED CONCEPTS IN THE PROCESS). AFTER THE FINAL TUTORIAL SESSION, YOU WILL FEEL CONFIDENT AND READY TO VENTURE FORTH WITH A DATABASE DESIGN OF YOUR OWN.

ROUTINE OPERATION IS FACILITATED BY SEVERAL SELF-EXPLANATORY MENUS (FIGS. 1 & 2). WHEN A MENU IS PRESENTED, THE OPTIONS ARE SELECTED EITHER BY PRESSING THE INDICATED FUNCTION KEY, OR BY TYPING THE COMMAND. IN THE CASE OF THE 'SELECT' MODE (FIG. 3) THE MENU IS ABBREVIATED ABOVE THE COMMAND LINE: PRESSING THE FIRST LETTER NOW INVOKES THE OPTION.

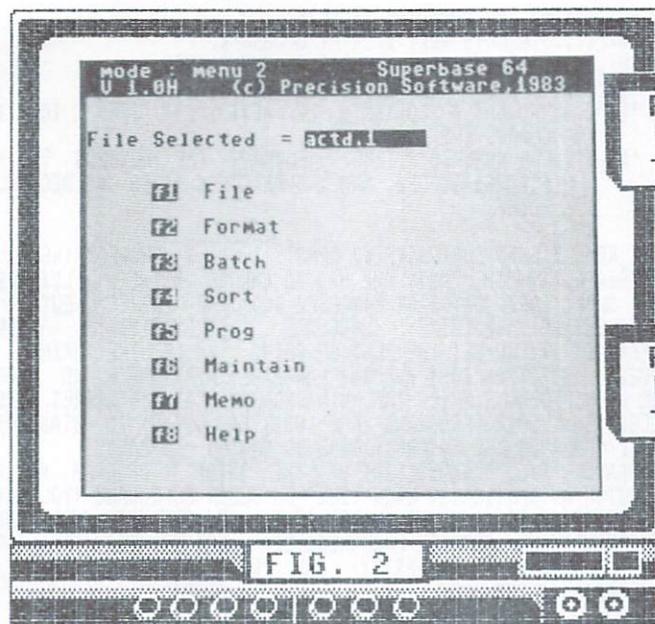
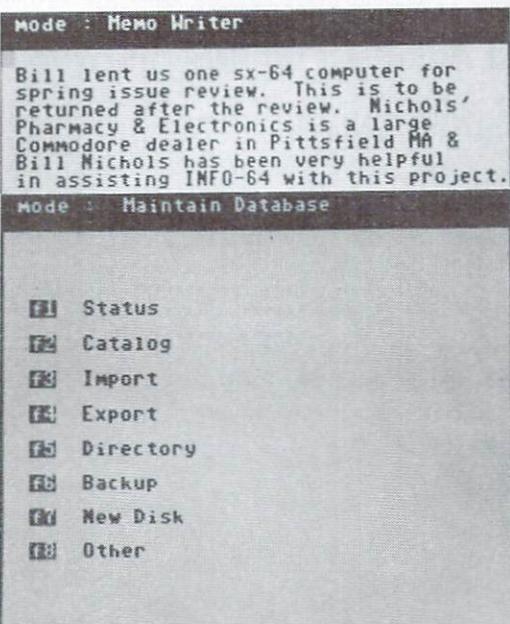


FIG. 2



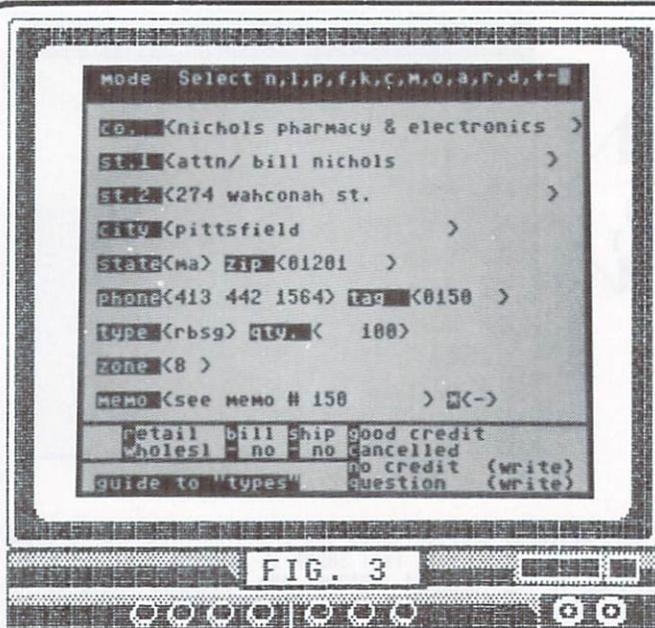


FIG. 3

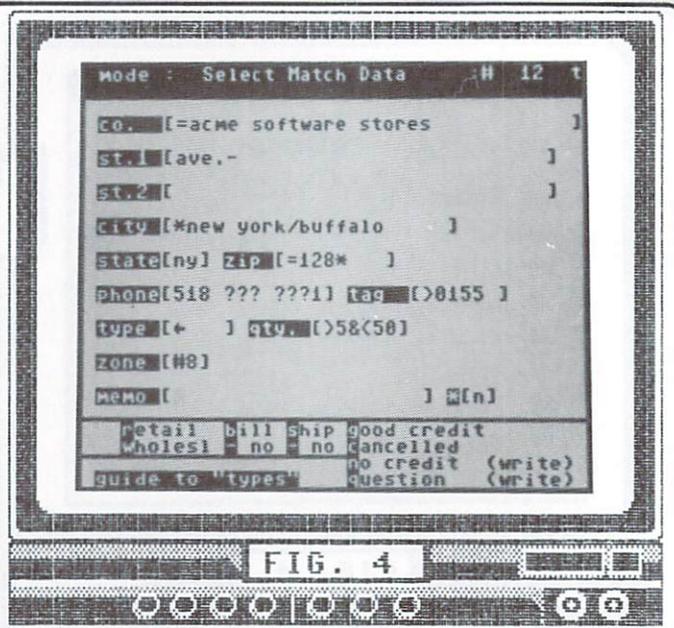


FIG. 4

THE BOTTOM LINE OF THE SAMPLE RECORD TIPS OFF ANOTHER NIFTY FEATURE NOT COMMON TO MOST DATABASE MANAGERS: THE MEMO SCREEN. WITH MOST SYSTEMS, IF YOU WANTED TO BE ABLE TO INCLUDE AN OCCASIONAL 10-LINE PARAGRAPH OF COMMENTS WITH A RECORD, YOU WOULD HAVE TO ALLOCATE A 10-LINE FIELD FOR EVERY RECORD IN YOUR FILE, EATING UP LOTS OF MEMORY. SUPERBASE USES AN INGENIOUS SYSTEM OF 'MEMOS' WHICH ARE ACTUALLY SEQUENTIAL FILES WHICH YOU MAY NAME & CALL-UP AT ANY TIME (FIG. 2 SHOWS THE MEMO REFERRED TO IN THE 'MEMO' FIELD OF THE RECORD IN FIG. 3). THESE MEMOS TAKE UP NO MORE SPACE THAN THE ACTUAL TEXT INVOLVED, AND CAN BE UP TO ONE FULL SCREEN OF TEXT EACH. (THE BUILT-IN HELP SCREENS ARE THEMSELVES MEMOS, AND THUS MAY BE EDITED OR REMOVED AS NEEDED). THE MEMO-WRITER MODE ALSO ALLOWS YOU TO EXAMINE OTHER SEQUENTIAL FILES SUCH AS DATA IMPORTED FROM OTHER PROGRAMS ETC.

THE 'SELECT' MODE ALLOWS FOR LOCATING, EXAMINING, AND CHANGING SPECIFIC RECORDS. THE 'FIND' MODE IS SIMILAR, BUT CREATES 'KEY LISTS'. A KEY LIST MIGHT CONSIST, FOR INSTANCE, OF ALL THE RECORDS OF COMPANIES WITH GOOD CREDIT. THESE LISTS MAY BE USED IMMEDIATELY (FOR REPORTS OR CREATING SUB-FILES), OR SAVED TO DISK FOR REPEATED OR FUTURE USE. 'SELECT' MODE MAY USE SELECTION CRITERIA AS SIMPLE AS "FIRST RECORD" WHILE BOTH MODES MAY USE ELABORATE CRITERIA (FIG. 4) TO HUNT DOWN EXACTLY THE RECORDS YOU WANT. HERE IS A SUMMARY OF THE EXTENSIVE SELECTION CRITERIA WHICH MAY BE APPLIED: (NOTE THAT "TEXT" CAN BE LETTERS OR DATES.)

- EXACT MATCH....."=TEXT"....."=NUMBER"
- SLIDING MATCH WITHIN FIELD....."TEXT"
- EXACT EXCLUSIVE MATCH (NOT EQUAL TO).."#TEXT"....."#NUMBER"
- SLIDING MATCH FROM FIELD ONWARDS....."TEXT-"
- TERMINATE THE SLIDING MATCH....."#\$"
- MATCH GREATER THAN FIELD CONTENT.....">TEXT".....">NUMBER"
- MATCH LESS THAN FIELD CONTENT....."<TEXT"....."<NUMBER"
- MATCH ALTERNATIVES....."T1/T2/ETC"....."N1/N2/ETC"
- MATCH RANGE OF VALUES.....">T1&<T2".....">N1&<N2"
- MATCH PARTIAL TEXT....."=TEXT?"
- MATCH WITH 'WILD' CHARACTER....."=TEXT*"
- REQUEST MATCH IN COMMAND AREA....."<-" (BACK ARROW)

USING THESE CODES, MATCH DATA MAY BE TYPED DIRECTLY INTO THE APPROPRIATE FIELDS. (IF THE MATCH FORMULA IS TOO LONG TO FIT IN THE FIELD, THE BACK ARROW CAUSES THE COMMAND LINE TO ACCEPT THE INPUT.) THE HYPOTHETICAL MATCH SCREEN SHOWN IN FIG. 4 WILL, WHEN ENTERED, PICK OUT ONLY THOSE STORES (IF THEY EXIST) THAT: HAVE THE EXACT COMPANY NAME OF "ACME SOFTWARE STORES", INCLUDE THE WORD "AVE." ANYWHERE IN THE 2ND OR 3RD FIELDS, ARE IN EITHER NEW YORK CITY OR BUFFALO NY, HAVE "128" AS THE FIRST 3 ZIP CODE DIGITS, HAVE A PHONE NUMBER WITH AREA CODE 518 AND ENDING IN "1", HAVE A TAG# GREATER THAN 0155, SHOW A QUANTITY ORDERED BETWEEN 5 AND 50 MAGAZINES, NOT BE IN UPS ZONE B, HAVE THE CHARACTER "N" IN THE '*' FIELD, AND MATCH 'TYPE' CRITERIA STILL TO BE ENTERED IN THE COMMAND AREA. (NOW THAT'S WHAT I CALL NARROWING THINGS DOWN!)

REPORTING IS ANOTHER AREA WHERE SUPERBASE 64 REALLY OUTSTRIPS THE OTHERS. COMPLETE CONTROL OVER ALL TYPES OF PRINTERS, PRINTOUTS UP TO 250 CHARACTERS WIDE, THE ABILITY TO INSERT PRINT-TIME TEXT ANYWHERE ON THE REPORT, AND A POWERFUL SET OF FORMATTING COMMANDS MEANS YOU CAN PRINT ANY OF YOUR DATA ANY WAY YOU WANT IT (INCLUDING ACCURATELY FILLING IN PRE-PRINTED FORMS LIKE INVOICES, CHECKS, PACKING SLIPS, PRICE TAGS, OR DESIGN YOUR OWN!)

OUTPUT FORMATTING COMMANDS INCLUDE:
 '@x'...DISPLAYS NEXT ITEM AT COLUMN X.
 '@x,y'...DISPLAYS NEXT ITEM AT COLUMN X, ROW Y.
 '&'...CUTS OFF ALL TRAILING SPACES.
 '&x'...TRUNCATES CONTENTS OF NEXT TEXT ITEM TO X CHARACTERS.
 '&x,y'...FOR NUMERIC ITEMS. FORMATS THE NUMBERS TO X FIGURES BEFORE, AND Y CHARACTERS AFTER THE DECIMAL POINT.

WHAT REALLY SETS SUPERBASE 64 APART IS ITS PROGRAMMING INTERFACE. IN THE PAST, ONE HAD TO CHOOSE BETWEEN FLEXIBLE (BUT SLOW) BASIC DATABASE MANAGERS AND THE FASTER (BUT INACCESSIBLE) MACHINE LANGUAGE ALTERNATIVES. WITH SUPERBASE 64 YOU GET THE BEST OF BOTH. WHILE THE MAIN PROGRAM IS 32K OF FAST MACHINE LANGUAGE, A 4K SPACE IS OPEN FOR USER PROGRAMS WHICH THE MAIN PROGRAM CAN INTERPRET AND EXECUTE. USER PROGRAMS ARE WRITTEN USING 40 STANDARD BASIC COMMANDS AND AN ADDITIONAL 50 CUSTOM SUPERBASE COMMANDS. FIG. 5 SHOWS PART OF THE "START" PROGRAM WHICH EXECUTES AUTOMATICALLY EACH TIME YOU BEGIN SUPERBASE (YOU MAY CUSTOMIZED THIS, AS WE HAVE DONE, TO REFLECT YOUR OWN EQUIPMENT AND FORMAT PREFERENCES.) NOTICE THE FAMILIAR BASIC COMMANDS LIKE "PRINT" AND "REM" ALONGSIDE THE SUPERBASE 64 COMMANDS LIKE "PLEN" AND "LFEED".

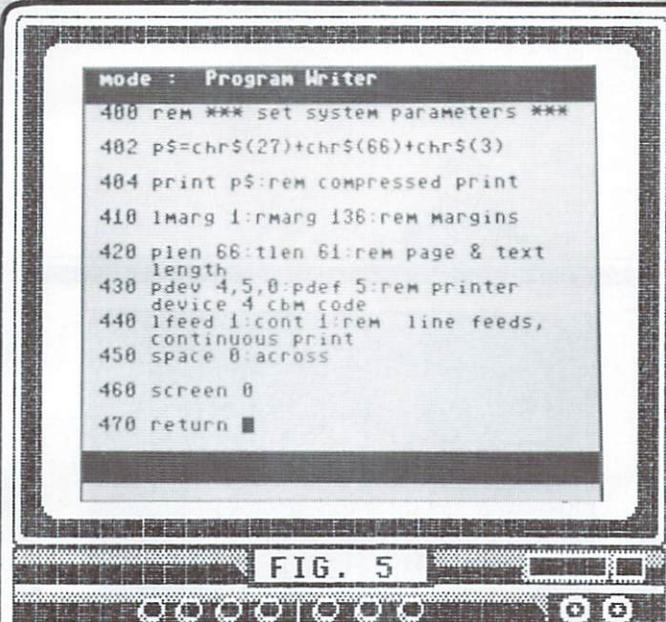


FIG. 5

THIS PROGRAMMING CONCEPT MEANS YOU CAN DEVISE A COMPLEX SERIES OF OPERATIONS AND THEN HAVE THEM EXECUTE AUTOMATICALLY. FOR INSTANCE, YOU COULD WRITE A PROGRAM THAT WOULD FIRST SET FORMAT PARAMETERS, THEN SEARCH FOR AND SELECT VARIOUS RECORDS MATCHING CERTAIN CRITERIA, THEN SORT THESE ON OTHER CONDITIONS, MAKE CALCULATIONS AND UPDATE CERTAIN FIELDS, STORE THE RESULTS BACK TO THE DATABASE, AND FINALLY PRINT A SERIES OF INVOICES AND THEN PACKING SLIPS- ALL WITHOUT OPERATOR INTERVENTION. THIS KIND OF PROGRAMMING TAKES CAREFUL THOUGHT AND SOME EFFORT ON THE PART OF THE OPERATOR, BUT ONCE MASTERED, ADDS INCREDIBLE POWER TO 'ORDINARY' DATABASE MANAGEMENT.

IF YOU ARE THE TYPE WHO SHRINKS FROM THE PROSPECT OF WRITING PROGRAMS NO MATTER HOW SHORT, NOT TO WORRY: YOU CAN USE SUPERBASE 64 TO GREAT ADVANTAGE WITHOUT EVER WRITING A LINE (BUT YOU'LL KNOW THE OPTION IS THERE WHEN YOU'RE READY). ACTUALLY, SUPERBASE 64 IS WRITING BASIC PROGRAMS FOR YOU ALL THE TIME. MANY FUNCTIONS (ESPECIALLY REPORT GENERATING) ASK THE USER TO ANSWER A STRING OF QUESTIONS LIKE "REPORT TITLE?" OR "SUBTOTAL TEXT?". WHEN DONE, PRESTO! A REPORT APPEARS ON YOUR PRINTER OR SCREEN. A LOOK AT THE PROGRAM--WRITER PAGE, HOWEVER, WILL REVEAL THAT SUPERBASE 64 HAS WRITTEN A NICE LITTLE BASIC PROGRAM (WHICH YOU CAN EDIT) AND IT IS THAT PROGRAM'S EXECUTION WHICH HAS PRODUCED THE FINISHED REPORT. IF YOU STILL THINK THIS IS TOO MUCH FOR YOU, YOU'LL BE GLAD TO KNOW THAT PRECISION SOFTWARE WILL BE RELEASING A SERIES OF "TEMPLATES" WHICH WHEN LOADED WILL PROVIDE READY-MADE DE-BUGGED SETUPS FOR A WIDE RANGE OF APPLICATIONS. ALSO IN THE WORKS ARE AUDIO-CASSETTE TRAINING TAPES AND AN ADVANCED PROGRAMMER'S GUIDE FOR THOSE WISHING TO DELVE DEEPER INTO APPLICATIONS DEVELOPMENT.

A FEW MORE FEATURES DESERVE MENTION IN COMPLETING THIS EVALUATION:

FIRST, THERE IS SUPERBASE 64'S ABILITY TO LINK ANY TWO FILES (HAVING AT LEAST ONE COMMON FIELD) FROM THE SAME DATABASE FOR SHARING AND EXCHANGING INFORMATION. THIS MAKES SUPERBASE 64 THE ONLY SEMI-'RELATIONAL' DATABASE ON THE MARKET FOR THE C64.

NEXT, THE 'MAINTAIN' SECTION (FIG. 2) PROVIDES A HANDFUL OF HELPFUL UTILITIES WHICH FURTHER EXTEND BOTH THE CONVENIENCE AND CAPABILITY OF THE SYSTEM. 'STATUS' IS A HANDY OPTION WHICH AUTOMATICALLY PRODUCES A REPORT ON YOUR CURRENT FILE, LISTING THE NAMES, LENGTHS, & TYPES OF FIELDS; 'CATALOG' GIVES A LIST OF FILES IN THE CURRENT DATABASE; 'IMPORT' & 'EXPORT' ALLOW TRANSFERRING FILES BETWEEN SUPERBASE 64 AND OTHER PROGRAMS; 'DIRECTORY' SHOWS THE DISK DIRECTORY; 'BACKUP' PRODUCES COPIES OF YOUR DATA DISKS; 'NEW DISK' FORMATS A FRESH DISK; & 'OTHER' ALLOWS DIRECT EXECUTION OF DISK COMMANDS SUCH AS "VALIDATE", "SCRATCH" ETC.

LASTLY, THERE IS A VERY INTERESTING COMMAND, 'PROTECT', WHICH ENCRYPTS A PROGRAM YOU HAVE WRITTEN IN SUCH A WAY THAT IT MAY BE LOADED, RUN, AND DELETED- BUT NOT LISTED OR EDITED. THIS IS INCLUDED TO ENCOURAGE USERS TO DEVELOP AND MARKET THEIR OWN SUPERBASE 64 APPLICATIONS AND ALLOWS FOR THE INCLUSION & DISPLAY OF COPYRIGHT NOTICES, WARNINGS ETC.! (CONTACT PRECISION SOFTWARE FOR FURTHER DETAILS REGARDING MARKETING AGREEMENTS.)

IS THIS THE MYTHICAL 'PERFECT' PRODUCT WITH NARY A FLAW? NOT QUITE. I FOUND ONE WEAKNESS, AND ONE OUTRIGHT BUG (NEITHER FATAL).

THE WEAKNESS IS THAT ONLY ONE KEY FIELD MAY BE USED (THE KEY FIELD IS THE 'FAST-LANE' FOR LOCATING RECORDS) AND IT MUST BE UNIQUE TO AVOID PROBLEMS. I WOULD HAVE LIKED THE OPTION OF DEFINING 2 OR 3 KEY FIELDS (THO THIS ALWAYS COSTS MEMORY) AND I THINK MANY WILL OBJECT TO THE 'UNIQUE' RESTRICTION (WHICH MAKES IT INADVISABLE TO USE LAST NAMES FOR THE KEY FIELDS). (FOR THE RECORD, LAST NAMES SHOULD GENERALLY NOT BE USED FOR KEYS ANYWAY BECAUSE OF THEIR LENGTH AND THE RESULTING BURDEN THEY PUT ON KEY SEARCHING.)

THE BUG IS MILDLY ANNOYING, BUT YOU CAN DEAL WITH IT EASILY ENOUGH: IF YOU WANT TO CREATE A NEW SUB-FILE FROM AN EXISTING FILE, YOU ARE SUPPOSED TO FIRST 'OUTPUT' THE SELECTED RECORDS WITH DESIRED FIELDS AND THEN 'IMPORT' THEM INTO THE BLANK FIELDS OF THE AWAITING NEW FILE. THE PROBLEM IS THAT 'OUTPUT' ADDS ONE EXTRA BLANK FIELD BETWEEN RECORDS (WHICH CAUSES AN OFFSET AND MAKES THE 1ST FIELD OF THE OLD 2ND RECORD GO INTO THE 2ND FIELD OF THE NEW 2ND RECORD ETC.). THIS MAY SOUND LIKE GREEK TO YOU NOW, BUT YOU'LL SEE WHAT I MEAN IF YOU EVER TRY IT. YOU CAN FIX THINGS JUST FINE BY TEMPORARILY CREATING A SHORT DUMMY TEXT FIELD AT THE END OF YOUR NEW FILE FORMAT (IE: ONE MORE FIELD THAN THE IMORT FILE HAS)- THIS WILL GIVE THE EXTRA BLANK FIELD SOMEWHERE TO GO. AFTER ALL THE RECORDS ARE IMPORTED, YOU CAN USE THE FORMATTING FUNCTION TO DELETE THE EXTRA FIELD AND YOU'LL BE IN LIKE FLYNN.

SHOULD YOU BUY THIS PROGRAM? IF YOU WANT THE BEST DATABASE MANAGER AVAILABLE FOR THE C64 (THE ABOVE PROBLEMS NOTWITHSTANDING) THEN I DON'T KNOW HOW YOU CAN RESIST. ALSO CONSIDER THAT WITH A REASONABLE AMOUNT OF STUDY & EFFORT ON YOUR PART, THIS PACKAGE CAN GENERATE APPLICATIONS TO REPLACE AND OFTEN OUTPERFORM EVEN THE BEST DEDICATED MAILING LIST PROGRAMS, PERSONAL & BUSINESS FINANCE MANAGERS, VARIOUS RECORD KEEPERS, SO-CALLED "PROGRAM-WRITING PROGRAMS", & A HOST OF OTHERS (THE CUMULATIVE COST OF WHICH COULD EASILY BE TWO TO THREE TIMES THE \$99.95 FOR SUPERBASE 64).

SUPERBASE 64

DISK - \$99.95

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 NEW YORK, NY 10017
 (212) 490-1825



REVIEWED BY:
RUTH BETZA

Since its inception at MIT, the LOGO language has been revised and adapted to various home computers by MIT, Krell Software, and Terrapin, Inc. Commodore 64 users will be pleased to know that the version of Terrapin LOGO for the C64 incorporates nearly every feature from all these LOGOs as well as additional procedures to access the C64's 16 colors, hi-res graphics, sprites, and exceptional sound capabilities. LOGO and the 64 are perfect partners.

Best known for its graphics, LOGO (in all versions) uses a moveable triangular shape, the now-famous 'turtle', to carry out graphics commands and draw on the screen. This engaging device, and the 'turtle graphics' it creates make LOGO especially interesting to children (as well as adults), while the procedural structure of the language leads painlessly to a better understanding of computers, and possibly thought itself.

LOGO procedures are manageable-sized building blocks, unlike the unbroken BASIC code most of us are familiar with. LOGO procedures are built with LOGO 'primitives' and other procedures. Here is an example procedure made from LOGO primitives:

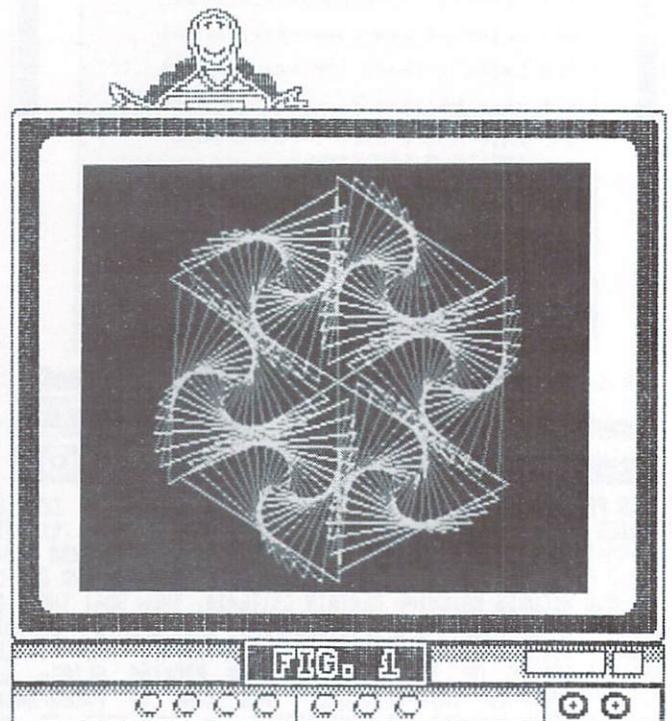
```
TO HOOK  
FORWARD 30  
REPEAT 12 [RIGHT 10 FORWARD 3]  
END
```

This procedure can then be used to write a second procedure:

```
TO CURVETRI  
REPEAT 3 [HOOK]  
END
```

(HOOK & CURVETRI are arbitrary procedure names- you could just as well use 'FRED' & 'ETHEL'.)

Thus, LOGO has an unlimited vocabulary, 'learning' as much as you can teach it. As in any good working relationship, LOGO can teach as well as be taught; If LOGO doesn't like your procedures, it will tell you immediately. This step by step correcting tends to make your final product error free. You will also appreciate the 'Trace' primitive, which lets you follow exactly how your procedure works.



Since most people are introduced to LOGO via graphics, the Commodore 64 version is especially satisfying. The turtle (which is the triangular sprite in the center of fig. 2) can be replaced with a kangaroo or almost any thing you like (even a real turtle) with the built in sprite editor. The LOGO utility disk provides 35 pre-defined sprite shapes, including animals, vehicles (fig. 2), miscellaneous shapes, and seven sprites (fig. 3) which are used in an animation demonstration of a woman running! Sprites can be easily expanded in height and width, changed in color, and collision-detected. You can substitute sprites of your own design, which will follow any of the turtle commands. Hundreds of sprites may be stored, any eight of which may be on screen together.

LOGO has an unlimited vocabulary, 'learning' as much as you can teach it. As in any good working relationship, **LOGO** can teach as well as be taught.

Two additional features are unique to Commodore LOGO: its ability to create text anywhere on the graphics screen (fig. 3), and the option of splitting the screen into separate text and graphics areas (fig. 2).

Add to this the outstanding sound capabilities (which are easily tamed with the included utility routines), & the implications for sophisticated user-created programs and games are enormous!

LOGO is not limited to graphics and sound. The LOGO utility disk (included) will help you explore many possibilities: you'll find 'Adventure', a rudimentary adventure game demonstrating LOGO's list-handling capabilities, and 'Pig', which converts input into 'pig-Latin' and demonstrates extensive word & list manipulation along with recursion, the powerful facility wherein a procedure calls itself as a sub-procedure (like a mirror looking in a mirror looking in a mirror...).

This review was composed using the LOGO Texteditor (no Wordpro, but quite a bit less expensive!). There are also built-in procedures for driving printers, and the Commodore 1520 plotter (for superb hard-copy of LOGO graphics).

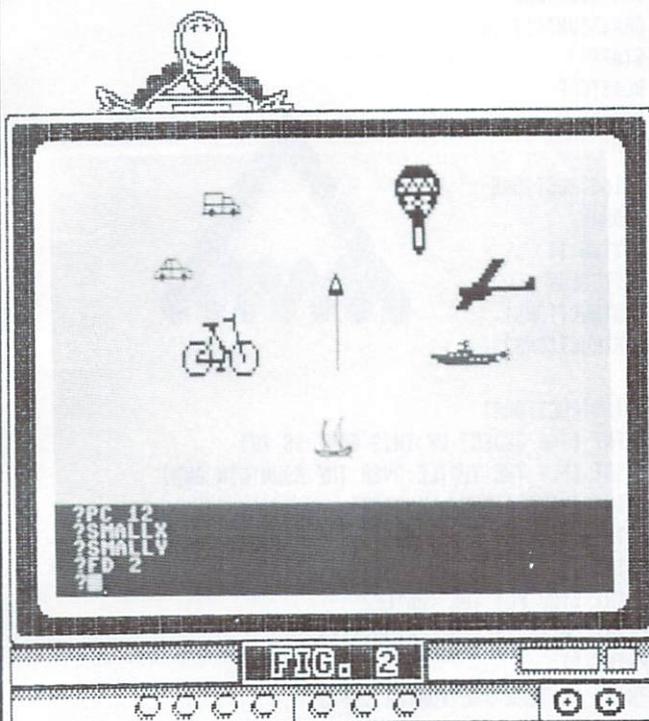
The LOGO manual is a thorough, readable reference & tutorial (the best documentation to date from Commodore) with plenty of projects & clear step-by-step instructions. Adults will find the manual a helpful reference in teaching children, tho it is too advanced for young children to use directly. The only real problems with the manual are that its binding (at least on our copy) will not stand up to much use, and does not allow the book to lie open (a serious design flaw in any computer manual).

Nonetheless, at under \$80, this package is one of the all-time values for a computer language! (Compare to \$100 or more for any Apple LOGO.)

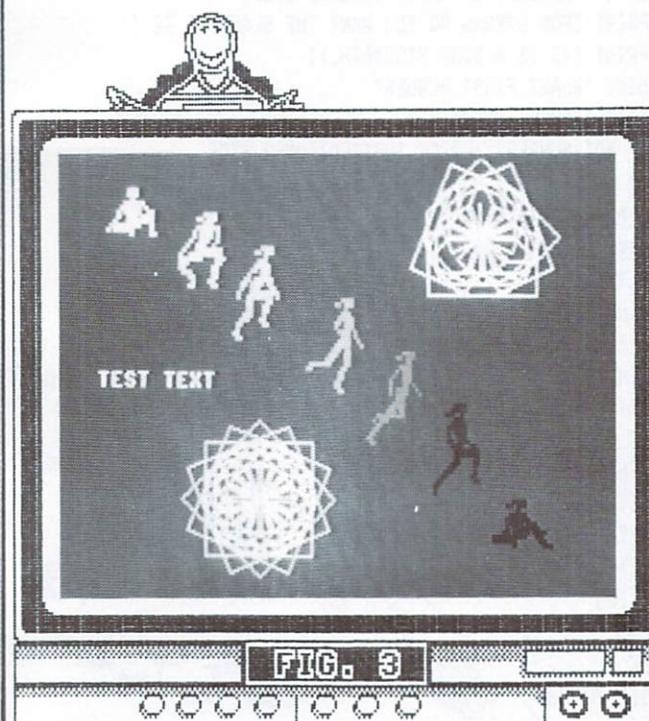
Since LOGO is essentially the same from machine to machine, you may get quite a bit from other LOGO books and articles (not written for the 64), and most programs will transfer to the 64 with no problem. Several LOGO classics such as 'Dynatrack' and 'Instant' are included on the utility disk.

And remember, LOGO is not just for kids: if you have a complicated program to write, you will come to value the naturally error-resistant procedural structure of LOGO. You can even alter LOGO's primitives and add machine language routines with C64 LOGO's 'Option' primitive and assembler.

LOGO is undoubtedly a good beginner's language. It's clarity, conciseness, & structure, however, make it a powerful alternative for experts as well.



...the implications for sophisticated user-created programs and games are enormous!



C64 LOGO - DISK < \$80
 COMMODORE BUSINESS MACHINES
 1200 WILSON DRIVE
 WEST CHESTER, PA 19380

LUNAR TURTLE

by HANS GRAGE

Once again, HANS GRAGE has given INFO-64 readers the foundation for a fun and instructive arcade game that incorporates SPRITES, SOUND, & GRAPHICS and won't take all weekend to type in! YOU MUST HAVE COMMODORE LOGO LOADED AND RUNNING TO TYPE IN AND RUN THIS PROGRAM. As always, this program is meant to encourage customization and elaboration- have at it & feel free to share your results with us via reader mail. HAPPY LANDINGS!

THIS PROGRAM HAS THREE MAIN PARTS: FIRST THE INSTRUCTIONS AND PLAYER OPTIONS ARE PRESENTED ON THE SCREEN, THEN THE ACTUAL GAME SCREEN IS DRAWN, AND FINALLY THERE'S A LOOP THAT MOVES THE TURTLE ABOUT THE SCREEN UNTIL YOU CRASH OR LAND. THESE PARTS CAN ALL BE SEEN IN THE PROCEDURE, "LUNAR.TURTLE" WHICH YOU CALL TO GET THINGS UNDERWAY.

"LUNAR.TURTLE" CALLS:

"INSTRUCTIONS"

(WHICH SIMPLY PRINTS THE INSTRUCTIONS TO THE SCREEN).

"DRAWMOUNTAIN"

NOT SURPRISINGLY, DRAWS THE MOUNTAIN.

"START"

DRAWS THE FUEL AND VELOCITY GAUGES.

"BLASTOFF"

IS JUST A SHORT LOOP THAT YOU BREAK OUT OF WHEN YOU HIT THE SPACE BAR THE FIRST TIME.

"MOTION"

IS THE MAIN LOOP IN THE PROGRAM. IT RECALCULATES THE TURTLE POSITION IN "TURTLEMOVE" AND CHECKS THE APPROPRIATE SPRITE REGISTER FOR A CRASH WITH "CHECK.CRASH". "CHECK.CRASH" IS MADE UP, IN TURN, OF OTHER PROCEDURES THAT CHECK FOR A SAFE LANDING OR BRANCH TO A SPECTACULAR CRASH WITH "SPIN&FLASH". THE MAIN LOOP CONTINUES WITH UPDATES OF THE GAUGES AND "COMMAND" THAT READS THE KEYBOARD. "MOTION" THEN CALLS ITSELF TO COMPLETE THE LOOP.

YOU CAN PRACTICE TAKE OFF AND LANDINGS WITH JUST THE SPACE BAR BEFORE YOU TRY TO CROSS THE MOUNTAIN. GOOD LUCK!

```
TO LUNAR.TURTLE
INSTRUCTIONS
DRAWMOUNTAIN :W
START
BLASTOFF
MOTION
```

END

```
TO INSTRUCTIONS
NODRAW
TEXTBG 11
TEXTCOLOR 1
INSTRUCTIONS1
INSTRUCTIONS2
```

END

```
TO INSTRUCTIONS1
PRINT [THE OBJECT OF THIS GAME IS TO]
PRINT [FLY THE TURTLE OVER THE MOUNTAIN AND]
PRINT [MAKE A SOFT LANDING]
PRINT [WITHOUT CRASHING!]
PRINT []
PRINT [YOU FLY THE TURTLE]
PRINT [WITH THE FOLLOWING KEYS:]
PRINT []
PRINT [G TURN THE TURTLE LEFT]
PRINT [J TURN THE TURTLE RIGHT]
PRINT [(SPACE) GIVE THE TURTLE A "BLAST" IN]
PRINT [THE DIRECTION IT IS POINTING.]
PRINT []
```

END

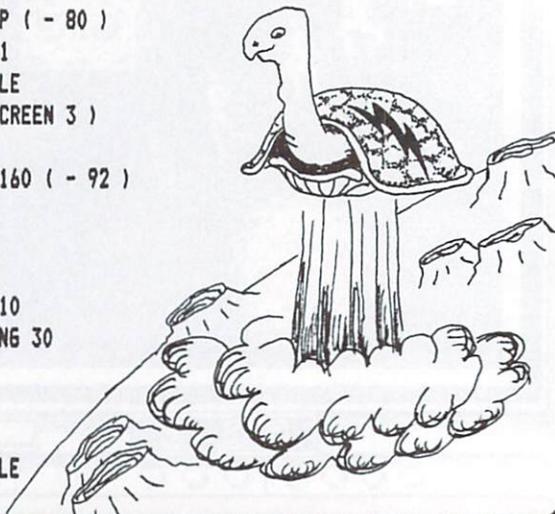
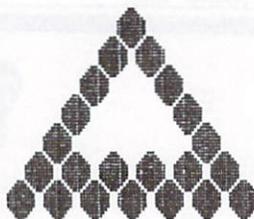
```
TO INSTRUCTIONS2
```

```
PRINT [HOW HIGH DO YOU WANT THE MOUNTAIN TO BE?]
PRINT [(50 IS A GOOD SIZE.)]
MAKE "H FIRST REQUEST
MAKE "W :H - 90
IF NOT NUMBER? :W INSTRUCTIONS2 STOP
PRINT [HOW STRONG DO YOU WANT THE BLAST TO BE?]
PRINT [(3 IS A GOOD STRENGTH.)]
MAKE "BLAST FIRST REQUEST
MAKE "FORCE :BLAST / 5
IF NOT NUMBER? :FORCE INSTRUCTIONS2 STOP
```

END

```
TO DRAWMOUNTAIN :W
```

```
MAKE "TOP ( - 80 )
TEXTBG 11
HIDETURTLE
( SPLITSCREEN 3 )
PENUP
SETXY - 160 ( - 92 )
PC 0
PENDOWN
SETX 160
SETX - 110
SETHEADING 30
CLIMB
FALL
PC 1
SET.TURTLE
END
```



```

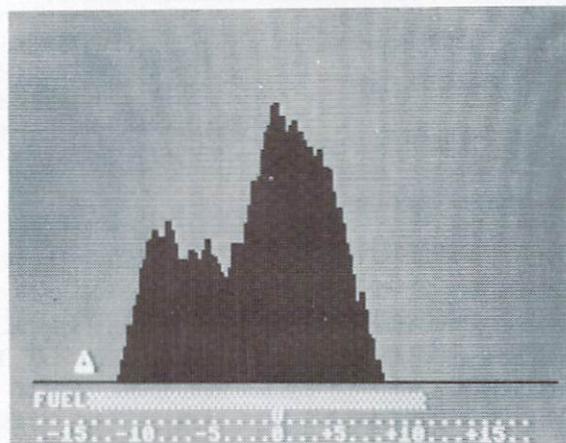
TO CLIMB
PENDOWN
MAKE "TOP :TOP + 15 - RANDOM 25
SETY - 92
SETY :TOP
SETX XCOR + 2
IF YCOR > :W STOP
CLIMB
END
TO FALL
MAKE "TOP :TOP - 15 + RANDOM 25
SETY - 92
SETY :TOP
SETX XCOR + 2
IF XCOR > 100 SETY - 92 STOP
IF YCOR < - 82 SETY - 92 STOP
FALL
END
TO SET.TURTLE
PENUP
SETHEADING 0
SETXY - 130 ( - 80 )
SHOWTURTLE
END
TO START
MAKE "FUEL 10 + INTEGER ( :H / 10 )
SETSOUND
PENUP
MAKE "VX 0
MAKE "VY 0
MAKE "F :FUEL
CURSOR 0 22 PRINT1 [FUEL]
PFUEL :F
CURSOR 0 23 PRINT [.....V.....]
PRINT1 [.-15..-10...-5....0...+5...+10...+15..]
END
TO SETSOUND
.DEPOSIT 54296 8
.DEPOSIT 54278 128
.DEPOSIT 54277 128
.DEPOSIT 54273 40
END
TO PFUEL :F
CURSOR :F + 4 22 PRINT1 [+ ]
IF :F = 0 STOP
PFUEL :F - 1
END

```

```

TO BLASTOFF
LOCAL "COM
MAKE "COM READKEY
IF :COM = CHAR 32 KICK STOP
BLASTOFF
END
TO MOTION
TURTLEMOVE
CHECK.CRASH
MAKE "VY :VY - 0.05
IF :FUEL > 0 CURSOR :FUEL + 5 22 PRINT1 [- ]
CURSOR 14 + ( INTEGER :VY * 3 ) 23 PRINT1 [....V....]
COMMAND
MOTION
END
TO TURTLEMOVE
SETXY XCOR + :VX YCOR + :VY
END
TO CHECK.CRASH
MAKE "CRASH .EXAMINE 53279
MAKE "CRASH .EXAMINE 53279
IF :CRASH > 0 SMASH
IF YCOR < - 82 CHECK.LANDING
END
TO CHECK.LANDING
IF :VY < - 0.75 SMASH STOP
IF :VX < - 0.1 SMASH STOP
IF :VX > 0.1 SMASH STOP
SPLITSCREEN
CURSOR 0 23
PRINT [SAFE LANDING!]
REPLAY
END
TO SMASH
SPIN&FLASH
SPLITSCREEN
CURSOR 0 23
PRINT [CRASH!]
REPLAY
END
TO SPIN&FLASH
.DEPOSIT 54296 15
.DEPOSIT 54276 129
REPEAT 15 [SETHEADING HEADING + 24 B6 HEADING / 24]
B6 11
.DEPOSIT 54276 0
END

```



```

TO REPLAY
SPLITSCREEN
PRINT1 [WOULD YOU LIKE TO PLAY AGAIN - (Y/N) - ]
IF ( FIRST FIRST REQUEST ) = "N TOPLEVEL
NODRAW
INSTRUCTIONS2
DRAWMOUNTAIN :W
START
BLASTOFF
END
TO COMMAND
LOCAL "COM
MAKE "COM READKEY
IF :COM = " STOP
IF :COM = "J RIGHT 10 + RANDOM 1 STOP
IF :COM = "6 LEFT 10 + RANDOM 1 STOP
IF :COM = CHAR 32 KICK STOP
END
TO READKEY
IF RC? OUTPUT READCHARACTER
OUTPUT "
END
TO KICK
MAKE "FUEL :FUEL - 1
IF :FUEL < 1 CURSOR 0 23 PRINT1 [FUEL GONE] STOP
.DEPOSIT 54276 129
PC 7
MAKE "VX :VX + :FORCE * SIN HEADING
PC 8
MAKE "VY :VY + :FORCE * COS HEADING
PC 1
.DEPOSIT 54276 0
END

```



C64 FORTH

REVIEW BY MARK R. BROWN

BASIC IS A GOOD GENERAL-PURPOSE LANGUAGE. IT IS EASILY LEARNED, SIMPLE TO USE, AND EASY TO EDIT AND MODIFY. HOWEVER, THERE ARE MANY PROGRAMMING TASKS THAT BASIC IS NOT SUITED FOR. IT IS NOT POWERFUL ENOUGH FOR COMPLEX BUSINESS APPLICATIONS, NOR FAST ENOUGH FOR ARCADE GAMES. THOUGH BASIC IS THE RESIDENT OPERATING SYSTEM FOR THE COMMODORE 64, IT IS POSSIBLE TO TURN IT OFF AND LOAD IN ANOTHER LANGUAGE WHEN BASIC IS JUST NOT ENOUGH.

WHEN SPEED IS THE MAJOR FACTOR IN A PROGRAM, ASSEMBLY LANGUAGE IS OFTEN THE ANSWER. ASSEMBLY ALLOWS A PROGRAMMER TO WRITE AND EDIT PROGRAMS IN A SYMBOLIC VERSION OF THE COMPUTER'S OWN LANGUAGE. BECAUSE THE FINAL PROGRAM PRODUCED IS THE COMPUTER'S OWN "MACHINE CODE" AND DOESN'T HAVE TO BE INTERPRETED BY THE COMPUTER BEFORE IT CAN BE RUN, ASSEMBLY LANGUAGE PROGRAMS RUN AS FAST AS IT IS POSSIBLE FOR COMPUTER PROGRAMS TO RUN. HOWEVER, THIS COMES AT A PRICE. ASSEMBLY CODE IS OFTEN DIFFICULT FOR A HUMAN BEING TO READ AND MODIFY; IT IS NOT VERY "USER-FRIENDLY".

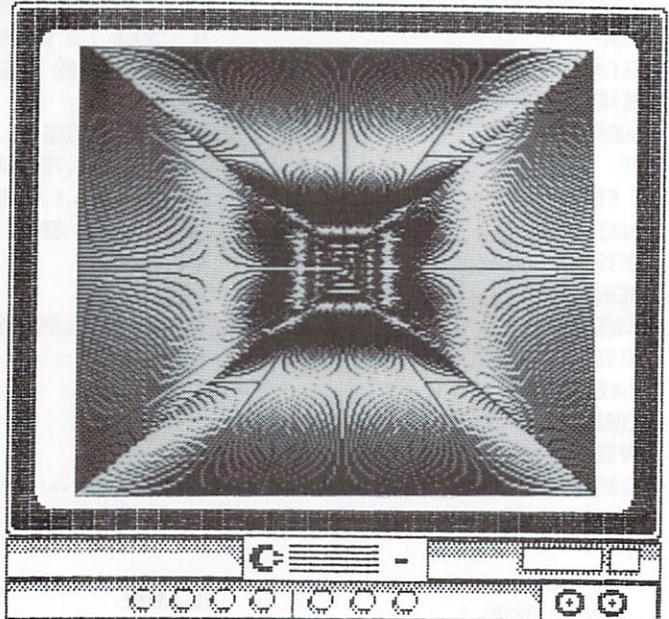
"Much faster than BASIC, though not quite as fast as assembly language. FORTH is more compact than either..."

FORTH IS A LANGUAGE THAT OFFERS A COMPROMISE BETWEEN THESE TWO EXTREMES. IT IS MORE DIFFICULT TO LEARN THAN BASIC, BUT NOT SO DIFFICULT AS ASSEMBLY LANGUAGE. IT HAS THE ADDED ADVANTAGE THAT WHEREAS ASSEMBLY IS DIFFERENT FOR DIFFERENT MICROPROCESSORS, FORTH (LIKE BASIC) IS THE SAME FOR ALL. IT IS MUCH FASTER THAN BASIC, THOUGH NOT QUITE AS FAST AS ASSEMBLY LANGUAGE. IT IS ALSO MORE COMPACT THAN EITHER, TAKING LESS MEMORY FOR APPLICATIONS OF MODERATE COMPLEXITY THAN EVEN MACHINE CODE.

FORTH IS AN EXTENSIBLE LANGUAGE. THIS MEANS THAT IT IS POSSIBLE TO DEFINE NEW COMMANDS (CALLED SIMPLY "WORDS") BY COMBINING PREVIOUS WORDS. IN FACT, THIS IS HOW ONE ACTUALLY WRITES A FORTH APPLICATION, BY DEFINING EVER MORE COMPLEX WORDS FROM THE SIMPLER WORDS THAT PRECEDE IT, UNTIL THE FINAL WORD CONTAINS ALL THE INSTRUCTIONS NECESSARY TO COMPLETE A TASK. FORTH SYSTEMS ALLOW THE EDITING OF APPLICATIONS IN BLOCKS OF 1024 CHARACTERS EACH, CALLED "SCREENS". THE SYSTEM TREATS SCREENS AS VIRTUAL MEMORY, LOADING BLOCKS INTO MEMORY BUFFERS AS THEY ARE NEEDED. THIS MEANS THAT THE ENTIRE CONTENTS OF A DISK IN THE DRIVE CAN BE TREATED AS THOUGH IT WERE AVAILABLE IN MEMORY AT ALL TIMES.

THE FORTH INTEREST GROUP HAS ESTABLISHED STANDARDS FOR THE FORTH LANGUAGE, AND ANY USEFUL VERSION OF FORTH SHOULD CONFORM TO THESE STANDARDS AS RIGIDLY AS POSSIBLE IN ORDER TO ASSURE THAT APPLICATIONS WRITTEN ON OTHER MACHINES WILL RUN WITHOUT HITCHES, AND SO THAT ANYTHING WRITTEN ON YOUR COMPUTER WILL ALSO RUN ON OTHER SYSTEMS. THE 79-STANDARD (WRITTEN IN 1979) IS THE MOST POPULAR VERSION OF FORTH AT THIS TIME, AND MOST USERS ACTUALLY PREFER IT TO THE MOST RECENT REVISION, THE 83-STANDARD, WHICH HAS NOT YET BEEN IMPLEMENTED ON MANY SYSTEMS.

ALL OF WHICH BRINGS US TO C 64 FORTH, A 79-STANDARD IMPLEMENTATION FOR THE COMMODORE 64 FROM PERFORMANCE MICRO PRODUCTS. THIS EXCELLENT VERSION OF THE FORTH LANGUAGE INCLUDES MANY ADDITIONS AND EXTENSIONS AS WELL AS THE STANDARD WORD SET. AS LOADED FROM DISK, C 64 FORTH INCLUDES DOUBLE-NUMBER, FLOATING-POINT, AND HIGH-RESOLUTION GRAPHICS EXTENSIONS. THE DOUBLE-NUMBER WORDS ALLOW YOU TO MANIPULATE INTEGERS LARGER THAN THE TWO-BYTE INTEGERS NORMALLY ALLOWED BY FORTH, AND THE FLOATING-POINT EXTENSIONS PROVIDE FOR FULL REAL-NUMBER CAPABILITIES OVER THE SAME RANGE AS BASIC.



THE HIGH-RES GRAPHICS WORDS GIVE YOU POINT-PLOT CONTROL IN BOTH BIT-MAP AND MULTICOLOR MODES ON THE C64 HIGH-RES SCREEN. COMMANDS ARE PROVIDED FOR DRAWING ARCS, LINES, AND BOXES, AS WELL AS SETTING GRAPHICS MODES AND CHOOSING COLORS. CHARACTERS FROM THE CHARACTER-GENERATOR ROM OR FROM USER-DEFINED CHARACTER SETS MAY BE MAPPED ONTO THE SCREEN IN ANY OF FIFTEEN ZOOM RATIOS. SPRITES HAVE NOT BEEN FORGOTTEN, EITHER. COLLISION DETECTION, COLOR DEFINITION, X-AND Y-AXIS EXPANSION, MOVEMENT, AND EVEN SHAPE DEFINITION ARE ALL SUPPORTED. THE ONLY GRAPHICS WORD THAT IS CONSPICUOUSLY ABSENT IS "FILL", TO COLOR IN AREAS ONCE THEY HAVE BEEN OUTLINED.

"Commands are provided for drawing arcs, lines, and boxes... character sets may be mapped onto the screen... sprites have not been forgotten, either."

TO GIVE THE USER ADDITIONAL FLEXIBILITY, FORTH PROVIDES THE WORD "FORGET", WHICH ALLOWS THE OPTIONAL ELIMINATION OF ANY WORDS TO SAVE MEMORY OR SPEED EXECUTION TIME. SO ANY OF THE EXTENSIONS INCLUDED WITH C 64 FORTH CAN BE "FORGOTTEN" IF THEY ARE NOT NEEDED. ADDITIONAL SCREENS CONTAINING STRING HANDLING FUNCTIONS CAN BE LOADED IF YOU NEED THEM. FORTH EQUIVALENTS OF ALL THE BASIC STRING FUNCTIONS ARE PROVIDED. THERE IS ALSO AN OPTIONAL FORTH ASSEMBLER WHICH LINKS TO FORTH ITSELF, ALLOWING THE USER TO DEFINE SPEED-CRITICAL WORDS IN ASSEMBLY LANGUAGE. ALL OF THE STANDARD 65XX MNEMONICS ARE SUPPORTED, AS WELL AS ASSEMBLER VERSIONS OF IF-THEN-ELSE AND OTHER HIGHER-LEVEL STRUCTURES. THE DISK IS ROUNDED OUT WITH SCREENS CONTAINING THE SYSTEM ERROR MESSAGES AND SEVERAL GRAPHICS DEMOS. THE ONLY GLARING OMISSION IS THE LACK OF ANY WORDS TO ACCESS THE C64'S TREMENDOUS SOUND CAPABILITIES. WITH ALL OF THE EXTENSIONS THAT HAVE BEEN PROVIDED, IT IS TOO BAD THAT SOUND COMMANDS HAVE NOT BEEN INCLUDED, TOO.

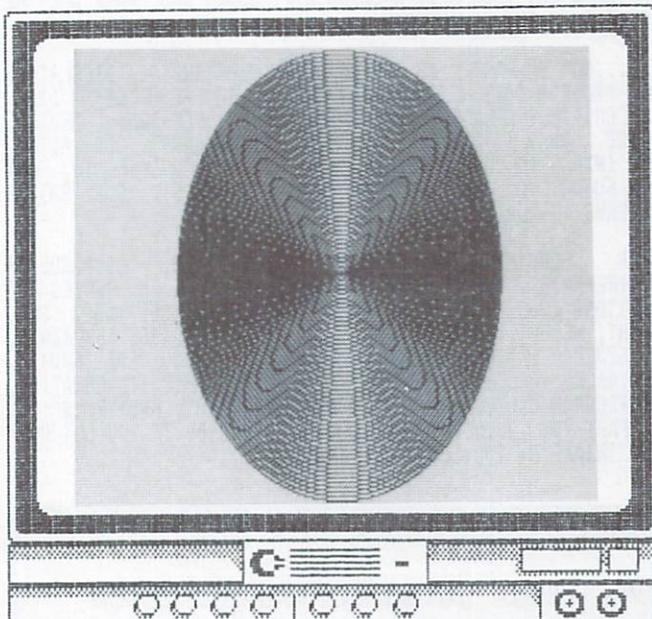
THE SCREEN EDITOR FOR C64 FORTH IS NON-STANDARD IN THAT IT USES THE REGULAR C64 SCREEN FORMAT OF 25 LINES BY 40 CHARACTERS. THE "STANDARD" FORTH SCREEN IS 16 LINES BY 64 CHARACTERS. THIS IS, IN MY OPINION, A COMPROMISE NECESSARY IN ORDER TO SHOW A FULL FORTH SCREEN AT A TIME WITHOUT SCROLLING. I AM SURE THAT EVEN A SEASONED FORTH PROGRAMMER WILL BECOME ACCUSTOMED TO THE 25X40 FORMAT IN SHORT ORDER, AND IT WON'T BOTHER NOVICES A BIT. THE EDITOR'S COMMANDS PROVIDE FOR MUCH MORE THAN THE C64'S RESIDENT EDITING FUNCTIONS. BOTH CHARACTER-AND LINE-ORIENTED DELETE, MOVE, AND INSERT ARE PROVIDED FOR. ONCE EDITED, SCREENS CAN BE DISCARDED OR UPDATED IN ONE OF SEVERAL WAYS, PROVIDING LOTS OF VERSATILITY.

"The system treats screens as virtual memory... This means that the entire contents of the disk can be treated as though it were available in memory at all times."

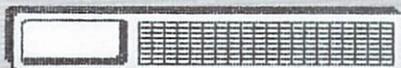
THE MANUAL PROVIDED WITH C64 FORTH IS VERY GOOD. WHILE THE DISCLAIMER PRINTED IN THE INTRODUCTION DECLARES THAT "IT IS NOT WITHIN THE SCOPE OF THIS MANUAL TO PROVIDE A COMPLETE INTRODUCTION TO FORTH", IT DOES A GOOD JOB OF EXPLAINING HOW FORTH WORKS. (I WOULD, HOWEVER, RECOMMEND THAT A NEW USER ALSO PICK UP A COPY OF LEO BRODIE'S EXCELLENT BOOK 'STARTING FORTH'.) THE FIRST THING YOU ARE SHOWN IS HOW TO LOAD THE SYSTEM AND MAKE A BACK-UP COPY. SECTIONS FOLLOW LOGICALLY, EXPLAINING THE BASICS OF FORTH, THE EDITOR, THE ASSEMBLER, THE GRAPHICS AND STRING EXTENSIONS, AND FLOATING-POINT OPERATIONS. THE EDITOR SECTION CONTAINS A ONE-PAGE SUMMARY OF COMMANDS FOR QUICK REFERENCE. EACH SECTION CONTAINS ITS OWN GLOSSARY OF FORTH WORDS, WITH EXPLANATIONS OF HOW THEY WORK AND SOME EXAMPLES. THE FINAL SECTION OF THE MANUAL IS A GLOSSARY OF GENERAL FORTH WORDS, WITH NOTATIONS AS TO WHETHER THEY ARE 79-STANDARD, SYSTEM, OR C64 DEFINITIONS. THE BOOK CONTAINS MUCH VALUABLE INFORMATION ON HOW DATA IS STORED IN THE SYSTEM, AS WELL AS MEMORY MAPS AND OTHER USEFUL TIPS AND SAMPLE PROGRAMS.

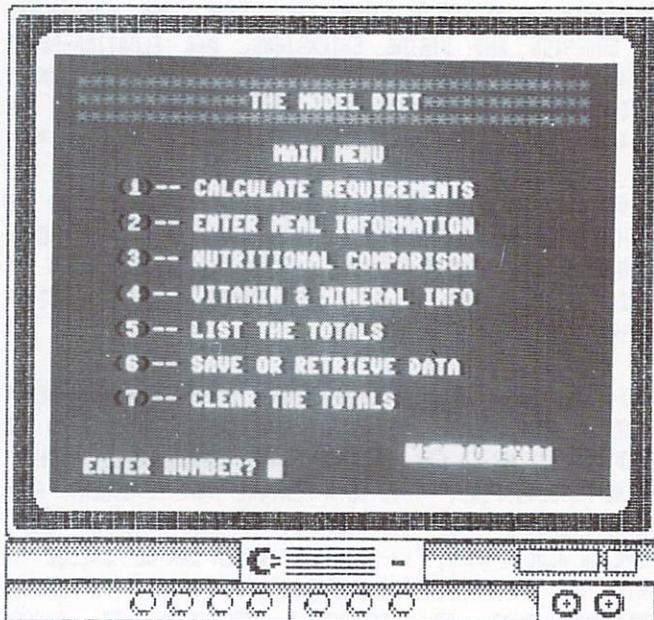
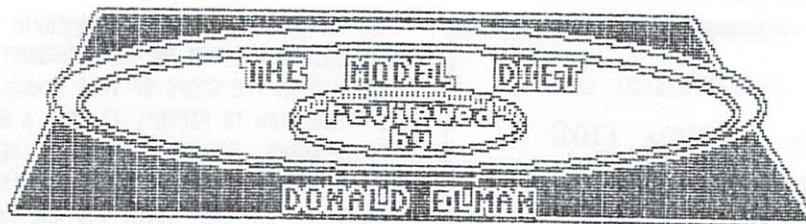
OF SPECIAL INTEREST TO PROGRAMMERS IS THE "SAVETURNKEY" FUNCTION, WHICH ALLOWS A COPYABLE APPLICATION PROGRAM TO BE SAVED TO DISK WHICH CAN BE SOLD AND DISTRIBUTED WITHOUT PAYING ROYALTY FEES. THIS IS A FEATURE THAT IS ABSENT FROM MANY SYSTEMS, OR ONLY PROVIDED AT A MUCH GREATER COST. THERE IS ALSO A WORD, "79-STANDARD" WHICH CAN BE CALLED TO VERIFY THAT AN APPLICATION CONFORMS 100% TO THE 79-STANDARD, SOMETHING THAT IS ABSOLUTELY NECESSARY TO INSURE COMPATABILITY WITH OTHER SYSTEMS.

FOR ANYONE SEEKING GREATER SPEED AND EFFICIENCY FOR THEIR PROGRAMS, C 64 FORTH IS A VERY GOOD IMPLEMENTATION OF AN EXTREMELY VERSATILE ALTERNATIVE LANGUAGE.



PERFORMANCE MICRO PRODUCTS
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IF EXERCISE, DIET BOOKS, AND SELF RESTRAINT CAN'T SEEM TO KEEP THE POUNDS OFF, MAYBE YOU'LL WANT TO TAKE THE HIGH TECH APPROACH WITH 'THE MODEL DIET'. THE BLURB ON THE PACKAGE DESCRIBES IT AS "A COMPUTERIZED NUTRITION AND DIET PROGRAM" THAT "ANALYZES YOUR UNIQUE NUTRITIONAL REQUIREMENTS AND PROGRAMS A SAFE DIET SCHEDULE." DOESN'T THAT SOUND AS IF YOU CAN THROW OUT YOUR BEST-SELLING DIET BOOKS AND LEAVE ALL THE THRIVING TO THE COMPUTER?

WELL...NOT SO FAST. AS THE DOCUMENTATION INSIDE DISCLAIMS, THIS PROGRAM DOES NOT ACTUALLY ATTEMPT TO PRESCRIBE A DIET, AND CERTAINLY CANNOT SUBSTITUTE FOR PROFESSIONAL MEDICAL ADVICE. WHAT IT CAN DO IS TO HELP YOU COMPARE YOUR ACTUAL FOOD INTAKE TO YOUR PERSONAL, NUTRITIONAL REQUIREMENTS, AND THEN GUIDE YOU IN DECIDING HOW TO ADJUST YOUR EATING PATTERNS TO ACHIEVE A BETTER BALANCE.

AFTER CHOOSING THE FIRST MENU ITEM, 'CALCULATE REQUIREMENTS', THE PROGRAM LEADS YOU THROUGH A SERIES OF QUESTIONS ABOUT YOUR PHYSICAL CHARACTERISTICS (AGE, SEX, HEIGHT, WEIGHT), HEALTH-RELATED HABITS (EXERCISE, SMOKING), AND GENERAL EATING PATTERNS (HOW OFTEN YOU EAT FRUITS, VEGETABLES, PROCESSED FOODS, ETC.). FROM THIS INFORMATION, THE PROGRAM CALCULATES YOUR DESIRABLE WEIGHT, AND TELLS YOU HOW FAST YOU COULD TAKE OFF THE EXTRA POUNDS IF YOU CUT DOWN YOUR INTAKE BY 100 TO 700 CALORIES A DAY.

"...the program calls upon an extensive food data file that is stored on the disk."

"...functions allow you to store, retrieve, and total the data for up to 100 days, and print out the totals if desired."

THE SECOND MENU CHOICE ALLOWS YOU TO TYPE IN WHAT YOU ATE AT A GIVEN MEAL, ASSIGNING EACH ITEM TO ONE OF 15 CATEGORIES. IF THERE'S A QUESTION ABOUT HOW TO CATEGORIZE AN ITEM, THE PROGRAM CALLS UPON AN EXTENSIVE FOOD DATA FILE THAT IS STORED ON THE DISK. YOU CAN ALSO QUERY THIS FILE TO GET A NUTRITIONAL ANALYSIS OF EACH ITEM THAT IS INCLUDED.

THE THIRD PROGRAM SECTION TAKES THE INFORMATION YOU HAVE ENTERED IN THE FIRST TWO PARTS, DOES SOME CALCULATIONS, AND DISPLAYS A TABLE OR A GRAPH THAT COMPARES YOUR ACTUAL TO YOUR IDEAL INTAKE FOR EACH NUTRITIONAL CATEGORY. IF YOU'VE EVER TRIED TO WORK THROUGH THESE CALCULATIONS BY HAND WHILE REFERRING TO A BOOK OF NUTRITION TABLES, YOU'LL APPRECIATE HOW YOUR COMPUTER CAN SAVE YOU FROM SUCH MENTAL DRUDGERY.

THE FOURTH SECTION IS AN ELECTRONIC TEXTBOOK WITH GENERAL INFORMATION ON 11 VITAMINS AND MINERALS. THE REMAINING PROGRAM FUNCTIONS ALLOW YOU TO STORE, RETRIEVE, AND TOTAL THE DATA FOR UP TO 100 DAYS, AND PRINT OUT THE TOTALS IF DESIRED.

I'D RECOMMEND THIS PROGRAM IF YOU WANT TO MONITOR YOUR FOOD INTAKE CAREFULLY AND HATE THE TEDIOUS PAPERWORK THAT IS USUALLY REQUIRED--BUT ONLY IF YOU HOLD NO UNREALISTIC EXPECTATIONS. FIRST, REMEMBER THAT THE NUTRITIONAL PRINCIPLES BUILT INTO THIS PROGRAM COME FROM THE SAME GOVERNMENT RECOMMENDATIONS THAT MOST CONVENTIONAL SOURCES OF INFORMATION USE. IT IS NOT A FANCY, NEW DIET SCHEME. SECOND, TO GAIN ANY LONG-TERM VALUE, YOU MUST ENTER YOUR MEAL INFORMATION JUST AS REGULARLY AND HONESTLY AS IF YOU WERE KEEPING RECORDS ON PAPER. FINALLY, DON'T FORGET THAT THE COMPUTER IS MERELY A TOOL, AND DOESN'T RELIEVE YOU OF RESPONSIBILITY FOR YOUR OWN EATING HABITS. IF SUCCESSFUL, HOWEVER, THIS PROGRAM MIGHT HELP YOU DECIDE TO SPEND MORE TIME WITH SILICON CHIPS AND LESS WITH CHOCOLATE CHIPS.

from: SOFTSYNG, INC.
14 East 34th St.
New York NY 10016
212 685-2080
Disk/ \$29.95

COMPUTER MECHANIC

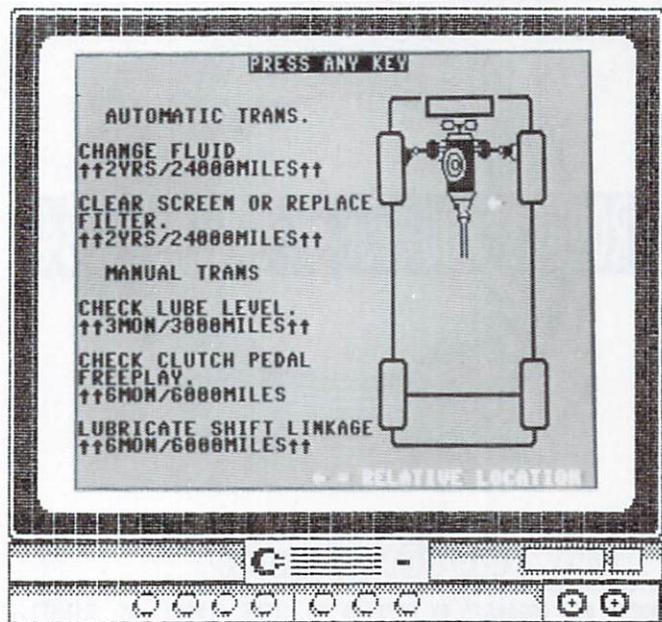
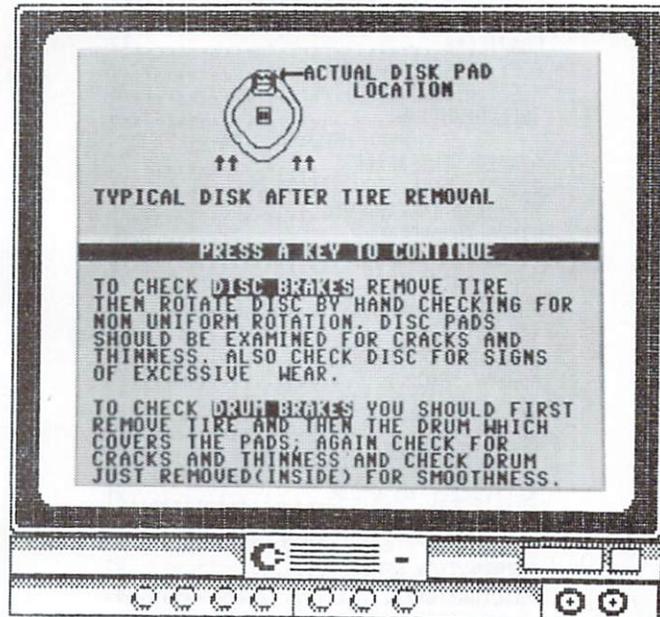
REVIEWED BY DONALD ELMAN

TIRED OF GAMES? NEED A BREAK FROM ACADEMIC/EDUCATIONAL PROGRAMS? 'COMPUTER MECHANIC' PROMISES TO PUT YOUR C-64 TO GOOD USE AROUND THE HOUSE. ACCORDING TO THE 6-PAGE ENCLOSED BROCHURE, THIS PROGRAM "TEACHES YOU THE BASICS OF AUTO MAINTENANCE AND SIMULTANEOUSLY LETS YOU RECORD YOUR CAR'S MAINTENANCE HISTORY." INDEED, IT IS CAPABLE OF APPROACHING THESE GOALS, AT LEAST TO A DEGREE.

THIS MENU-DRIVEN PROGRAM HAS ESSENTIALLY TWO PARTS. THE FIRST ONE ALLOWS YOU TO MAINTAIN A DATA FILE ON DISK OR TAPE OF MAJOR MAINTENANCE RECORDS FOR UP TO 100 CARS (USEFUL, I SUPPOSE, IF YOU RUN A TAXI FLEET). TO SET UP A SINGLE CAR'S RECORD, YOU CAN ENTER THE DATE AND MILEAGE FOR EACH OF THE FOLLOWING JOBS: OIL CHANGE, TUNEUP, BRAKE JOB, TIRE ROTATION, AND TRANSMISSION CHECK. LATER, YOU CAN EASILY RETRIEVE AND UPDATE ANY RECORD IN THE FILE.

THE SECOND PART IS AKIN TO A COMPUTERIZED AUTO MAINTENANCE MANUAL. FOR EXAMPLE, THE 'DIAGNOSTIC SECTION' USES AN INTERACTIVE DIALOG APPROACH TO SUGGEST POSSIBLE SOLUTIONS FOR MANY COMMON AUTO PROBLEMS. IT BEGINS WITH THIS MENU CHOICE: 1 CAR WON'T START; 2 STARTS BUT RUNS ROUGH. AFTER YOU ENTER 1 OR 2, THE SCREEN SHOWS A LIST OF FURTHER DIAGNOSTIC TESTS, AND EVENTUALLY MIGHT SUGGEST A PROCEDURE SUCH AS CHECKING THE SPARK PLUGS. NEXT, THE SCREEN MIGHT LIST SEVERAL POSSIBLE OUTCOMES OF YOUR CHECK, SUCH AS "DRY BLACK DEPOSITS" OR "MELTED SEVERELY". SELECTING THE APPROPRIATE MENU CHOICES IN SUCCESSION WOULD THEORETICALLY LEAD YOU TO A SOLUTION.

THE MOST VISUALLY APPEALING PARTS OF THE PROGRAM ARE THE 'WHEN TO CHECK' AND 'HOW TO CHECK' SECTIONS. THESE BEGIN WITH A 7-CHOICE MENU: BRAKES, SUSPENSION, TIRES, TRANSMISSION, ENGINE, COOLING SYSTEM, AND FUEL & EMISSIONS. AFTER SELECTING ONE, A DIAGRAM OF PART OF A CAR APPEARS, WITH AN ARROW POINTING TO THE SYSTEM IN QUESTION. THE 'WHEN TO CHECK' SECTION CAN INTERACT WITH A PREVIOUSLY STORED MAINTENANCE RECORD TO SUGGEST THE FUTURE MILEAGE AT WHICH A CERTAIN CHECK SHOULD BE MADE. THE 'HOW TO CHECK' SECTION DESCRIBES METHODS OF INSPECTING KEY PARTS OF YOUR CAR.

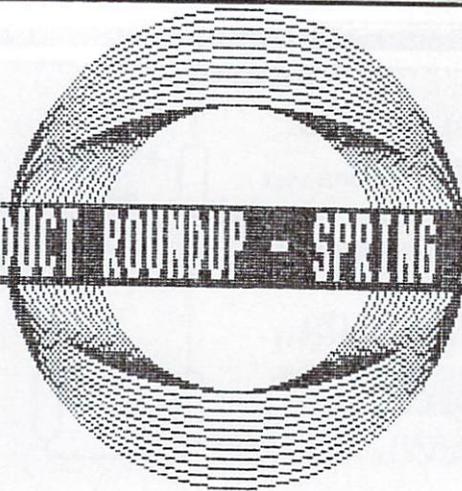


"The 'diagnostic section' uses an interactive dialog approach to suggest possible solutions for many common auto problems."

THIS PRODUCT COULD BE QUITE USEFUL FOR SOMEONE WHO KNOWS VERY LITTLE ABOUT AUTO MAINTENANCE PRINCIPLES, OR WHO TENDS TO NEGLECT REGULAR CAR SERVICE DUE TO INADEQUATE RECORD KEEPING. BEFORE RUSHING OUT TO BUY IT, HOWEVER, YOU SHOULD BE AWARE OF ITS LIMITATIONS. FIRST, THE PROGRAM ONLY INCLUDES GENERIC MAINTENANCE INFORMATION, AND HAS NOTHING SPECIFIC ABOUT ANY PARTICULAR ENGINE, MAKE, OR AGE OF CAR. SECOND, ALTHOUGH THE DIAGNOSTIC SECTION, WITH ITS LOGIC-TREE DESIGN, IS BOTH WORTHWHILE AND FUN TO USE, ONLY ENGINE PROBLEMS ARE COVERED. IT IS NO HELP FOR SUCH OTHER AREAS AS BRAKES OR STEERING. THIRD, WHILE THE PROGRAMMING SEEMS FAIRLY SOPHISTICATED, THERE ARE SUCH MINOR ANNOYANCES AS A FEW BACKGROUND/TEXT COLOR COMBINATIONS WHICH ARE HARD TO READ ON A COLOR TV, AND INPUT FORMATS WHICH SOMETIMES REQUIRE YOU TO PRESS <RETURN> AND SOMETIMES DON'T, IN NO OBVIOUS PATTERN.

OVERALL, I'D RECOMMEND THAT YOU GIVE 'COMPUTER MECHANIC' A TRY IF ITS UNIQUE CONCEPT INTRIGUES YOU, OR IF YOU'D LIKE A PAINLESS WAY TO INCREASE YOUR MECHANICAL KNOWLEDGE--BUT DON'T THROW AWAY YOUR OLD CAR MANUALS OR SERVICE RECORD FILES JUST YET.

from: **SOFTSYNE, INC.**
 14 East 34th St.
 New York NY 10016
 212 685-2080
 Disk/Cassette
 \$26.95/\$21.95



PRODUCT ROUNDUP - SPRING 1984

HOW TO USE THE PRODUCT ROUNDUP

PRODUCTS ARE ARRANGED BY CATEGORIES (SEE INDEX AT RIGHT). EACH PRODUCT TITLE IS ACCOMPANIED BY A 3-CHARACTER VENDOR CODE, A MEDIA ABBREVIATION WHERE APPLICABLE (SEE LEGEND BELOW), PRICE, AND A RATING OF FROM ONE TO FIVE STARS (*). IF WE DON'T HAVE ONE OF THESE INFORMATION ITEMS, THE LETTERS "NA" WILL APPEAR INSTEAD. IF YOU WANT MORE INFORMATION ABOUT A PARTICULAR PRODUCT AND YOUR LOCAL DEALER IS NOT ABLE TO HELP, USE THE 3-CHARACTER CODE TO LOCATE THE VENDOR IN THE VENDOR ROUNDUP (BEGINNING ON PAGE).

LEGEND: (D)=DISK (T)=TAPE (R)=CARTRIDGE
(D/T)=DISK OR TAPE AVAILABLE
(T+D)=DISK VERSION INCLUDED ON TAPE
(R&D)=USES BOTH ROM AND DISK

RATINGS:

- *.....BOO, HISS, YUK, BLAH, SNORT, ARGH.
- **.....POOR: EITHER DOESN'T WORK RIGHT (SERIOUS BUGS), OR IS LACKING IN IMAGINATION, USEFULNESS, OR PERFORMANCE.
- ***.....JUST FINE: NO SERIOUS BUGS, PERFORMS REASONABLY WELL - BUT NOTHING SPECIAL (THIS IS SOMETIMES A PRODUCT WHICH HAS BEEN DONE ENOUGH BY OTHERS, LIKE A PLAIN VANILLA MAILING-LABEL PROGRAM, OR SOME BLAST-'EM ARCADE GAMES)
- ****....VERY GOOD: PROFESSIONAL, SOLID, CREATIVE, STANDS APART.
- *****..UNUSUALLY OUTSTANDING!: A LEADER IN ITS CATEGORY.

(PLUS AND MINUS SIGNS INDICATE SLIGHTLY HIGHER AND LOWER JUDGEMENTS, RESPECTIVELY)

WE DON'T RECOMMEND BUYING ANYTHING RATED BELOW 3 STARS-THERE'S TOO MUCH GOOD STUFF OUT THERE TO SETTLE FOR LESS.

ONLY PRODUCTS ACTUALLY TESTED BY INFO-64 OR TRUSTED ASSOCIATES ARE RATED - OTHER PRODUCTS SHOW "NA" (NOT AVAILABLE) IN PLACE OF STARS.

*NOTE: INFO-64 DOES NOT SELL ANY OF THESE PRODUCTS. PLEASE SEE YOUR DEALER OR CONTACT THE VENDOR IF YOU WANT TO BUY ANY OF THESE.

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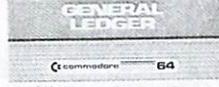
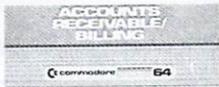


PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

====>>THE MANAGEMENT ACCOUNTING SYSTEM SERIES (MAS) FROM INFO DESIGNS (IDC) IS VERY THOROUGH AND PROFESSIONAL WITH EXTENSIVE REPORTING CAPABILITIES AND EXCELLENT DOCUMENTATION. ALL MODULES CAN PASS AND SHARE THE SAME DATA AND LINK TOGETHER THRU A MASTER MENU ROUTINE. THE FIVE MODULES BELOW ORIGINALLY RETAILED FOR \$200 EACH. SINCE THEN MANY IMPROVEMENTS HAVE BEEN MADE (NOT THE LEAST OF WHICH IS THE NEW PRICING).

COMMODORE NOW OFFERS A VERSION OF THE INFO DESIGNS SERIES (IDC) LISTED BELOW. PRICED AT ABOUT \$50 PER MODULE, THE COMMODORE VERSIONS ARE ESSENTIALLY THE SAME PRODUCTS WITH SOME REDUCTIONS IN MAXIMUM CAPACITIES

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6A 1600 ACCOUNTING
DES.....(D).....395.00.....NA
COMBINED G/L, A/R, A/P; 2 DRIVES REQUIRED. ASSORTED BOOK AND RECORD KEEPING
SOU.....(D).....(most under 100.00).....NA

INVENTORY PACKAGE
MSP.....(D).....99.95.....NA

FULL-FEATURED INVENTORY PACKAGE.
PAYROLL SYSTEM
MSP.....(D).....99.95.....NA

GENERAL LEDGER
MSP.....(D).....99.95.....NA

UP TO 75 ACCOUNTS.

INVENTORY	LUN.....(D).....	49.95.....	NA
INVENTORY	WRD.....(?).....	30.00.....	NA
GENERAL LEDGER	AAR.....(D).....	69.95.....	NA
INSTA-LEDGER	CIM.....(NA).....(NA).....		NA
CYBER-FARMER	CYB.....(D).....	195.00.....	NA
GENERAL LEDGER / INVENTORY / BUDGET ANALYSIS / CASH FLOW / DEPRECIATION / LOAN MANAGEMENT			
DATABOOKS	DMI.....(D).....	295.00.....	NA
G/L A/R A/P BILLING, INVOICING. SINGLE DRIVE SYSTEM. MENU DRIVEN.			

ACCOUNTS RECEIVABLE/PAYABLE	ECP.....(NA).....	21.95.....	NA
THE ACCOUNTANT (G/L B/S P&L)	ECP.....(NA).....	29.95.....	NA
INVOICE EASE 64	ENT.....(NA).....	39.00.....	NA
SUPERBYTE BUSINESS PAK	POW.....(D).....	100.00.....	NA
INCLUDES: G/L / INCOME STATEMENT / BALANCE SHEET, A/R, A/P, WORDPROCESSOR / SPREADSHEET / INVENTORY / CHECKBOOK MAINTENANCE / MAILLIST / 6 UTILITIES			

==>> THE FOLLOWING ARE MODULES IN A SERIES WHICH ARE ALL: PASSWORD PROTECTED / MENU-DRIVEN / STAND-ALONE OR INTEGRATABLE WITH THE OTHER MODULES / FLEXIBLE REPORTING: (: NOTE PRICE REDUCTIONS-)

GENERAL LEDGER	TMW.....(D).....	59.95.....	NA
CASH FLOW MANAGEMENT	TMW.....(D).....	59.95.....	NA
PAYROLL MANAGEMENT	TMW.....(D).....	59.95.....	NA
ACCOUNTS PAYABLE AND CHECKS	TMW.....(D).....	59.95.....	NA
ACCOUNTS RECEIVABLE AND INVOICING	TMW.....(D).....	59.95.....	NA
SALES ANALYSIS MANAGEMENT	TMW.....(D).....	59.95.....	NA
INVENTORY MANAGEMENT	TMW.....(D).....	59.95.....	NA
MANAGEMENT SYSTEM 64	ENT.....(D).....	69.95.....	NA
INTEGRATED BUSINESS PACKAGE: CALCULATES AND PRINTS INVOICES, PACKING SLIPS, MAILING LABELS/ TRACKS INVENTORY/ GENERATES RELATED REPORTS.			
BUSINESS PAK	LOE.....(D).....	179.95.....	NA
SINGLE-DISK ACCOUNTING SYSTEM COVERS: RECEIVABLES, INVENTORY, SALES, INVOICING/ INCLUDES SPREADSHEET ROUTINES.			

NEW ADDITIONS

TRICOUNT,	TRI.....(D).....	149.94.....	NA
FOUR MODULES: G/L, A/R, A/P, & INVENTORY/ ALSO ABLE SEPARATELY. FULL-FEATURED SMALL BUSINESS ACCOUNTING.			
BUSINESS WARE	SOU.....(D).....	??.??.....	NA
(SOUTHERN SOLUTIONS OFFERS A BROAD RANGE OF BUSINESS ACCOUNTING MODULES FOR EVERYTHING FROM GENERAL LEDGER TO PAYROLL FUNCTIONS.)			



INTEGRATED BUSINESS/HOME

PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

====>> THE FOLLOWING 5 MODULES CAN BE USED STAND- ALONE OR LINKED IN VARIOUS COMBINATIONS.

FINANCE I

PGI.....(D/T).....39.95/34.95.....***
CHECKBOOK MAINTENANCE / CHART OF ACCOUNTS / CHECK SEARCH / CHECK WRITER

FINANCE II

PGI.....(D/T).....29.95/24.95.....***
NET WORTH/INCOME/EXPENSE STATEMENTS / DETAIL AND SUMMARY BUDGET ANALYSIS

FINANCE III

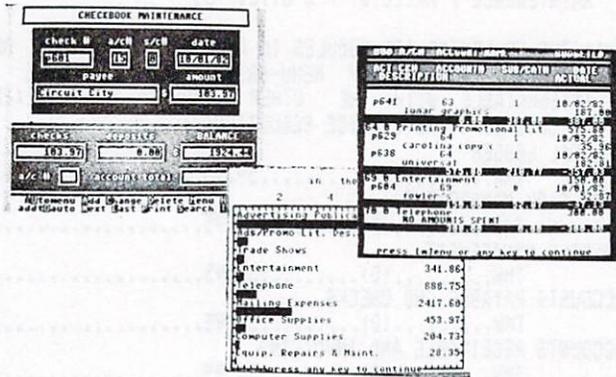
PGI.....(D/T).....29.95/24.95.....***
PAYMENTS CALENDER / APPOINTMENTS CALENDAR / MAILING LIST / COLOR GRAPH DESIGN PACKAGE

FINANCE IV

PGI.....(D/T).....29.95/24.95.....NA
SPREADSHEET: COMPATIBLE WITH FINANCE I, II, & V.

FINANCE V

PGI.....(D/T).....59.95/54.95.....NA
INCOME TAX PACKAGE: PRINTS FORMS, HANDLES MOST SCHEDULES/ USES FINANCE I, II, & IV.



COMPLETE PERSONAL ACCOUNTANT (FORMERLY 'COLOR ACCOUNTANT')

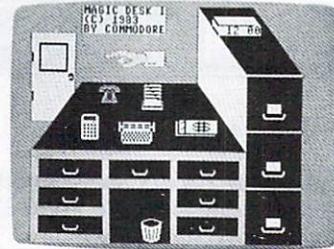
PGI.....(D/T).....79.95/74.95.....***
INCLUDES ABOVE MODULES I THRU III: A SOLID SET OF PERSONAL FINANCE TOOLS/ INCLUDES A UNIQUE SELF-RUNNING DEMONSTRATION PROGRAM ON THE FLIP-SIDE OF THE DISKETTE WHICH MAKES FIRST-TIME FAIRLY PAINLESS (WE WOULD LIKE TO SEE MORE OF THIS TYPE OF BUILT-IN TRAINING AID INCLUDED WITH 'SERIOUS' SOFTWARE.) SEE COMPLETE REVIEW IN WINTER '83/84 ISSUE.

BUDGETEER

ABA.....(T/D).....19.95/22.95.....NA
PART BUDGET MANAGER, PART SPREADSHEET. PRODUCES BAR CHARTS OF MONTHLY TOTALS AND AVERAGES. ALLOWS 999 COLUMNS BY 99 ROWS FOR WORKSHEET

JANE

ARK.....(NA).....(NA).....NA
MOUSE & ICON-BASED INTEGRATED SYSTEM: WORDPROCESSING, SPREADSHEET, FILING/ 'ALL ON ONE SCREEN AT THE SAME TIME'. WILL THIS BE THE 64-USER'S SCALED-DOWN ANSWER TO LOTUS' 1-2-3??



MAGIC DESK I

CBM.....(R).....<50.00.....***+

ICON-BASED 'SHELL' PACKAGE THAT WILL HELP THE USER ACCESS AND TRAVEL BETWEEN APPLICATIONS IN A MORE 'FRIENDLY' WAY THAN IS NOW USUALLY THE CASE. MAGIC DESK I INCLUDES WORDPROCESSING AND FILING FUNCTIONS/ MORE FUNCTIONS ARE SCHEDULED TO COME LATER ON ADDITIONAL CARTRIDGES.

SMART

DEE.....(D).....(NA).....NA

INCLUDES SIMPLIFIED WORDPROCESSING/ MONEY MANAGEMENT/ LOAN & SAVINGS ANALYSIS/MAIL LIST/ HOME INVENTORY/ TIME MGMT CALENDAR & SCHEDULING/ ALL LOAD FROM ONE MENU

SUPERBYTE BUSINESS PACK

SPB.....(D).....100.00.....NA

INCLUDES: GL/ AR/ AP/ WORDPROCESSOR/ SPREADSHEET/ INVENTORY/ CHECKBOOK MNGR/ MAIL LIST/ & 6 UTILITY PROGRAMS

NEW ADDITIONS

CCI MERCHANDISER

CCI.....(2800 - 4000).....NA

COMBINED HARDWARE/SOFTWARE SYSTEM PROVIDES POINT OF SALE RETAILERS WITH ELECTRONIC CASH DRAWER STATION, AND A HOST OF USEFUL SOFTWARE ROUTINES INCLUDING SALES ANALYSIS, INVENTORY CONTROL, ACCOUNTING, MAILING & FILING, STICKER & LABEL MAKING, WORDPROCESSING, AND TELECOMMUNICATIONS.

THE MASTER KEY

TRI.....(D).....129.95.....NA

HARD TO CATEGORIZE THIS INTERESTING BUNDLE. INCLUDES: FILING/ WORD PROCESSING/ HOME FINANCE/ ELECTRONIC PAINTBRUSH/ & 'TERRESTRIAL GAME'.

PERSONAL FINANCES

PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

HOME ACCOUNTANT

CON.....(D).....79.95.....***+

THIS COULD BE AN EXCELLENT PACKAGE; UNFORTUNATELY, THE PRODUCT, IN ITS PRESENT CONDITION, CAN NOT BE RECOMMENDED. SLOW DISK-ACCESSING ROUTINES RESULT IN UNACCEPTABLY LONG DELAYS DURING ROUTINE PROCESSING. (SEE COMPLETE REVIEW WINTER '83/'84 ISSUE)

PERSONAL FINANCE ASSISTANT

RAI.....(NA).....59.95.....NA

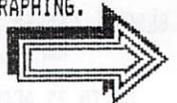
BUDGET AID

MIQ.....(NA).....69.95.....NA

MENU DRIVEN / CHART OF ACCOUNTS / USER-DEF CATEGORIES / CHECKBOOK W/RECONCILIATION / COLOR GRAPH ANALYSIS THE MONEY MANAGER (BUDGET AND CASH FLOW SYSTEM)

TMW.....(D/T).....24.95.....NA

DETAILED BUDGET ANALYSIS WITH BAR CHART GRAPHING.



PERSONAL FINANCES (CONT'D)

HOME FINANCE MANAGER
 SWC.....(D).....59.95.....NA
 BUDGETING / 3-ACCT CHECKBOOK / DEDUCTION FLAGS / CHARTS & GRAPHS

FAMILY FINANCES
 SOP.....(D).....33.95.....NA
 MENU-DRIVEN / BUDGETING / EXPENSES AND INCOME / CHECKBOOK MGR. / SUMMARIES & JOURNALS

CCI BOTTOM LINER - PERSONAL. (BUSINESS VERSION IS 74.95)
 CCI.....(D).....69.95.....NA
 THIS PACKAGE GOES BEYOND THE USUAL BUDGETING ROUTINES, ADDING GENERAL LEDGER, INVOICING FUNCTIONS, CLIENT FILE, INVENTORY, AND AMORTIZATION/ SUPPORTS 700 ACCOUNTS.

HOUSEHOLD FINANCE
 CRE.....(D/T).....34.95/29.95.....NA

PERSONAL FINANCE FORECASTER
 XAN.....(NA).....(NA).....NA
 THIS PACKAGE EMPHASIZES THE FUTURE BASED ON DATA FROM THE PAST & PRESENT. GENERATES GRAPHS AND REPORTS FOR A WHAT-IF LOOK AT YOUR FUTURE FINANCES.

COMP-U-CHECK
 HOT.....(D).....64.95.....NA
 CHECK WRITING/ ACCOUNT BALANCING/ UNLIMITED BUDGET CATEGG./ CREDIT ACCOUNTS/ AUTO-TELLER TRANSXS/ TAX SUMMARIES/ SUPPORTS ALL PRINTERS & INTERFACES. ALSO INCLUDES SIMPLE WORDPROCESSING FEATURES.

BUDGET AIDE
 MID.....(NA).....69.95.....NA
 MENU-DRIVEN/ CHART OF ACCOUNTS/ CHECKBOOK WITH RECONCILIATION/ COLOR GRAPH ANALYSIS OF BUDGET MANAGEMENT.

THE FINANCIAL ASSISTANT
 GAL.....(D).....49.95.....NA
 50 ACCOUNTS/ 100 CATEGORIES/ 3200 ENTRIES PER DISK/ SEARCH-SORT ON ANY FIELD/ REPORTS TO WIDE VARIETY OF PRINTERS.

BILLWRITER/SUMMARY
 UHL.....(T).....29.95.....NA
 HOME ACCOUNTING & CHECK-WRITING/ PRINTS CHECKS ON REGULAR PRINTER PAPER.

NEW ADDITIONS

64-ACCOUNTING SYSTEM
 SDI.....(D).....69.95.....NA
 SUPPORTS 10 CHECKING LEDGERS AND 20 SEP. ACCOUNTS. PRINTS: CHECKS, STATEMENTS, PROFIT & LOSS AND TRIAL BALANCE SHEETS. 'MINI A/R, A/P LEDGERS'.

FINANCE MANAGER
 HES.....(D).....69.95.....NA
 BUDGET MANAGEMENT: MULTIPLE CHECKING ACCOUNTS/ PRINTS CHECKS/ KEEPS TAX RECORDS/ HELP SCREENS

FINANCIAL ACCOUNTING & PLANNING SYSTEM.
 SMX.....(D).....39.95.....NA

PERSONAL ACCOUNTANT
 SFX.....(D/T).....39.95.....NA
 DOUBLE ENTRY BOOKKEEPING/ MAINTAIN CHECKBOOK, CREDIT CARDS, LOANS/ REPORTS INCLUDE: TRIAL BAL., PROFIT/LOSS, EXPENSE VS. INCOME, ASSETS VS. LIABILITIES. AMORTIZATION TABLES AND ADDRESS BOOK FUNCTIONS.

TAX PACKAGES

TAX-MAN
 SAU.....(D/T).....39.95.....NA
 COMPUTES TAX TABLE / SCHEDS X,Y,Z / INCOME AVERAGING / W/PRINTER FORMS

SUPERTAX (I, II, & III)
 RDC.....(D).....\$79/89/99.....NA
 I: GENERATES SUMMARIES OF PAGE 1 & 3 AND SCHED. A. PRINTS OVERALL SUMMARY OF RETURN SHOWING ADJUSTED GROSS INCOME, ITEMIZED DEDUCTIONS, TAXABLE INCOME, REG. TAX, INCOME AVERAGING TAX, MIN. TAX, & PAYMENT OR REFUND DUE. ALSO COMPUTES: MOVING EXPENSE DEDUCTION, INVESTMENT CREDIT, TAXABLE CAPITAL GAINS, POLITICAL & CHILDCARE CREDITS, MEDICAL LIMITATIONS, & MORE. (SUPERTAX I IS ALSO AVAILABLE ON CASSETTE)

II: ALL FEATURES OF ABOVE BUT PRINTS ACTUAL INCOME TAX RETURN (PAGE 1, 2, SCHEDS. A, B, & 5, FORM 346B) ON GOVERNMENT FORMS (WITH FRICTION-FEED PRINTERS) OR BLANK PAPER FOR USE WITH TRANSPARENCIES.

III: ALL FEATURES OF ABOVE TWO MODULES PLUS CALCULATES AND PRINTS SCHED. C ALONG WITH A STAND-ALONE DEPRECIATION PROGRAM.

THE TAX ADVANTAGE
 CON.....(D).....59.95.....NA
 HELPS WITH 1040 FORM/ SCHEDULES A,B,C,D,E,G,SE,4562, AND W. INCOME AVERAGING. HELP SCREENS.

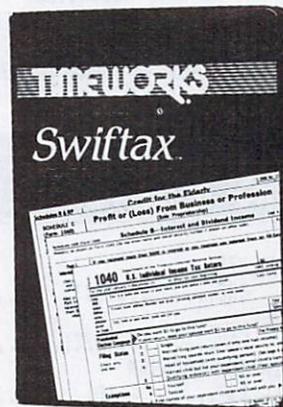
FINANCE V
 PGI.....(D/T).....59.95/54.95.....NA
 PRINTS FORMS/ MOST SCHEDULES/ USES DATA FROM PROGRAMMER'S INSTITUTE'S (PGI) HOME FINANCE PROGRAMS.

TAX FILE
 S&G.....(D/T).....19.95/14.95.....NA
 ORGANIZES TAX DATA FROM 23 CATEGORIES/ DOES NOT PRINT FORMS.

NEW ADDITIONS

TAXPAYER'S SURVIVAL PROGRAM
 CAR.....(D).....39.95.....NA
 INCLUDES H&R BLOCK INCOME TAX WORKBOOK, HOTLINE PHONE #, DISK-BASED TAX TABLES, DISK STORAGE OF YOUR TAX FORM DATA, LINE BY LINE PRINTOUT OF TAX FORM DATA, & RUNNING TOTAL OF REFUND OR TAX DUE.

SWIFTAX
 TMW.....(D).....49.95.....NA
 MENU DRIVEN/ GUIDES USER THRU PREPARATION OF TAX FORMS/ CHECKS ALTERNATIVES INCLUDING INCOME AVG. AND FIGURES LOWEST TAX TO PAY/ CAN PRINT DIRECTLY ON IRS SCHEDULES AND GENERATE ITEMIZED ADDITIONAL STATEMENTS/ ALSO CALCULATES & PRINTS AMORTIZATION SCHEDULES. YEARLY SOFTWARE UPDATES AVAIL. AT SMALL CHARGE.



TAXWARE
 SFP.....(D).....44.95.....NA
 STORES ALL TAX INFO ON ELECTRONIC VERSIONS OF MOST TAX FORM/ CALCULATES TAX AT ANY TIME/ FACILITATES EASY 'WHAT-IF' TYPE ANALYSIS/ HANDLES ITEMIZED DEDUCTIONS, INCOME AVG., DIVIDENDS, STOCKS, SELF-EMP., RENTS, ROYALTIES, MANY OTHERS/ M.L. & COMPILED BASIC

CHECKBOOK MANAGEMENT



CHECKBOOK MANAGER
MSP.....(D).....69.95.....NA
VICHECK
UMI.....(T&D).....29.95.....***
CHECKBOOK MANAGER WITH PRINTER OPTIONS
64 CHECKBOOK MANAGER
DES.....(D/T).....40.00/35.00.....NA
INSTA-CHECK
CIM.....(NA).....(NA).....NA
64 CHECKBOOK MANAGER
BSS.....(D/T).....39.95/34.95.....NA
PASSWORD PROTECTED / 250 CHECKS PER FILE / 100 DEPOSITS
/ 50 ACCOUNT CHARGES
64 CHECKBOOK MANAGER
DES.....(D/T).....40.00/35.00.....NA
PASSWORD PROTECTED / 400 CHECKS PER FILE / 200 DEPOSITS
/ 100 ACCOUNT CHARGES
CHECKBOOK ACCOUNTING ('UNLIMITED CHECKBOOK')
MIQ.....(NA).....24.95.....NA
CHECKBOOK BALANCER (250 CHECK CAPACITY)
GAT.....(T).....9.95.....NA
CHECK MANAGER
GOS.....(T).....29.95.....NA
CHECKBOOK BALANCER
GTR.....(T).....10.00.....NA
CHECK K HELPER
MAG.....(D/T).....(NA).....NA
CHECKEASE
T&F.....(D/T).....34.95/29.95.....NA
OVER 600 CHECKS / INTERFACES WITH COMMODORE'S 'PERSONAL
FINANCE' / RECONCILIATIONS / FORWARD & REVERSE REVIEW /
DEDUCTABLE FLAGGING / PRINT BY CATEGORY

NEW ADDITIONS

MY ACCOUNTANT
RAM.....(D).....(NA).....NA
CHECKBOOK MANAGER WITH 36 CHECK CATEGORIES, 10 FOR
DEPOSITS. HOLDS 2000 CHECKS AND 475 DEPOSITS PER YR.
SEARCH, REPORT, RECONCILE.
YOUR PERSONAL ACCOUNTANT (FORMERLY 'THE BEAN COUNTER')
TRI.....(D/T).....39.95.....NA
SUPPORTS ONLY 2 BANK ACCOUNTS AND NINETEEN EXPENSE
CATEGORIES.

LOANS & INVESTMENT



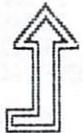
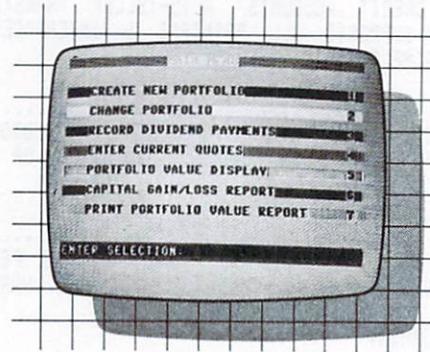
LOAN ANALYZER
CRE.....(D/T).....19.95/14.95.....NA
LOAN CALC
FAN.....(D/T).....11.95/9.95.....NA
AMORTIZATION PROGRAM
INP.....(D).....30.00.....NA
THE INVESTORS PAK
USE.....(D).....39.95.....NA
25 BUSINESS & INVESTMENT PROGRAMS IN REAL ESTATE,
MORTGAGES, BONDS, LOANS, SHELTERS ETC.
HOME MATH ANALYZER
UHL.....(D).....19.95.....NA
ANALYZES HOME LOANS, SAVINGS, AND SIMPLE STATISTICAL
DATA.

HOW TO MAKE GOOD INVESTMENTS

THZ.....(D).....54.95.....NA
COMBINED 100 PAGE TEXT & PROGRAM DISKETTE DESIGNED TO
INSTRUCT THE BEGINNING OR OCCASIONAL INVESTOR.
BEC
LAW.....(D/T).....89.95/79.95.....NA
DESIGNED TO HELP THE ENTREPRENEUR FIND BREAK-EVEN POINT
FOR NEW PRODUCT. COMPUTES TOTAL FIXED COSTS, VARIABLE
COSTS, & SALES REVENUE AT BREAK-EVEN POINT.
INVESTMENT PORTFOLIO MANAGER
B&B.....(D).....14.95.....NA
TRACKS STOCKS AND STOCK OPTIONS/ REPORTS ON 9 INVESTMENT
CATEGORIES.
STOCK PORTFOLIO MANAGER
BAB.....(D/T).....34.95/29.95.....NA
STOCK HELPER (TRACK AND ANALYZE STOCKS)
MAG.....(NA).....(NA).....NA

NEW ADDITIONS

PORTFOLIO MANAGER
BAB.....(D/T).....29.95.....***+
MENU-DRIVEN INVESTMENT AID TRACKS UP TO 70 STOCKS WITH
UP TO 300 TRANSACTIONS PER PORTFOLIO. UPON ENTERING
CURRENT QUOTES, YOU MAY QUICKLY ASSESS YOU PRESENT
BALUE, % GAIN/LOSS, ACTUAL GAIN/LOSS, AVG. PURCHASE
PRICE, AND TOTALS. REPORTS TO SCREEN OR PRINTER.



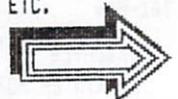
WALLSTREET MICROSCOPE

DEE.....(D).....(NA).....NA
DETAILED PRICE AND FINANCIAL ANALYSIS OF COMMON STOCKS/
EACH STOCK RATED AGAINST 10 CRITERIA/ AVAILABLE WITH 10
YR. HISTORY OF FORTUNE 500'S / OTHERS SOON.
TAS-64 (STOCK MARKET TECHNICAL ANALYSIS)
ABA.....(D).....84.95.....NA
ANALYZES AND CHARTS (HI-RES TO PRINTER) TECHNICAL
SECURITIES INDICATORS. INDICATORS MAY BE DOWNLOADED
FROM DOW JONES NEWS SERVICE OR MANUALLY ENTERED. ONE
DISKETTE HOLDS UP TO 300 PERIODS FOR UP TO 10 ISSUES.
SPLIT-SCREEN CHARTING OF 7 MOVING AVERAGES, 3
OSCILLATORS, 1-99% TRADING BANDS, LEAST SQUARES, & 5
VOLUME INDICATORS. COMPARATIVE CHARTS FOR 2 DIFFERENT
ISSUES. SUPPORTS CBM, EPSON, GEMINI, & OKIDATA
PRINTERS.

MISC. BUSINESS & PERSONAL



TOTL.TIME 2.6
TOT.....(T/D).....35.00/39.00.....***+
USEFUL FOR SCHEDULING AND MANAGING PROJECTS
RESEARCH ASST.
TOT.....(T/D).....35.00/39.....***+
UNIQUE CROSS-REF. TOOL FOR BIBLIOGRAPHIES ETC.



MISC. BUS./PERSONAL (CONT'D) ↓

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
ESI TIME PLANNER				
ESI.....(D).....			89.00.....	****
USE ON-SCREEN DAILY OR MONTHLY CALENDAR TO SCHEDULE EVENTS. 40 COMMANDS ALLOW SCHEDULING BY 15 MIN., 30 MIN., DAILY, WEEKLY, OR MONTHLY INTERVALS. REPEAT, MOVE, & RESCHEDULE EVENTS/ FIND FREE TIME INSTANTLY. ON-LINE HELP, COLOR & SOUND, ON-SCREEN REAL-TIME CLOCK/ CROSS-REFERENCING/ PASSWORD-PROTECTION/ HARD-COPY REPORTS/ UP TO 8000 EVENTS PER DISK/ SCHEDULE THRU THE YEAR 2000/ UNLIMITED PERSONS AND COMMENTS PER DAY.				
NUMERIC KEYPAD (SOFTWARE)				
CYB.....(D).....			14.95.....	**
CONVERTS PART OF YOUR KEYBOARD INTO A NUMERIC CLUSTER MORE SUITABLE FOR FINANCIAL AND ACCOUNTING WORK. STICK-ON LABELS INCLUDED FOR KEY-TOPS. 'KEYPAD' CAN BE TOGGLED ON AND OFF EASILY DURING OPERATION, AND ROUTINES MAY BE COPIED ONTO APPLICATION DISKETTES FOR CONVENIENCE.				
BIBLIOGRAPHER				
GEM.....(D).....			50.00.....	NA
CROSS-REFERENCING PROGRAM				
DATE DUE				
MWS.....(D).....			39.50.....	NA
LIBRARY UTILITIES TO MANAGE OVERDUES ETC. PRODUCES HARDCOPY / SORTS & SEARCHES				
MASTER LIBRARY PROGRAM				
MWS.....(D).....			39.50.....	NA
INTERESTING PROGRAM FOR MANAGING LARGE COLLECTIONS OF COMPUTER DISKETTES. CATALOGS OVER 8000 TITLES / M.L. SORTING / SEARCHES AND FLAGS DUPLICATE TITLES / MORE				
CCI RETAILER 64				
CCI.....(D).....			1073.00.....	NA
INTEGRATED HARDWARE/SOFTWARE POINT OF SALE SYSTEM. INCLUDES: IEEE-488 INTERFACE WITH BASIC 4.0 / COMPUTER CONTROLLED CASH DRAWER / TRANSACTION DISKETTE / INVENTORY DISKETTE / MACHINE LANG. MONITOR AND TERMINAL SOFTWARE / MONITOR-PEDESTAL / USER'S MANUAL				
FARM MANAGER I (GENERAL BUSINESS)				
CYB.....(D).....			49.95.....	NA
INCLUDES: INVESTMENT / LOAN ANALYSIS / LAND PURCHASE / MACHINE COST / AND BUSINESS STUDY PROGRAMS.				
FARM MANAGER II (BEEF PRODUCTION)				
CYB.....(D).....			49.95.....	NA
INCLUDES: BEEF CALF PRODUCTION / CATTLE FEEDER / HEAVY CATTLE / BEEF MARKETING / AND RATION ANALYZER PROGRAMS				
FARM MANAGER III (PORK PRODUCTION)				
CYB.....(D).....			49.95.....	NA
INCLUDES: PIG PRODUCTION / PIG FEEDER / HEAVY HOGS / AND RATION ANALYZER				
FORM GENERATOR				
SIM.....(NA).....			19.95.....	NA
APPOINTMENTS				
SIM.....(NA).....			24.95.....	NA
TASK ORGANIZER				
SIM.....(NA).....			24.95.....	NA
PRO SPORTS STATS (FOOTBALL)				
ECC.....(D).....			285.00.....	NA
AWESOME SOUNDING DATA BASE ON DISK WITH EVERY CONCEIVABLE STATISTIC FOR NFL AND USFL GAMES SINCE 1970. IMPLIES YOU WILL BE ABLE TO PICK WINNERS MORE OFTEN BY CONSULTING YOUR COMPUTER BEFORE A GAME. (WEEKLY UPDATES ARE INCLUDED FOR \$15 PER MONTH.) IF YOU LIKE THIS PACKAGE, THEY HAVE SIMILAR SYSTEMS FOR BASEBALL, HOCKEY, AND BASKETBALL.				

TENANT FILE				
FAB.....(D/T).....			17.95/14.95.....	NA
MANAGE TENANT DATA FILES / OCCUPANCY AND RATE SPREADSHEETS.				
ENERGY MASTER (FORMERLY 'UTILITY FILE')				
FAB.....(D/T).....			27.95/24.95.....	NA
'AN EXTENSIVE UTILITY CONSUMPTION DATA PROCESSING PROGRAM FOR DISPLAY, STORAGE, AND PRINTING WITH METER READING INPUTS.'				
DISCALENDER				
SUD.....(D).....			49.95.....	NA
TIME MANAGEMENT: 12 MONTHS OF SCHEDULING AND APPOINTMENTS PER DISK.				
MULTI-LEVEL MARKETING MANAGER				
CCC.....(?).....			(NA).....	NA
INVENTORY				
SUD.....(D).....			79.95.....	NA
1200 RECORDS PER DISK/ BACKORDERS/ 3-LEVEL PRICING/ PRINTED REPORTS.				
RESTAURANT MANAGER				
SUD.....(D).....			79.95.....	NA
POINT OF SALES RESTAURANT SYSTEM; HANDLES 60 TABLES/ 250 MENU ITEMS/ CREDIT CARDS & TIPS/ PRODUCES KITCHEN & SERVER REPORTS.				
BARTENDER'S FRIEND				
RLR.....(T).....			9.95.....	NA
CONTAINS HUNDREDS OF RECIPES & BAR TERMS.				
RENTAL PROPERTY MANAGEMENT				
MSP.....(D).....			(NA).....	NA
BLACKJACK TEACHER				
SOT.....(D/T).....			49.95.....	NA
FOR THE SERIOUS BLACKJACK STUDENT: SIMULATES CASINO PLAY IN REAL-TIME WITH COMPUTER CONTROLLED PLAYERS/ TEACHES SEVEN DIFFERENT STRATEGIES OF VARYING COMPLEXITY/ MONITORS YOUR PERFORMANCE AND CORRECTS YOUR BAD DECISIONS.				

NEW ADDITIONS

RENTAL MANAGER				
FAB.....(D/T).....			27.95/24.95.....	NA
GENERAL RENTAL RECORD KEEPING WITH YEARLY/MONTHLY COLOR GRAPHING. TRACKS UNIT #'S, RATES, OCCUPANT, & DATES IN USE/AVAILABLE.				
FAB BUSINESS				
FAB.....(D).....			37.95.....	NA
PROVIDES MAIL-ORDER OR SMALL BUSINESS WITH: INVOICES/ PACKING LISTS/ LABELS. SUPPORTS CHARGE-CARD DATA AND FEATURES AN INVENTORY DATABASE, PRINTOUTS TO PLAIN PAPER OR SELECTED FORMS (ON 1525, EPSON, GEMINI & SIMILAR PRINTERS).				
PM+				
LAW.....(D).....			129.95.....	NA
COMPUTES CRITICAL PATH AND/OR SCHEDULE FOR PROJECTS. REQUIRES NO EXPERIENCE WITH CRITICAL PATH TECHNIQUES. MANAGES 5 LEVELS OF WAGE-RATES, THREE TYPES OF MATERIAL, CAPITAL EQUIPMENT COSTS, AND MISC. EXPENSES FOR EACH PROJECT. EVALUATES ACTUAL VS. ESTIMATED COSTS.				
TIMESTAR				
F/2.....(D).....			24.95.....	NA
15 SEPARATE ON-SCREEN TIMERS WITH AUDIO ALARMS CAN TIME FROM 1 SEC. TO 99 MIN. 59 SEC. VARIABLE WARNING PERIODS MAY BE SET FROM 5 TO 50 SECONDS. TIMERS MAY BE LINKED SEQUENTIALLY OR RUN SIMULTANEOUSLY.				
DARKSTAR				
F/2.....(T).....			74.95.....	NA
PHOTOGRAPHER'S AID: PROVIDES EXPOSURE, PROCESSING, AND COLOR CORRECTION DATA BASED ON PRINT DENSITY, MAGNIFICATION, LENS OPENING, PAPER TYPE, EMULSION, CONTRAST GRADE, FILTERS.				

MISC. BUS./PERSONAL (CONT'D) ↓

REAL ESTATE ANALYSIS (PROPERTY)
 SMX.....(D).....24.95.....NA
 ESTATE ANALYSIS (ESTATE PLANNING)
 SMX.....(D).....24.95.....NA
 COMPUTA-LAW
 LEG.....(D/T).....24.95/14.95.....NA
 15 COMMON LEGAL AGREEMENTS: 'JUST ANSWER THE QUESTIONS
 AND YOUR COMPUTER & PRINTER DOES THE REST'. INCLUDES
 WILL, POWER OF ATTORNEY, REAL ESTATE AGREEMENT,
 PROMISSORY NOTE, SEPARATION AGREEMENT, CONSTRUCTION
 CONTRACT, COMPUTER SOFTWARE CONTRACT & MORE! SOUNDS
 LIKE A NEAT IDEA!

SPREADSHEET SOFTWARE ↓

PRODUCT NAME
 VENDOR CODE MEDIA PRICE RTG.

CALC RESULT ADVANCED
 HAN.....(R+D).....99.95.....****+
 3-DIMENSIONAL SPREADSHEET SUPPORTS SPLIT SCREENS/
 WINDOWS/ COLOR GRAPHING/ EXTENSIVE HELP SCREENS/ COMPLEX
 FORMULAS. SEARCH & SORT ROUTINES WOULD MAKE THIS
 POWERFUL PACKAGE EXCEPTIONAL.
 (SEE REVIEW: FALL '83 ISSUE.)



	Fuel	Miles			
Cab	3888	1858	3144	5898	2885
Ford	5888	42376			37882
MPG	16.67	22.91	17.58	NA	18.45
Totals					
Fuel	15897				
Miles					

PRACTICAL
 CSA.....(D/T).....54.95/49.95.....****
 EASY TO USE SPREADSHEET. SEARCHING & SORTING FEATURES
 ADD EXTRA VALUE HERE.

MULTIPLAN
 HES.....(D).....99.95.....NA
 MICROSOFT'S POPULAR ADVANCED SPREADSHEET PACKAGE IS NOW
 AVAILABLE FOR THE 64 AT A FRACTION OF ITS ORIGINAL PRICE
 AND WITH MOST OF ITS ORIGINAL POWER. SINCE MICROSOFT
 HAS TAKEN H.E.S. UNDER ITS WING, WE CAN LOOK FORWARD TO
 MANY MORE EXCELLENT OFFERINGS FOR THE 64!



SPREADSHEET ASSIST
 RCC.....(NA).....125.00.....NA
 BUSICALC 1
 SEW.....(NA).....69.00.....NA

INSTA-CALC
 CIM.....(NA).....(NA).....NA
 FINANCE CALC
 ENT.....(NA).....69.00.....NA
 BCALC
 MTS.....(D/T).....44.95/39.95.....NA
 PB: THE PROGRAMMABLE SPREADSHEET
 CSA.....(D).....79.95.....NA
 ADVANCED SPREADSHEET USES THE PROGRAMMABILITY OF BASIC
 TO ALLOW COMPLEX OPERATIONS IN A SPREADSHEET FORMAT.
 JANECALC
 ARK.....(NA).....(NA).....NA
 SPREADSHEET PART OF 'JANE', A MOUSE-BASED INTEGRATED
 SOFTWARE BUNDLE.
 BUSICALC 2
 SEW.....(NA).....99.00.....NA
 ESP>CALC
 NLI.....(D/T).....47.50/43.50.....NA

NEW ADDITIONS

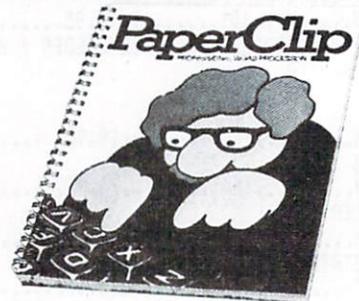
CALC RESULT EASY
 HAN.....(R).....49.95.....***+
 SINGLE-PAGE, SCALED-DOWN VERSION OF CALC RESULT (THIS IS
 THE SAME PRODUCT COMMODORE MARKETS AS 'EASY CALC 64') NO
 WINDOWS OR SCREEN-SPLITTING.
 ULTRAPLAN
 DAS.....(D).....(NA).....NA
 COMBINED SPREADSHEET & GRAPHICS UTILITIES.

WORDPROCESSING ↓

PRODUCT NAME
 VENDOR CODE MEDIA PRICE RTG.

WORDPRO 3 PLUS/64 (NOW INCLUDES SPELLRIGHT PLUS)
 PRO.....(D).....99.95.....****
 SOLID, FULL-FEATURED, AND A STANDARD OF THE INDUSTRY.
 WIDELY SUPPORTED BY OTHER VENDORS' PRODUCTS. COMPLETE
 WITH ALL USUAL FEATURES PLUS TRUE GLOBAL SEARCH/ SEARCH
 & REPLACE (THRU ENTIRE DISK IF DESIRED). LINKED
 DOCUMENTS FOR UNLIMITED LENGTH, NUMERICS, AND
 COMPATIBILITY WITH SEVERAL OTHER MAJOR PRODUCTS. THE
 ONLY FEATURES LACKING ARE ON-SCREEN FORMATTING, &
 MULTI-COLUMN CAPABILITY. SPELLRIGHT (FORMERLY
 'SPELLMASTER') IS AN 18,000-WORD SPELLING-CHECKER WITH
 ROOM FOR 1500 ADDITIONAL USER-ENTERED WORDS.)

PAPER CLIP
 BAT.....(D).....125.00.....****
 GENERALLY GETTING THE SAME 3RD-PARTY SUPPORT AS WORDPRO
 III PLUS/64; MANY ADVANCED FEATURES INCLUDING 80-COLUMN
 VIEW MODE.



SCRIPT 64 (WITH 'SCRATCH PAD')
 RTC.....(D).....105.00.....****
 FULL-FEATURED WITH SEARCH & REPLACE, NUMERICS, SCREEN
 FORMATTING, AND DICTIONARY SOFTWARE BUILT IN (YOU MUST
 BUILD THE VOCABULARY YOURSELF). BUILT-IN 80-COLUMN
 SOFTWARE. NOW INCLUDES DATABASE MANAGER ('SCRATCH PAD')

WORDPROCESSING (CONT'D)

EASY SCRIPT

CBM.....(D).....\$50.00.....***
 QUALITY AT A LOW PRICE. RANGE OF CAPABILITIES SIMILAR
 TO WORDPRO 3 PLUS- FEATURES ON-SCREEN FORMATTING AND
 HORIZONTAL SCROLLING. (DEVELOPED BY PRECISION SOFTWARE
 LTD.)



WORDMANAGER

DAT.....(R).....\$ FREE.....***-
 \$ FREE WITH THE PURCHASE OF ANY DATA-20 80-COLUMN VIDE
 EXPANSION CARTRIDGE. FEATURES: 80 COLUMNS (NATURALLY) /
 ON-SCREEN FORMATTING / KEYBOARD 'FEATURE STRIP' / DISK &
 TAPE STORAGE / MAIL-MERGE

CIRCASCRIPT

CIR.....(D).....39.95.....***-
 COPYABLE (FOR PERSONAL BACKUPS), M.L. WORDPROCESSOR IS
 FAST WITH MANY FEATURES: WE LIKE THE ON-SCREEN, ONE-LINE
 PROMPTS WHICH ACCOMPANY MOST OPERATIONS. THESE, ALONG
 WITH FULL-PAGE HELP SCREENS, VIRTUALLY ELIMINATE THE
 NEED TO REFER TO THE MANUAL AFTER THE FIRST READ-THRU.
 THE GLOBAL SEARCH & REPLACE IS ONE OF THE FASTEST.
 SUPPORTS THE USUAL ARRAY OF EDIT & FORMAT CONTROLS ALONG
 WITH EMBEDDED PRINTER CONTROLS. THE PRINTER INTERFACING
 SECTION IS TOO TECHNICAL FOR MOST USERS. (IF YOU HAVE
 AN EARLY VERSION, YOU MAY HAVE TROUBLE WITH THE
 CARDCO/GEMINI PRINTER COMBO. THIS HAS BEEN FIXED, &
 CIRCADIAN'S POLICY (WHICH WE APPLAUD) IS TO PROVIDE ANY
 AND ALL SOFTWARE UPGRADES AT NO COST TO THEIR
 CUSTOMERS).

TOTL.TEXT 2.6

TOT.....(D/T).....44.00/40.00.....***+
 WRITTEN SKILLFULLY IN BASIC WITH MACH. LANG. SUBROUTINES
 FOR INCREASED SPEED/ FEATURES INCLUDE MERGING OF LABELS
 CREATED WITH TOTL.LABEL 2.6/ MENU-DRIVEN/ NO SEARCH &
 REPLACE.

WORD MACHINE/NAME MACHINE

CBM.....(D).....19.95.....***
 YOU GET A MINI WORDPROCESSOR AND MENU-DRIVEN MAILING
 LIST PROGRAM SUITABLE FOR LIGHT-WEIGHT LETTER WRITING
 AND MAILINGS. ALSO INCLUDED ARE DOS 5.1 AND A NICE
 PROGRAM THAT WILL ADD A 'SMART' DIRECTORY MENU TO ANY OF
 YOUR DISKETTES.

HOMEWOR

SIE.....(D).....49.95.....***-
 MENU-DRIVEN WORDPROCESSOR FEATURES ICON FUNCTION--
 SELECTION AND PICTORIAL VIEW OF DOCUMENT LAYOUT.
 INCLUDES AUDIOTAPE-BASED TUTORIAL AND DETAILED 30-PAGE
 MANUAL. (IN SPITE OF THE OBVIOUS THOUGHT, LABOR, AND
 CONVINCING MARKETING BEHIND THIS PRODUCT, THIS SYSTEM IS
 VERY SLOW AND AWKWARD TO USE. IT LOOKS PRETTY IN THE
 STORE, AND IS FUN FOR ABOUT 5 MINUTES, BUT WRITING MORE
 THAN A MEMO WITH HOMEWORD WILL WIPE THE SMILE RIGHT OFF
 YOUR FACE.)



HESWRITER 64

HES.....(R).....44.95.....***-
 MIRAGE CONCEPTS WORD PROCESSOR-PROFESSIONAL VERSION
 MIR.....(D).....89.95.....NA
 FULL-FEATURED: LINKS WITH THEIR DATABASE MANAGER, & NOW
 INCLUDES 30,000 WORD SPELLING CHECKER. INTEGRAL 80
 COLUMN SOFTWARE.

MIRAGE CONCEPTS WORD PROCESSOR-PERSONAL VERSION

MIR.....(D).....39.95.....NA
 QUICK BROWN FOX

DBF.....(D/R).....55.00.....NA
 A POPULAR AND FULL-FEATURED WORDPROCESSOR WITH BUILT-IN
 TELECOMMUNICATIONS FEATURES!

WORDCRAFT

UMI.....(NA).....149.00.....NA
 WRITE NOW

CAR.....(R).....49.95.....NA
 FULL-FEATURED WITH GLOBAL SEARCH & REPLACE / ARABIC OR
 ROMAN PAGE NUMBERING / AUDIO CASSETTE INSTRUCTIONS WITH
 MANUAL / UP & DOWN SCROLLING / LINKS WITH 'MAIL NOW' /
 SAVES TO TAPE OR DISK.

COPY-WRITER

CBF.....(NA).....145.00.....NA
 FEATURES INCLUDE DOUBLE COLUMNS & SHORTHAND.

RAPIDWRITER

HDM.....(T+D).....59.95.....NA
 LISTABLE BASIC PROGRAM: LACKS GLOBALS AND NUMERICS. EACH
 COPY IS CUSTOMIZED FOR YOUR PARTICULAR PRINTER &
 INTERFACE.

WRITER'S ASSISTANT

RCC.....(NA).....125.00.....NA
 JANEWRITE

ARK.....(NA).....(NA).....NA
 WORDPROCESSING MODULE OF 'JANE'- A MOUSE-BASED
 INTEGRATED SOFTWARE BUNDLE.

SMITHWRITER

SSM.....(D/T).....(NA).....NA
 BLITZTEXT

EPI.....(D/T).....89.00.....NA
 4-DIRECTION SCROLLING/ 70 COMMANDS/ WORKS WITH MOST
 PRINTERS/ SENDS PRINTER CONTROL CODES/ LINK FILES ON UP
 TO 4 DISKETTES/ INTEGRAL TERMINAL SOFTWARE.

NEW ADDITIONS

WORDPRO 64

PRL.....(D).....49.95.....NA
 THIS IS A VERY EXCITING PRODUCT ANNOUNCEMENT! WE HOPED
 TO HAVE IT FOR REVIEW, BUT DUE TO MANUFACTURING DELAYS,
 THIS WILL HAVE TO WAIT 'TILL THE NEXT ISSUE. STEVE
 PUNTER, THE ORIGINATOR OF THE FAMOUS WORDPRO SERIES, HAS
 DEVELOPED THE SUCCESSOR TO WORDPRO 3 PLUS/64 AND FROM THE
 SPECIFICATIONS, IT LOOKS TO BE A HUNDINGER! ALL REGULAR
 WORDPRO FEATURES (CONSIDERABLE IN THEMSELVES) PLUS: 100%
 PROPORTIONAL SPACING, 40 TO 136 COLUMNS OF SCREEN
 DISPLAY (NO, YOU CAN'T READ THEM, BUT YOU CAN SEE WHAT
 YOUR PAGE WILL LOOK LIKE), COLUMNIZATION (MULTIPLE
 COLUMN, LIKE THIS MAGAZINE, PRINTED IN ONE PASS!), AND
 'OOPS' BUFFER FOR RECOVERY OF ACCIDENTAL DELETIONS.
 INTERFACES WITH PRO-LINE'S EQUALLY AMAZING 80,000-WORD
 SPELLING CHECKER (SEE BELOW). NOW, LOOK AGAIN AT THE
 PRICE!

WORD WRITER

TMW.....(NA).....59.95.....NA
 FULL-FEATURED WORDPROCESSOR WITH 80-COLUMN SOFTWARE
 PREVIEWING, KEYBOARD FUNCTION STRIPS, & ABILITY TO
 INTERFACE WITH TIMEWORKS' DATA MANAGER.2

OMNIWRITER (WITH OMNISPELL)

HES.....(D).....69.95.....NA
 ON-SCREEN FORMATTING, INTERFACING WITH MULTIPLAN, AND
 INTEGRAL 30,000 WORD SPELLING CHECKER HIGHLIGHT THE MANY
 FEATURES OF THIS NEW ENTRY.

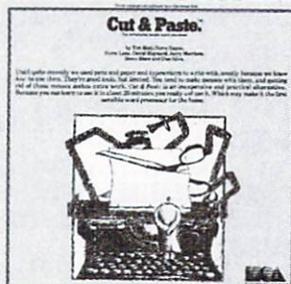
WORDPROCESSING (CONT'D)

LETTER WIZARD
 DAS.....(D).....49.95.....NA
 FULL-FEATURED WORDPROCESSOR FROM DATASOFT LINKS WITH
 'SPELL WIZARD' SPELLING CHECKER (BELOW)

SCRIPTIMUS
 TRI.....(D/T).....39.95.....NA
 FULL-FEATURED, MENU-DRIVEN, MATH MODE, SIX WORK PAGES IN
 MEMORY, RS-232 COMPATIBLE.

THE CRITIC
 TOL.....(D).....40.00.....NA
 SOFTWARE 80-COL./ SUPPORTS KEYBOARD GRAPHICS, GLOBALS,
 WORD-COUNT, QUICK REFERENCE CARD.

CUT & PASTE
 ELE.....(D).....40.00.....***
 ADVERTISED AS 'THE REMARKABLY SIMPLE WORD PROCESSOR',
 SIMPLE TO A FAULT. THIS NEW WAVE OF 'TV-DINNER'
 SOFTWARE IS DISCOURAGING. WHAT 'CUT & PASTE' GAINS IN
 SIMPLICITY, IT LOSES IN POWER AND UTILITY. NO ONE LIKES
 UNNECESSARY COMPLEXITY, BUT 64 USERS AREN'T BABIES
 EITHER- WE DON'T NEED TO BE PROTECTED FROM SEARCH &
 REPLACE, JUST SHOWN HOW TO USE IT BETTER.



SPELLING CHECKERS

SPELRIGHT PLUS (FORMERLY SPELLMASTER)
 PRC.....(D).....50.00.....***
 INCLUDED NOW WITH WORDPRO III PLUS/64, MAY ALSO BE
 PURCHASED SEPARATELY. (SEE WORDPRO III ABOVE FOR
 DESCRIPTION.)

TOTL.SPELLER 3.6
 TOT.....(D).....35.00.....NA
 CHECKS SPELLING OF DOCUMENTS CREATED WITH TOTL.TEXT 2.6/
 COMPILED BASIC/ OPERATES UNATTENDED/ 10,000-WORD STARTER
 DICTIONARY IS EXPANDABLE TO 24,000 WORDS BY USER/
 SUPPORTS MULTIPLE DRIVES & 80-COLUMN HARDWARE.

EASYSPELL 64
 CBM.....(D).....25.00.....NA
 20,000-WORD DICTIONARY & SPELLING CHECKER/ WORKS WITH
 EASYSCRIPT 64.

QUICKSPELL
 QBF.....(NA).....(NA).....NA

EASY SPELL
 PRE.....(NA).....(NA).....NA

NEW ADDITIONS

SPELLPRO 64
 PRL.....(D).....49.95.....NA
 80,000(!)-WORD CAPACITY DICTIONARY BY JIM BUTTERFIELD
 DESIGNED TO WORK WITH THE WORDPRO LINE OF WORDPROCESSORS
 OR PROGRAMS USING SIMILAR FILE FORMAT.



SPELLPACK
 BAT.....(D).....(NA).....NA
 USE WITH 'PAPERCLIP' TO CHECK DOCUMENTS AGAINST 20,000
 WORD DICTIONARY IN UNDER 4 MINUTES/ ADD 5000 ADDITIONAL
 WORDS OF YOUR OWN.

SPELL WIZARD
 DAS.....(D).....(NA).....NA
 33,000 WORD DICTIONARY/ WORKS WITH 'LETTER WIZARD'
 ABOVE.

DATABASE MANAGEMENT

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
SUPERBASE 64	PRE.....(D).....		99.00.....	*****
THIS TOPS OUR LIST OF THE BEST DATABASE MANAGERS. EXCELLENT PRODUCTS LIKE SUPERBASE 64 ARE ELEVATING THE C64 TO NEW HEIGHTS OF RESPECTABILITY. (SEE REVIEW THIS ISSUE)				
PRACTIFILE (FORMERLY FLEX-FILE 2.1)	CSA.....(D).....		55.00.....	***
WE LIKE THE FLOATING FIELD STRUCTURE/ EASY CONFIGURATION TO MOST EQUIPMENT/ FLEXIBLE SELECTION & REPORT OPTIONS/ RUN-TIME ADDED FIELDS/ CALCULATED FIELDS & COLUMNS/ OUTPUT TO MANY POPULAR WORDPROCESSORS, ETC. WE DON'T LIKE THE CONSTANT DISKETTE SWAPPING REQUIRED TO USE MOST FUNCTIONS.				
THE CONSULTANT (FORMERLY 'DELPHI'S ORACLE')	BAT.....(D).....		150.00.....	****
9 SCREENS PER RECORD / FLEXIBLE REPORTS / PASSWORD PROTECTION. THIS IS A QUALITY PRODUCT OVERALL, THO WE FOUND SOME PROBLEMS WITH INITIAL SCREEN DESIGN, SCREEN AESTHETICS, AND LACK OF FLEXIBILITY IN MAILING LABEL DESIGN.				
SOLIDIX	SOL.....(D).....		99.95.....	****
REVOLUTIONARY DISK-ACCESS TECHNIQUES INCREASE THE SPEED OF 1541 DISK OPERATIONS BY AS MUCH AS 20 TIMES!/ MANAGE UP TO 625 'CARDS' PER DISKETTE/ LIGHTNING-FAST SEARCHES WITH SOPHISTICATED CONDITIONALS. THO WELL DOCUMENTED, THIS PACKAGE TENDS TO BE OVERWHELMING (DUE PARTLY TO THE EXTENSIVE OPTIONS, BUT ALSO TO SOLIDIX' UNIQUE STYLE OF STRUCTURING AND WRITING)/ DOES NOT GENERATE OUTPUT FOR WORDPROCESSORS.				
MIRAGE CONCEPTS DATABASE MANAGER	MIR.....(D).....		89.95.....	****
ALL MACH. LANG. / FREE FORM RECORD DESIGN AND INPUT / CALCULATED FIELDS / RESTRUCTURING / CREATES SEQUENTIAL FILES FOR POPULAR WORDPROCESSORS / ENTIRE PROGRAM RESIDES IN RAM SO DISKS NEED NOT BE SWAPPED DURING OPERATION / THO SOME IMPROVEMENTS HAVE BEEN MADE TO THE ORIGINAL, WE STILL FIND THE MAILING LABEL ROUTINES TOO RESTRICTIVE. REQUIRES A SEPARATE REPORTING PACKAGE (SEE BELOW) TO ACCESS THE MORE POWERFUL REPORTING FUNCTIONS (WE THINK THESE SHOULD HAVE BEEN DESIGNED INTO THE ORIGINAL PACKAGE). GOOD DOCUMENTATION, WITH HANDS-- ON TUTORIALS.				



GENERAL LIST & FILE MNGMNT. ↓

PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

MAILPRO 64
PRL.....(D).....129.95.....NA
'TOTAL FORMAT AND RECORD SELECTION CONTROL...WORDPRO
COMPATIBLE...UP TO 4000 RECORDS ON 1541' CAN BE USED AS
A DATABASE MANAGER.



DIARY 64
HAN.....(R).....29.95.....NA
ELECTRONIC NOTEBOOK- KEEPS TRACK OF APPOINTMENTS, PHONE
NUMBERS, MEETINGS, BIRTHDAYS, ETC. / ACCESS BY VARIOUS
KEYS (DATE, NAME, ETC.)

DATA MANAGER
TMW.....(D/T).....24.95.....NA

SDB 64
SIP.....(D).....39.95.....NA
GENERAL PURPOSE FILING SYSTEM FOR ADDRESSES, HOBBIES,
ETC. SORT & RETRIEVE BY ANY FIELD. MENU- DRIVEN WITH
PRINTOUT CAPABILITY

TAPEWORM
ECP.....(NA).....12.95.....NA
TAILORED ESPECIALLY FOR KEEPING TRACK OF YOUR TAPES AND
RECORDS

LIST HELPER
MAG.....(NA).....(NA).....NA
EDIT, ENTER, AND SORT VARIOUS LISTS

LIST MITE 2
NEL.....(D/T).....16.95/14.95.....NA
GENERAL LIST MANAGEMENT FOR INVENTORIES, COLLECTIONS,
INVENTORY MANAGER

FILE/CARD
DIG.....(D).....29.95.....NA

DATA/SCAN
DIG.....(D).....29.95.....NA

LOG
MES.....(?).....9.95.....NA
EVENT LOGGING AID/ LIST BY DATE OR PERSON

THESIS MASTER
MCR.....(D).....29.95.....NA
ORGANIZES RESEARCH NOTES AND CREATES BIBLIOGRAPHY/
REPORTS/ SORT & SELECT.

STAMP COLLECTOR
MCR.....(D/T).....29.95.....NA
STORE UP TO 14 FIELDS FOR EACH ISSUE INCLUDING CAT.
NOS., CAT. VALUES, COND., PERF, WRMK., COLOR.

HOME LIBRARIAN
MCR.....(D).....29.95.....NA
PERSONAL ELECTRONIC CARD CATALOGUE FILE.

NEW ADDITIONS

THE HOME ORGANIZER SERIES
BAT.....(NA).....(NA).....NA
SERIES OF 8 DEDICATED LIST MANAGERS FOR: STAMPS/ PHOTOS/
MAIL LIST/ HOME INVENTORY/ RECIPES/ CHECKBOOK/ AUDIO--
VIDEO/ ADDRESS BOOK.

KEEPTACK
DIL.....(D).....(NA).....NA
THIS FILE MANAGER COMES WITH A BOOK DISCUSSING USES AND
EXAMPLES AS WELL AS OPERATING MANUAL.

CLASSROOM ADMINISTRATION ↓

GRADEPRO
GEM.....(T/D).....25.00.....NA
FULL-FEATURED GRADING UTILITY, ALLOWS WEIGHTED OF
STRAIGHT AVGS., GENERATES BAR GRAPHS OF GRADE
DISTRIBUTIONS, AUTOMATIC GENERATION OF PROGRESS REPORTS.
MASTER GRADES PROGRAM

MMS.....(D).....(NA).....NA
COMPREHENSIVE GRADES MANAGEMENT SYSTEM FOR TEACHERS.
INCLUDES ATTENDANCE / POINT- SYSTEM, PERCENTAGE, AND
LETTER GRADE TRACKING AND REPORTING / UP TO 200 STUDENTS
COMPUGRADE

MES.....(D).....24.95.....NA
MULTI-CLASS GRADEBOOK/ REPORTS TO SCREEN OR PRINTER.
THE ATTENDANCE MASTER

MES.....(D).....39.95.....NA
KEEPS ATTENDANCE RECORDS FOR UP TO 39 STUDENTS PER
CLASS/ UNLIMITED # OF CLASSES.

GRADECALC
TAM.....(D).....29.95.....NA
KEEPS FILES OF ALL RAW GRADES & ASSIGNMENT INFO/
AVERAGES GRADES IN VARIETY OF WAYS/ GENERATES REPORTS
INCLUDING MISSING ASSIGNMENTS, GRADE TOTALS & AVERAGES,
ASSIGNMENT SUMMARIES ETC./ ALSO MAINTAINS AND REPORTS ON
ATTENDANCE.

NEW ADDITIONS

TEACHERS' AID
TOL.....(D).....34.95.....NA
KEEP SCHEDULES, STORE SCORES, ALPHABETIZE, CROSS--
REFERENCE STUDENTS & TEACHERS.

TYPING & KEYBOARD MASTERY ↓

TYPING TUTOR + WORD INVADERS
ACA.....(T).....21.95.....****+

THIS IS THE BEST TYPING TUTOR WE HAVE SEEN YET; IT CAN
GET YOUR CHILDREN TOUCH- TYPING IN SHORT ORDER AND BRING
AN OLD HAND UP TO SPEED. INCLUDES EXCELLENT TRAINING
MODULES AND AN ARCADE-TYPE MODE TO LIVEN THINGS UP AND
PUT SOME PRESSURE ON.

TYPING STRATEGY / LETTER MAN
BEH.....(D).....34.95 EACH.....****+

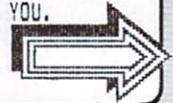
BOTH OF THESE TYPING 'TUTORS' USE BEHAVIORAL
ENGINEERING'S 'NEURO-LINGUISTIC PROGRAMMING' CONCEPTS TO
'...INDUCE THE STRATEGY OF EXCELLENCE' IN THE USER'.
WHILE THE TENETS OF NEURO-LINGUISTIC PROGRAMMING ARE
MILDLY CONTROVERSIAL, AND BY NO MEANS A CORNERSTONE OF
ESTABLISHMENT PSYCHOLOGY, WE LIKE THE THOUGHTFULNESS OF
THE APPROACH (THO WE COULD NOT VERIFY ANY UNUSUAL
BENEFITS TO OUR TYPING SKILLS). SEVERAL OTHER NLP-BASED
PROGRAMS ON OTHER SUBJECTS ARE AVAILABLE FROM BEH AT
SIMILAR PRICES.

TYPING DRILLER
PIO.....(D).....29.95.....****+

CHOSE SELECTIVE PRACTICE, RANDOM PRACTICE, OR MASSES
DRILL MODES. WE ESPECIALLY LIKE THE DETAILED ANALYSIS
OF USER'S PROGRESS AND PROBLEM AREAS. MINOR COMPLAINT;
IN PRACTICE MODES, THE PROGRAM OCCASIONALLY LAGS A SPLIT
SECOND BEHIND THE TYPIST IN DISPLAYING CHARACTERS TYPED,
THIS CAN BE DISTRACTING.

HAPPY TUTOR
PAC.....(T).....19.95.....***

THIS IS A PRETTY FAIR TYPING TUTOR WHICH USES A HAPPY
FACE AND ANNOYING SOUND EFFECTS TO PRESSURE YOU.



TYPING & KEYBOARDS (CONT'D)

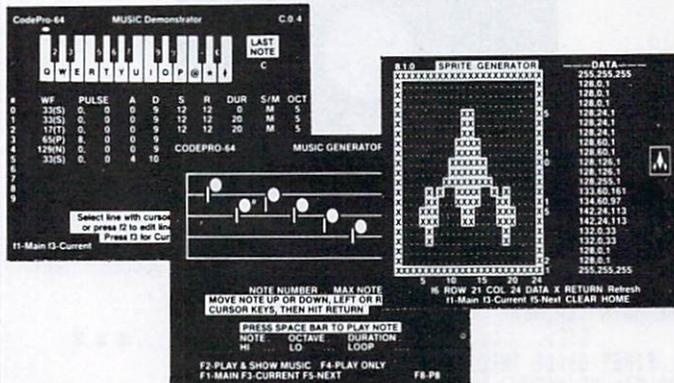
- MASTER TYPE
 LIG.....(D).....39.95.....NA
 EARNED INFOWORLD'S HIGHEST RATINGS. WE LIKED THE ORIGINAL AD PITCH: "LEARN TO TYPE OR GET BLOWN TO BITS". COMBINES INSTRUCTION WITH ARCADE PLAY.
- TOUCH TYPING TUTOR
 TAY.....(T/D).....19.95/24.95.....NA
 19 LESSONS AND 12-PG. MANUAL.
- QUICKFINGER
 QBF.....(D).....40.00.....NA
 QUICK BROWN FOX'S MULTI-LEVELED TYPING TUTOR.
- KIDS ON KEYS
 SPI.....(R).....(NA).....NA
 FROM SPINNAKER'S LEARNING GAMES SERIES.
- TYPO
 ROM.....(R).....(NA).....NA
 DEVELOP SPELLING AND TYPING SKILLS WHILE ESCAPING FROM AN EVIL SPACESHIP.

PROGRAMMING INSTRUCTION

- INTRODUCTION TO BASIC: PART 1
 CBM.....(T).....21.00.....***+
 TWO CASSETTES, THOROUGH MANUAL, & FLOW-CHART TEMPLATE (!). WELL DONE PACKAGE TAKES THE BEGINNER THRU THE FUNDAMENTALS WITHOUT TEDIOUS TYPING IN OF EXAMPLE PROGRAMS.
- COMMODORE 64 TUTORIAL VOL. 1
 CYB.....(D).....24.95.....***+
 SELF-CONTAINED LESSONS ON DISKETTE (NO MANUAL). INCLUDES INTRO TO KEYBOARD AND 7 INTRO TO BASIC LESSONS
- COCO
 HES.....(D/T).....49.95.....NA
 PROGRAMMING INSTRUCTION SYSTEM
- COCO II
 HES.....(D/T).....44.95.....NA
 UNIQUE APPROACH TO GAME PROGRAMMING INSTRUCTION: STEPS USER THRU THE STRUCTURE OF A SAMPLE GAME UNTIL THE USER IS ABLE TO ALTER OR TOTALLY RE-WRITE THE GAME.
- STEP BY STEP
 PDI.....(D).....59.95.....NA
 GRADUATED INSTRUCTION ON BASIC AND PROGRAMMING TECHNIQUE. ABOUT TWENTY HOURS OF INSTRUCTION WITH QUIZZES.
- PROGRAMMING IN BASIC
 LYN.....(VIDE TAPE).....49.95.....NA
 CLOSE TO 2 HRS. OF PROGRAMMING INSTRUCTION (BASIC) ON VHS OR BETA CASSETTE.
- 64 TUTORIAL VOL. 2
 CYB.....(D).....24.95.....***+
 WELL DONE TOUR OF THE 64'S SOUND AND GRAPHICS ABILITIES AND HOW THEY WORK. NO MANUAL IS NEEDED AS THE INTERACTIVE CONTENT OF THE PROGRAM IS TOTALLY SELF-CONTAINED. EXPLAINS RASTER INTERRUPTS, BIT-MAPPED AND MULTI-COLOR MODES, SPRITES, COLLISIONS, ALL SOUND PARAMETERS AND MORE. GOES AT USERS PACE AND HIGHLIGHTED BY VERY GOOD GRAPHIC & SOUND EXAMPLES / USER MAY TAKE OPTIONAL QUIZZES AT THE END OF EACH SECTION/ INCLUDES SPRITE AND SOUND EDITORS WHICH ARE, BY THEMSELVES EASILY WORTH THE PRICE OF THE PROGRAM.
- C64 TUTOR
 CSS.....(?).....29.95.....NA
 TUTORIAL LESSONS PLUS SCREEN DISPLAY EDITOR, SPRITE EDITOR, MUSIC SYNTHESIZER, AND PROGRAMMER'S CALCULATOR (HAS HEX, BINARY, AND DECIMAL FUNCTIONS).

CODEPRO-64

SYS.....(D/T).....59.95.....NA
 COVERS PROGRAMMING IN BASIC, GRAPHICS, & MUSIC. INCLUDES SPRITE AND MUSIC EDITORS AS WELL AS DEMONSTRATION PROGRAMS. ONE UNIQUE FEATURE IS THE ABILITY TO SEARCH THRU THE TUTORIAL USING KEYWORDS TO FIND RELATED MATERIAL.



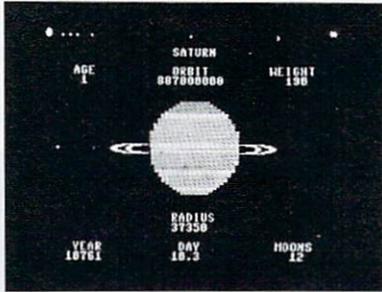
NEW ADDITIONS

- HOW TO OPERATE YOUR COMMODORE 64
 FLP.....(T).....(NA).....NA
 2 SPOKEN AUDIO CASSETTES PLUS ONE CASSETTE OF PROGRAMS & DATA ACCOMPANIED BY A 45 PG. PRINTED MANUAL. COVERS EQUIPMENT, KEYBOARD, PROGRAMMING, GRAPHICS, SOUND, AND SPRITES.

QUIZ-AUTHORING SOFTWARE

- | PRODUCT NAME | VENDOR CODE | MEDIA | PRICE | RTG. |
|-----------------|-------------|-------|-------|------|
| EASYQUIZ 64 | CBM | (D) | 19.00 | *** |
| QUIZMASTER | RAY | (T) | 9.95 | NA |
| QUIZ-KIT | LOG | (T) | 14.50 | NA |
| SPELL-IT! | LOG | (T) | 12.50 | NA |
| MULTIPLE CHOICE | MWS | (D+T) | 29.50 | NA |
| QUIZ ME | SIM | (NA) | 14.95 | NA |
| OMNITEST | STG | (D/T) | 29.95 | NA |
| DRILLMASTER | STG | (D/T) | 17.95 | NA |
| CLAS | TOU | (D) | 89.95 | NA |
- CREATE LESSONS AND ADMINISTER MULTIPLE CHOICE QUIZZES.
- CREATE YOUR OWN QUIZZES OF ANY LENGTH ON ANY SUBJECT.
- CREATE YOUR OWN QUIZZES OF ANY LENGTH ON ANY SUBJECT.
- CREATE YOUR OWN SPELLING QUIZZES
- CREATE UP TO 150 QUESTION AND ANSWER SETS PER DISK. ANY NUMBER MAY BE EXTRACTED FROM THESE AND SCRAMBLED. TESTS MAY BE CONDUCTED VIA THE SCREEN OR PRINTED OUT.
- QUIZ AND DRILL SYSTEM. COMES WITH STATE CAPITOLS AND VOCABULARY QUIZZES.
- COURSEWARE AUTHORIZING SYSTEM ALLOWS TEACHERS AND PARENTS WITH NO COMPUTER EXPERIENCE TO CREATE CUSTOM COURSEWARE WHICH USES THE ADVANTAGES OF THE COMPUTER WITHOUT SACRIFICING INDIVIDUAL STYLE AND METHODOLOGY.

GENERAL EDUCATIONAL SOFTWARE



THE VISIBLE SOLAR SYSTEM
 CBM.....(R).....15.00.....***+
 GRAPHIC TOUR THRU THE SOLAR SYSTEM INTRODUCES MANY PLANETARY CONCEPTS EFFECTIVELY AND COLORFULLY.

THE MATH TEACHER
 CTC.....(T).....39.95.....***
 FIRST GRADE THRU 9TH. (+ - x /)
 YOU CAN DO MATH!
 MTS.....(D).....49.95.....NA
 UNIQUE CONCEPT - DESIGNED TO OVERCOME "MATH ANXIETY" BY DETECTING YOUR PROBLEM AREAS AND GIVING THEM SPECIAL ATTENTION.

ADD/SUB
 BOS.....(NA).....16.95.....NA
 SINGLE OR MULTIPLE DIGITS. OPTIONAL PICTORIAL REPRESENTATION. SHOWS BORROWING AND CARRYING. AUDIO FEEDBACK.

NUMER-BEC1
 BOS.....(NA).....16.95.....NA
 NUMBER RECOGNITION / COUNTING / GROUPING / SHAPE, SIZE, & NUMBER DISCRIMINATION

MATH TUTOR
 GTR.....(T).....15.00.....NA
 K-6 ADDITION AND SUBTRACTION
 'ABC'
 THO.....(D/T).....21.95/18.95.....NA
 THE ALPHABET FOR PRESCHOOLERS. GRAPHICS AND SOUND

VOCABULARY MASTER
 GAT.....(T).....20.00.....NA
 500- WORD VOCABULARY BUILDER.

LANGUAGE TUTOR
 DIG.....(T).....14.95.....NA
 3 LEVELS EACH; GERMAN OR SPANISH - OR ALL 3 ON ONE DISK FOR 29.95.

EDUCATION PAK
 COM.....(D/T).....29.95/24.95.....NA
 4 PROGRAMS: GEOGRAPHY MATCH / MATH ADVENTURE / RULER / MICRO

ROMAN NUMERALS
 CRQ.....(R&D).....79.95.....NA
 CLASSROOM PACKAGE INCLUDES INSTRUCTOR NOTEBOOK AND STUDENT HANDOUTS.

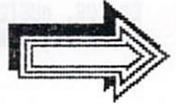
THE SPEED READER II (2 DISKS)
 DAV.....(D).....69.95.....NA
 HIGH SCHOOL, COLLEGE, & ADULTS.

ROCKET LAUNCH/ ADD SPEED/ MATH SQUARES/ NOUNS & VERBS/ ADJECTIVES AND ADVERBS.
 BAN.....(T).....9.95 EA. (SET; 34.95).....NA
 UNUSUAL ASSORTMENT OF THOUGHT-PROVOKING SOFTWARE COVERING NUMERICAL SEQUENCES, CATEGORIZATION, MATH, & PARTS OF SPEECH.

PLAYFUL PROFESSOR
 SCR.....(NA).....29.95.....NA
 ANIMATED LESSONS USE HI-RES AND SPRITES TO INVOLVE CHILDREN IN LEARNING MATH SKILLS. ANIMATED CHALK WRITES VARIOUS INFORMATION TO THE COLORFUL SCREENS.

ADVANCED EDUCATIONAL SOFTWARE

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
FAST FOURIER TRANSFORM				
RED.....(D).....			179.95	***
(* 59.95 FOR STUDENTS/PROFESSORS) FOR STUDYING OR USING THE FFT./ MULTI-MODE INPUT, TRANSFORM, SAVE, AND HI-RES DISPLAY PLUS UTILITIES AND SAMPLE DATA CASES. INCLUDES EXTENSIVE DOCUMENTATION.				
ALGEBRA ARCADE				
WEP.....(D).....			49.95	***
GRAPHING OF ALGEBRAIC EQUATIONS (UP TO 40 CHARACTERS) IN HI-RES ON COORDINATE SYSTEM. GAME-MODE HAS YOU ZAPPING 'ALGEBROIDS' WITH THE GRAPHS OF EQUATIONS YOU WRITE. MUCH MORE FUN AND USEFUL THAN IT MAY SOUND.				
NUMBER CRUNCHER				
HIN.....(D).....			59.95	***+
MENU-DRIVEN STATISTICAL PACKAGE; USER BUILDS DATABASE OF UP TO 3000 LABELED ITEMS/ FOURTEEN TRANSFORMATIONS AVAILABLE/ HANDLES MISSING VALUES/ SECTIONS INCLUDE: UNIVARIATE & BIVARIATE STATISTICS, SCATTER PLOTS, FREQUENCY TABLES & HISTOGRAMS, T TESTS, ONEWAY ANALYSIS OF VARIANCE, MULTIPLE REGRESSION, STEPWISE REGRESSION, & CHI-SQUARE CONTINGENCY TABLE ANALYSIS. CHARACTER GRAPHICS ONLY- WOULD BE MUCH NICER WITH HI-RES GRAPHING.				
STAT				
MES.....(D).....			24.95	NA
PACKAGE FOR TEACHING STATISTICS INCLUDES: BINOMIAL FREQUENCIES, CONFIDENCE INTERVALS, COMPARISON OF MEANS, CHI-SQUARE, CORRELATION COEFFICIENT, LINEAR REGRESSION, CENTRAL LIMIT THEOREM, ANALYSIS OF VARIANCE, AND BAR GRAPH GENERATOR.				
COMP				
MES.....(D/T).....			19.95/14.95	NA
DRILL PROGRAM COVERS DECIMALS AND NEGATIVE NUMBERS.				
COMPUTER CALCULATOR				
FIO.....(D).....			29.95	NA
DESIGN AND STORE COMPLEX FORMULAE/ USE 64 LIKE PROGRAMMABLE SCIENTIFIC CALCULATOR.				
'MASTER MATH' SERIES (#1-6)/(\$150.00 FOR SET)				
PMI.....(D).....			30.00 EACH	NA
1- LOGS & ANTILOGS				
2- ALGEBRA & SETS				
3- AREAS & VOLUMES				
4- TEST PROBLEMS: FACTORS, INTEREST, TRIG, CALCULUS, PERCENTS, BASES AND EXPONENTS				
5- TEST PROBLEMS: ALGEBRA, GEOMETRY, STATISTICS, RATIOS, EXPONENTS				
6- TEST PROBLEMS: GEOMETRY, LCM, MAPPINGS, FRACTIONS, ALGEBRA, CURRENCY.				
C-64 WORLD CLOCK				
RAK.....(D/T).....			10.95/7.95	NA
SHOWS HI-RES GRAPHIC WORLD MAP AND CALCULATES WORLD TIMES/ CORRECTS FOR DAYLIGHT SAVING TIME & PLOTS APPARENT POSITION OF SUN RELATIVE TO EARTH.				
COLLEGE PAK				
USE.....(D).....			29.95	NA
25+ PROGRAMS ASSIST IN STUDY OF COLLEGE-LEVEL MATH, PHYSICS, CHEMISTRY, ENGINEERING, LANGUAGE, HISTORY, & MEDICINE.				
64-S.A.T.				
CRQ.....(R&D).....			129.95	NA
AID PROSPECTIVE COLLEGE ENTRANTS IMPROVE S.A.T. SCORES/ CONTAINS A COMPLETE 18-HR. S.A.T. PREPARATION COURSE.				



ERG-CARD™ REFERENCE CARDS

WELL, BY NOW YOU ALL HAVE YOUR ERGBOARDS, RIGHT? (NO? SEE INSIDE BACK COVER FOR DETAILS ON THE AMAZING ERGBOARD... BE THE FIRST IN YOUR USER GROUP TO OWN ONE... ORDER YOURS TODAY!) ACTUALLY YOU CAN USE THESE REFERENCE CARDS WITHOUT THE ERGBOARD (IT'S JUST

NOT AS HANDY- TAPING THEM TO YOUR MONITOR). INSTRUCTIONS: CAREFULLY REMOVE CENTERFOLD FROM STAPLES, CUT ALONG COLORED BORDERS, POSITION IN ERGBOARD REFERENCE WINDOW, USING THE ORIGINAL CARDS FOR SUPPORT (OR TAPE 'EM TO YOUR MONITOR). USE THE BLANK BACKSIDES FOR MAKING YOUR OWN REFERENCE CARDS. KEEP SENDING YOUR SUGGESTIONS FOR ERG-CARDS YOU'D LIKE TO SEE. -THE EDITOR.



SUPERBASE 64™

ERG-CARD™ FOR THE INFO-64™ ERGBOARD™

SELECTION CRITERIA SUMMARY

EXACT MATCH....."=TEXT"....."=NUMBER"
 SLIDING MATCH WITHIN FIELD....."TEXT"
 EXCLUSIVE MATCH (NOT EQUAL TO)....."#TEXT"....."#NUMBER"
 SLIDING MATCH FROM FIELD ONWARDS....."TEXT-"
 TERMINATE SLIDING MATCH....."#\$"
 MATCH GREATER THAN FIELD CONTENTS.....">TEXT".....">NUMBER"
 MATCH LESS THAN FIELD CONTENTS....."<TEXT"....."<NUMBER"
 MATCH ALTERNATIVES (OR).....">T1<T2".....">N1/<N2"
 MATCH PARTIAL TEXT....."=TEXT\$"
 MATCH WITH WILD CARDS....."=TEXT??"
 REQUEST MATCH IN COMMAND AREA....."<-"

BASIC COMMANDS

ABS	FOR...NEXT	LOG	RUN
ASC	GET	MID\$	SAVE
ATN	GO SUB	NEW	SIN
CHR\$	GOTO	ON	SGR
CLR	IF...THEN	PI	STEP
COS	INT	READ	STOP
DATA	LEFT\$	REM	STR\$
DIM	LEN	RESTORE	TAN
END	LIST	RETURN	VAL
EXP	LOAD	RIGHT\$	

OUTPUT FORMATTING COMMANDS

@X.....DISPLAYS NEXT ITEM @ COLUMN X.
 @X,Y.....DISPLAYS NEXT ITEM @ COLUMN X, ROW Y.
 &.....CUTS OFF ALL TRAILING SPACES.
 &X.....TRUNCATES CONTENTS OF NEXT TEXT ITEM TO X CHARACTERS.
 &X,Y.....FORMATS NUMBERS TO X PLACES BEFORE, AND Y PLACES AFTER THE DECIMAL POINT.

SUPERBASE 64™ EXTENDED COMMANDS

ACROSS.... (OUTPUT ACROSS)	EOL..... (END OF LIST)	RLINK.... (RETURN FROM LINK)
ALL..... (RECORDS)	FROM..... (SELECTS KEY LIST)	RMARG.... (SET RIGHT MARGIN)
ASK..... (FOR KEYBOARD INPUT)	IS..... (CONVERSATIONAL)	SAVE..... (PROGRAM)
BRKOFF... (STOP KEY OFF)	LFEED.... (LINE FEED)	SCREEN... (SELECT FROM 4)
BRKON.... (STOP KEY ON)	LINK..... (ACROSS 2 FILES)	SET..... (SEE MANUAL)
CLEAR.... (CURRENT RECORD)	LMARG... (SET LEFT MARGIN)	SETLINK.. (SETS LINKING FILE)
CONT..... (CONTINUOUS PRINT)	LOAD.... (A PROGRAM)	SPACE... (LINE SPACING)
CONVERT.. (TO NAMED VARIABLE)	MENU.... (CALLS UP MENU)	STORE... (RECORD CHANGES)
DATABASE.. (SELECT DATABASE)	NMAT.... (NO MATCH COND'T'L)	SUBTOTAL.. (SETS BREAK-FIELDS)
DATE..... (U.S. / EUROPEAN)	PDEF.... (PRINTER DEFINITION)	TITLE.... (REPORT TITLE)
DETAIL... (OF REPORT)	PDEV.... (PRINTER DEVICE #)	TLEN.... (TEXT LENGTH)
DISPLAY.. (OUTPUT TO SCREEN)	PLEN.... (PAPER LENGTH)	TOTAL.... (SELECTED FIELDS)
DO..... (COMMAND LINE)	PLUS.... (APPENDS COMMANDS)	WAIT.... (FOR INPUT)
DOWN.... (OUTPUT DOWN)	PMAT.... (PARTIAL MATCH)	WHERE.... (CONVERSATIONAL)
DUMP..... (FILE OF VARIABLES)	PRINT... (OUTPUT TO PRINTER)	
ELINK.... (END / REVERSE LINK)	PROTECT.. (PROGRAM)	
ENDREPORT. (PRINTS TEXT & TOT)	QUIT.... (RETURN TO BASIC)	
EOF..... (END OF FILE)	RESTART.. (AFTER CRASHES ETC)	

SUPERBASE 64 IS A TRADEMARK OF PRECISION SOFTWARE LTD.

DOODLE

CREATED BY MARK R. RUBIN & OMNI UNLIMITED

ERG-CARD™ FOR THE INFO-64™ ERGBOARD™

SKETCH MODE

KEYS [F9]... BRUSH SIZES
 [F10]... BRUSH SPEED
 [F11]... CURSOR/BRUSH (TOGGLE)
 [F12]... GRID (TOGGLE)
 [F13]... MIRROR MODE (TOGGLE)
 [F14]... CLEAR SKETCH PAD
 [F15]... MEMORIZE SCETCH PAD
 [F16]... RECALL MEMORIZED IMAGE
 [F17]... REVERSE IMAGE (TOGGLE)
 [F18]... FILL CLOSED SHAPE

BOX MODE

[F19]... MOVE EDGES OR BOX (TOGGLE)
 [F20]... 'CHANGE' BOX ('XOR')
 [F21]... DRAW BOX
 [F22]... ERASE BOX
 [F23]... ERASE BOX CONTENTS
 [F24]... MIRROR BOX CONTENTS
 [F25]... REVERSE BOX CONTENTS
 [F26]... MEMORIZE BOX CONTENTS
 [F27]... 'OP-ART' BOX CONTENTS

COPY MODE

[F28]... 'CHANGE' COPY ('XOR')
 [F29]... DRAW COPY
 [F30]... ERASE COPY
 [F31]... ROTATE COPY 90 DEG.
 [F32]... VERT. EXPAND/CONTRACT
 [F33]... HORIZ. EXPAND/CONTRACT

CIRCLE MODE

[F34]... MOVE RADII OR CIRCLE (TOGGLE)
 [F35]... 'CHANGE' CIRCLE ('XOR')
 [F36]... DRAW CIRCLE
 [F37]... ERASE CIRCLE
 [F38]... ERASE CIRCLE CONTENTS

STAMP MODE

KEYS [F39]... SELECT STAMP
 [F40]... MAKE STAMP
 [F41]... 'CHANGE' STAMP ('XOR')
 [F42]... DRAW STAMP
 [F43]... ERASE STAMP
 [F44]... MIRROR STAMP CONTENTS
 [F45]... REVERSE STAMP CONTENTS
 [F46]... ROTATE STAMP 90 DEG.
 [F47]... ROTATE STAMP 180 DEG.
 [F48]... VERT. EXPAND/CONTRACT
 [F49]... HORIZ. EXPAND/CONTRACT

LETTER MODE

[F50]... TURNS ON LETTER MODE
 [F51]... 'CHANGE' TEXT ('XOR')
 [F52]... DRAW TEXT
 [F53]... ERASE TEXT
 [F54]... ROTATE CURSOR 90 DEG.

LINE MODE

[F55]... ALTERNATE CURSORS
 [F56]... 'CHANGE' LINE ('XOR')
 [F57]... DRAW LINE
 [F58]... ERASE LINE

COLOR MODE

[F59]... PAINT ON/OFF (TOGGLE)
 [F60]... CHANGE PAINT COLOR
 [F61]... CHANGE PAPER COLOR

DISK & PRINTER

[F62]... DISK & PRINT FUNCTIONS
 [F63]... SAVE PAGE
 [F64]... LOAD PAGE
 [F65]... PRINT NORMAL SIZE
 [F66]... PRINT DOUBLE SIZE

f1	SKETCH
f2	COLOR
f3	LINES
f4	ZOOM
f5	BOXES
f6	COPY
f7	CIRCLES
f8	STAMP

COMMODORE™ LOGO

ERG-CARD™ FOR THE INFO-64™ ERGBOARD™

GRAPHICS

BK (BACK)
 BG (BACKGROUND)
 CS (CLEARSCREEN)
 DOUBLECOLOR
 DRAW
 DRAWSTATE
 FD (FORWARD)
 FULLSCREEN <F5>
 HEADING
 HT (HIDETURTLE)
 HOME
 LT (LEFT)
 ND (NODRAW)
 NOWRAP
 PC (PENCOLOR)
 PD (PENDOWN)
 PU (PENUP)
 RT (RIGHT)
 SETH (SETHEADING)
 SETSHAPE
 DRAW
 SETX
 SETXY
 SETY
 SHAPE
 ST (SHOWTURTLE)
 SINGLECOLOR
 SPLITSCREEN <F3>
 STAMPCHAR
 TELL
 TEXTBG

TEXTCOLOR
 TEXTSCREEN <F1>
 TOWARDS
 WHO
 WRAP
 XCOR
 YCOR

NUMERIC

+,-,*,/,,<,>
 ATAN
 BITAND
 BITOR
 BITXOR
 COS
 INTEGER

NUMBER?
 QUOTIENT
 RANDOM
 RANDOMIZE
 REMAINDER
 ROUND
 SIN
 SQR

WORDS/LISTS

=
 BF (BUTFIRST)
 BL (BUTLAST)
 COUNT
 EMPTY?
 FIRST

FPUT
 ITEM
 LAST
 LIST
 LIST?
 LPUT
 MEMBER?
 SE (SENTENCE)
 WORD
 WORD?

EDIT/DEFIN

DEFINE
 ED (EDIT)
 END
 ER (ERASE)

TEXT TO

NAMING

LOCAL
 MAKE
 THING
 THING?
 ALLOF
 ANYOF
 ELSE
 IF
 IFF (IFFALSE)
 IFT (IFTRUE)
 NOT
 TEST
 THEN
 CO (CONTINUE)
 PAUSE

NOTRACE
 TRACE

I/O

.CTYD
 ASCII
 CHAR
 CLEARTEXT
 CLEARINPUT
 CURSOR
 CURSORPOS
 FPRINT
 JOYSTICK
 JOYBUTTON
 NOPRINTER
 PADDLE
 PADDLEBUTTON
 PR (PRINT)
 PRINT1
 PRINTER

RC?

RC (READCHARACTER)
 RQ (REQUEST)
 SETDISK

FILE MGMT

BLOAD
 BSAVE
 CATALOG
 DOS
 ERASEFILE
 ERASEPICT
 ERNAME
 PO (PRINTOUT)
 POTS
 READ
 READPICT
 SAVE
 SAVEPICT

CONTROL

GO
 GOODBYE
 OP (OUTPUT)
 REPEAT
 RUN
 STOP
 TOPLEVEL

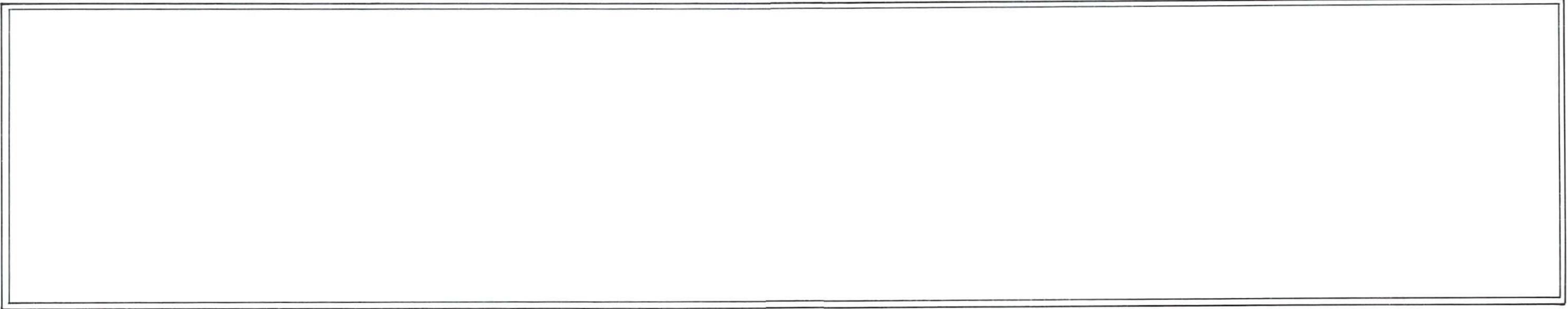
MESSAGE

.ASPECT
 .CALL
 .CONTENTS
 .DEPOSIT
 .EXAMINE
 .GCOLL
 .NODES
 .OPTION
 .SPRINT
 ;

COMMODORE,
 IS A
 TRADEMARK
 OF
 COMMODORE
 ELECTRONICS
 LTD.

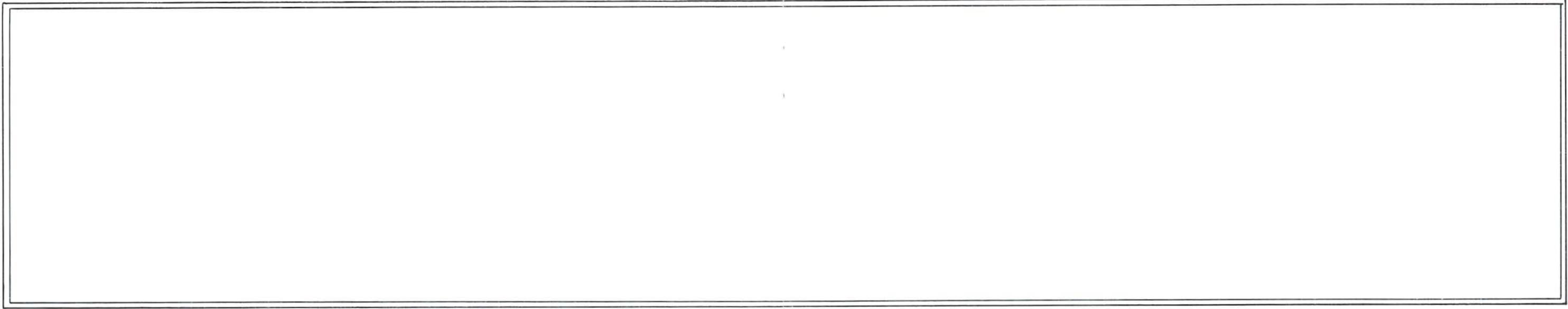
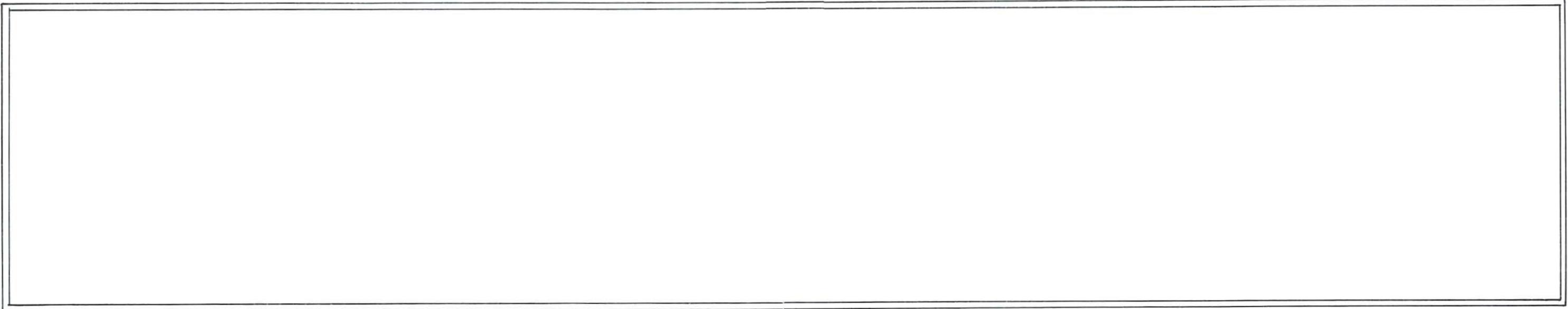
ERG-CARDSM REFERENCE CARDS

(DO-IT-YOURSELF SIDE)



ERG-CARDSM REFERENCE CARDS

(DO-IT-YOURSELF SIDE)



ADVANCED EDUCATIONAL (CONT'D)

COMPUTER SAT
 HBJ.....(D).....79.95.....NA
 1000 VOCAB-BUILDING FLASH CARDS/ 540 DRILL ITEMS/
 COMPLETE 470 PG. TEXT BOOK/ 4 FULL-LENGTH EXAMS/ SCORES
 & TIMES/ DIAGNOSES STRENGTHS & WEAKNESSES/ PRESCRIBES
 DRILLS AND REVIEWS.
 CONSTELLATION QUIZ
 SAT.....(T).....15.00.....NA
 ASTRONOMY LESSONS AND QUIZZES
 MATHPAK
 LOG.....(T).....49.50.....NA
 6 PROGRAMS (AVAILABLE INDIVIDUALLY FOR 12.50 EA.);
 STATISTICS, LINEAR EQUATIONS, DATA AND FUNCTION
 PLOTTING, FUNCTION ANALYSIS, COMPLEX FUNCTIONS, AND
 MATRIX OPERATIONS. SOME INCLUDE PLOT AND GRAPHING
 ROUTINES FOR PRINTER.

NEW ADDITIONS

THE ACCOUNTING TUTOR
 TWZ.....(D).....64.95.....NA
 TEACHES ACCOUNTING CONCEPTS USING CONCEPTS BORROWED FROM
 ARTIFICIAL INTELLIGENCE SYSTEMS.
 ACT/SAT REVIEW
 QIN.....(D).....179.95.....NA
 98+ PROGRAMS WITH 50,000 QUESTIONS.
 MATH SAT / ENGLISH SAT
 MLI.....(D).....30.00 EA.....NA
 ASTRO POSITIONS
 MTS.....(D).....49.95.....NA
 FOR BOTH ASTRONOMERS & ASTROLOGISTS. PROVIDES POSITIONAL
 DATA FOR 92 STARS, THE PLANETS, SUN AND MOON FOR ANY
 LOCATION ON ANY DATE AND TIME. PRINTS OR DISPLAYS
 ASTROLOGICAL CHART DATA.
 PHYSICS LAB
 QBF.....(D).....(NA).....NA
 SORT OF A PHYSICS 'ERECTOR SET' PROVIDES GRAPHIC
 SIMULATIONS OF MASSES, GRAVITY, INCLINED PLANES,
 SPRINGS, PENDULUMS, FRICTION, ROLLING, & INVERSE-SQUARE
 GRAVITY. USE JOYSTICK TO COMBINE AND CAUSE
 INTERACTIONS WITH THE ABOVE. FORCES MAY BE APPLIED AND
 GRAPHS SUPERIMPOSED. PLAY 'RUBE-GOLDBERG', CONDUCT
 EXPERIMENTS OR SIMPLY OBSERVE INTERACTIONS.
 Q-STAT
 QUI.....(D).....269.95.....NA
 IF YOU CAN SCRAPE UP THE \$270, YOU CAN OWN THIS MENU--
 DRIVEN STATISTICS PACKAGE WHICH PERFORMS COMPLEX
 PROCEDURES 'BY SIMPLY PRESSING A KEY'. SEND RESULTS TO
 SCREEN OR PRINTER. COVERS: DATA TRANSFORMATION,
 DESCRIPTIVE STATS, CROSS-TABULATION, T-TESTS, NON--
 PARAMETRIC STATS, & CORRELATION ANALYSIS INCLUDING
 SCATTERGRAMS, RESIDUAL ANALYSIS, ANOVA AND TIME-SERIES
 ANALYSIS.

EDUCATIONAL COLLECTIONS

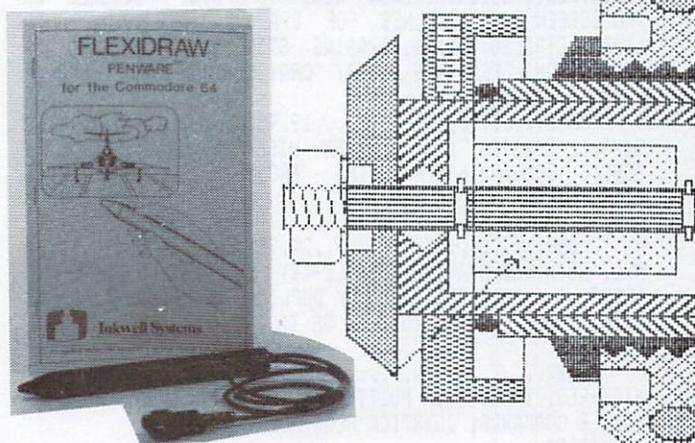
PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
64 PUBLIC DOMAIN	CBM.....(D).....		250.00.....	***
646 PROGRAMS ON 52 DISKS WITH INDEX. COVERS BROAD RANGE OF SUBJECTS AND AGE-GROUPS. MOSTLY EDUCATIONAL WITH SOME ENTERTAINMENT, ADMINISTRATIVE, AND DEMONSTRATION SELECTIONS. NOT ORIGINALLY AVAILABLE TO INDIVIDUAL CONSUMERS, EXCEPT THRU SCHOOLS AND CLUBS, THE SET IS BEGINNING TO SHOW UP FOR SALE AT SOME DEALERS NOW.				

EDUCATIONAL ASSORTMENT
 MED.....(T).....from 7.95.....***
 150+ SELECTIONS: GRADES K THRU COLLEGE. LIMITED USE OF
 GRAPHICS: THESE ARE MOSTLY RE-WRITES OF OLDER PET
 PROGRAMS
 EDUCATIONAL ASSORTMENT
 MGR.....(T).....12.95-EA.....NA
 OVER 100 PROGRAMS ON WIDE RANGE OF ACADEMIC SUBJECTS
 GRADES 1 - ADULT. PRICES COME DOWN FOR SIX OR MORE
 SELECTIONS. DISKS AVAILABLE FOR EXTRA CHARGE.
 EDUCATIONAL ASSORTMENT
 PGI.....(T).....8.95.....NA
 FOR AGES 3-9, SOUND AND GRAPHICS. MOST INTERFACE WITH
 PGI'S EDUMATE LIGHT PEN. ENTIRE SET AVAILABLE ON
 DISKETTE FOR \$79.95
 EDUCATIONAL ASSORTMENT
 MPH.....(D/T).....(NA).....NA
 GRADES 4 THRU COLLEGE. ALL SUBJECTS INCLUDING SAT
 ANALOGIES, ANAGRAMS, CALCULUS, PHYSICS, AND CHEMISTRY.
 EDUCATIONAL ASSORTMENT
 RSL.....(D/T).....19.95 TO 49.95.....NA
 GRAMMAR, PHONICS, ELEMENTARY MATH, FUN PACKS
 (EDUCATIONAL GAMES).
 ASSORTED EDUCATIONAL
 DAB.....(D/T).....29.95 TO 39.95.....NA
 AGES 3 TO COLLEGE/ WELL-ROUNDED SELECTION/
 SELF-DIRECTING PROGRAMS NEED NO ADULT SUPERVISION/
 SELF-CORRECTING & SELF-MOTIVATING. (WE ESPECIALLY LIKE
 THE SOUND OF 'DISCOVER' FOR 3-5 YRS. AND
 'PERPLEXITY'-PROBLEM SOLVING, LOGIC, & ORGANIZATIONAL
 SKILLS FOR 7 YRS.+))

NEW ADDITIONS

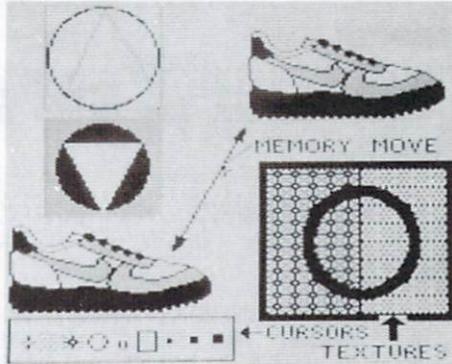
EDUCATIONAL ASSORTMENT
 EAL.....(D).....(NA).....NA
 WIDE RANGE OF SUBJECTS. BACK-UP DISKS WITH ALL

GRAPHICS SOFTWARE



PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
FLEXIDRAW 3 (includes Inkwell's excellent light pen)	INK.....(D).....		150.00.....	*****
COMPREHENSIVE LIGHT-PEN-BASED DRAWING PACKAGE (FOR USE WITH INKWELL SYSTEMS' PROFESSIONAL GRADE LIGHT-PEN) SUPPORTS TRUE HI-RES. WITH ELABORATE AREA PATTERN FILLS, UNLIMITED TEMPLATE CREATION, TWO SIZES OF PRINTOUT, SPRITE EDITOR, ANIMATION ROUTINES, COLORING MODE, TELECOMMUNICATIONS MODE FOR TRANSMITTING GRAPHICS VIA MODEM, PROGRAMMING GRAPHICS LANGUAGE/ MORE! NOT A TOY (BUT LOTS OF FUN!) - (SEE REVIEW WINTER '83 ISSUE.)				

GRAPHICS SOFTWARE (CONT'D)



SORCERER'S APPRENTICE
EHS.....(D).....49.95.....****
JOYSTICK OR TRACKBALL CONTROLLED FULL-FEATURED COLOR GRAPHICS PACKAGE (SEE REVIEW FALL '83 ISSUE)

DOODLE 2
OMN.....(D).....29.95.....****
ROUTINES INCLUDE PAINT & ERASE WITH 8 BRUSH SIZES, DUPLICATE, ENLARGE, REDUCE, REVERSE, MIRROR. MENU-DRIVEN / COLOR/ TEXT MAY BE VARIOUS SIZES, ORIENTATIONS, MIXED WITH GRAPHICS, ZOOM, MARVELOUS 'OF ART' FEATURE, BUILT-IN GRAPHICS DUMPS TO PRINTER AT SINGLE OR DOUBLE SIZE.

GRAFIX-ARTIST
SPH.....(D).....39.95.....****+
INCLUDES JOYSTICK DRAWING ROUTINES AS WELL AS A PROGRAMMING MODE AND SELF-RUNNING DEMO MODE WITH WHICH THE USER MAY MAKE A CUSTOM "SLIDE-SHOW" PRESENTATION/ 16 COLORS/ HELP SCREENS/ SAVE DRAWINGS TO DISK. LACKS AUTOMATIC SHAPES (CIRCLE, BOX, ETC) AND HAS NO ZOOM OR MAGNIFICATION FACILITIES.

COMPUTER CRAYONS
PLA.....(D/T).....29.95.....***
'ELECTRONIC COLORING BOOK' READY TO PAINT PICTURES ON THE SCREEN PLUS ROUTINES FOR DRAWING YOUR OWN: AUTO LINES, CIRCLES, BOXES, ERASING/ STORE & SAVE. AIMED AT YOUNGER CHILDREN: HAS A VERY 'CRAYON-LIKE' FEEL & LOOK.

'64 GRAFIX SAMPLER
MID.....(T).....19.95.....**
SIMPLE SPRITES AND SIMPLER HIGH-RES. ROUTINES. THE PUBLIC DOMAIN STUFF GOING AROUND IS MUCH MORE IMPRESSIVE.

'64 PENCIL
DUN.....(D/T).....24.95.....NA
M.L. HIGH-RES DRAWING. SINGLE-KEY COMMANDS / JOYSTICK 'PENCIL' / 10 SPEEDS / BLOCK DUPLICATION / ERASE / 1525 PRINTER DUMP / SAVE TO DISK OR TAPE

SCRIBBLER
SNX.....(T).....35.95.....NA
HIGH-RES. DRAWING IN MULTI-COLOR MODE, MAGNIFY, PAINT, & CIRCLE COMMANDS; JOYSTICK REQUIRED.

PAINT WIZARD
DMO.....(R/D).....< 40.00.....NA
DRAW ON THE SCREEN. AUTOMATIC CIRCLES, LINES, PATTERNS.

DELTA DRAWING
SPI.....(R).....(NA).....NA

SCREEN-GRAPHICS-64
ABA.....(D/T).....27.95/24.95.....NA
ADDS 20+ COMMANDS TO BASIC ALLOWING SIMPLE MEANS FOR DRAWING POINTS, LINES, BOXES, AND SPRITES. DISPLAYS CAN BE SAVED TO TAPE OR DISK.

'64 PANORAMA
MID.....(T).....19.95.....NA
19 PRE-DIGITIZED DRAWINGS AS WELL AS A HIGH-RES. DRAW ROUTINE FOR JOYSTICK AND DUMP TO CBM PRINTER.

3-D GRAPHICS DEVELOPMENT PACKAGE.
FIG.....(D).....<100.00.....NA
2-D OR 3-D DRAWINGS EASILY CONSTRUCTED/ FINISHED DRAWING CAN BE VIEWED FROM ANY PERSPECTIVE, EVEN FROM 'INSIDE' 3-D OBJECT LOOKING OUT! FINISHED 'FRAMES' MAY BE SHOWN IN SUCCESSION FOR 3-D ANIMATION (UP TO 1/2 HOUR-LONG SEQUENCES). ROUTINES MAY BE LINKED TO OTHER PROGRAMS, & FRAMES MAY BE EDITED WITH THE KOALA PAD OR A LIGHT-PEN FOR EXCEPTIONAL FLEXIBILITY.

PICTURE PERFECT
MWE.....(D).....24.95.....NA
JOYSTICK DRAWING/ 15 COLORS/ AUTO CIRCLES, LINES, BOXES/ MIX WITH TEXT/ SAVE PICTURES TO DISK

COLORING BOOKS 1 & 2
KOA.....(D).....24.95 EA.....NA
PRE-DRAWN DESIGNS WHICH MAY BE COLORED IN USING THE KOALA-PAD.

LOGO DESIGN MASTER
KOA.....(D).....(NA).....NA
GRAPHICS & PROGRAMMING LANGUAGE

MEGA DRAW
MEG.....(D/T).....15.95/12.95.....NA
16 COLOR 'HI-RES' DRAWING - JOYSTICK OR KEYBOARD, HARDCOPY.

SLIDE SERVICE FOR KOALA PICTURES
VIS.....(NA).....(NA).....NA
THIS OUTFIT WILL MAKE COLOR SLIDES OF YOUR KOALA-PAD SCREENS. SIMPLY MAIL IN THE DISKETTES CONTAINING THE PICTURES YOU WANT...GET BACK SLIDES!

TRI GRAPH
TRI.....(NA).....34.95.....NA
SKETCH IN COLOR/ CREATE CHARTS/ ANIMATE CHARACTERS/ BUILD SHAPE-SCREEN LIBRARIES

NEW ADDITIONS

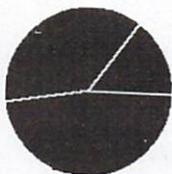
PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
MICRO-ILLUSTRATOR	ISL.....(D).....		VARIABLES.....	*****
DIFFERENT VERSIONS OF THIS SOFTWARE ARE FOUND THROUGHOUT A GROWING VARIETY OF SYSTEMS INCLUDING: KOALA PAD, POWERPAD, AND SOON TO BE MARKETED BY COMMODORE FOR THE 64 IN A JOYSTICK VERSION.				
PAINT MAGIC	DMO.....(D).....		35.00.....	*****
THIS IS A SOLID COLOR GRAPHICS PACKAGE WITH ALL THE USUAL BELLS AND WHISTLES, PLUS SOME UNUSUAL AND DELIGHTFUL EXTRAS LIKE: CREATE HUNDREDS OF YOUR OWN FILL-TEXTURES, CREATE COMPLEX MULTI-COLORED BRUSHES WITH 'GRAB' FUNCTION, MERGE 2 PAGES OF GRAPHICS TOGETHER, SCREEN-DUMPS NOT DIRECTLY SUPPORTED.				
MOVIEMAKER	RES.....(D).....		(NA).....	NA
THIS ANIMATION CREATION SYSTEM CAUSED QUITE A STIR AT CES WINTER: IT WILL BE AVAILABLE SOMETIME LATER THIS YEAR FOR THE 64-SHOULD BE GOOD.				
GRAPHICS DESIGNER 64	ABA.....(D).....		32.95.....	***+
THIS GRAPHICS PACKAGE IS A LET-DOWN & DOESN'T LIVE UP TO THE QUALITY OF ABACUS' OTHER 3-4 STAR SOFTWARE. COMPLEX, AWKWARD TO USE, AND SLOW. TAKE THIS ONE BACK TO THE DRAWING BOARD.				
HESFONT	HES.....(R).....		19.95.....	NA
FONT EDITOR FACILITATES CREATION AND EDITING OF TEXT AND GRAPHICS CHARACTERS. HELPS TESTING OF ANIMATION SEQUENCES. INCLUDES SEVERAL READY TO USE FONTS.				



PLOTTING & PRINTER GRAPHICS

PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

DOODLE 2
CIS.....(D).....29.95.....****
I REPEAT THE LISTING OF DOODLE HERE BECAUSE I USE IT
PRIMARYLY FOR PRINTER GRAPHICS (MANY OF THE TITLES &
LABELS IN THIS ISSUE) AND IT IS VERY POWERFUL IN THAT
APPLICATION-THE OTHER FEATURES (COLOR, FREE-FORM
SKETCHING ETC.) ARE LESS IMPRESSIVE BONUSSES.



CHARTPAK-64
ABA.....(D).....42.95.....****
TAKES DATA INPUT (MANUALLY OR FROM BUSICALC) TO PRODUCE
A WIDE VARIETY OF BUSINESS CHARTS & GRAPHS TO SCREEN OR
PRINTER. AUTO-SCALING/ PIE, LINE, BAR, & COMPARATIVE
CHARTS/ DISPLAYS UP TO 4 DATA SETS SIMULTANEOUSLY/
COLOR & SHADING SELECTION/ 2 PRINT SIZES/ SAVE TO DISK.
PRINTER UTILITY PROGRAMS

CAR.....(D/T).....24.95/19.95.....***+
ALLOWS SCREEN DUMPS (NORMAL OR REVERSED) TO ALMOST ALL
DOT MATRIX PRINTERS. ALSO ALLOWS PRINTING OF ENTIRE CBM
CHARACTER SET (GRAPHICS SYMBOLS TOO). ALSO INCLUDES TWO
LARGE PRINTER FONTS FOR BANNERS OF VARIOUS SIZES.
MATH GRAPH
SIM.....(NA).....19.95.....NA
'64 BANNER/HEADLINER

MID.....(T).....19.95.....(NA).....NA
USE TO CREATE LARGE BANNERS ON A VARIETY OF PRINTERS.
BOLDFACE
LOG.....(T).....18.00.....NA
ALLOWS USE OF 3 CUSTOM FONTS FOR SPECIAL EFFECTS
PRINTING.

THE GRAPHICS ASSISTANT
RAI.....(D).....79.95.....NA
BUSINESS GRAPHICS PACKAGE INTERFACES WITH RAINBOW'S
BUSINESS SOFTWARE FOR CHARTS, GRAPHS, ETC. BAR, LINE, &
PIE CHARTS GENERATED FROM BUSINESS DATA/ MIXED TEXT &
GRAPHICS SUPPORTED.

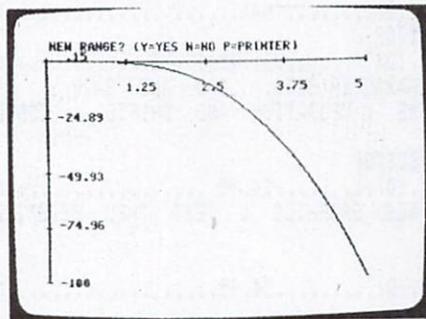
THE BANNER MACHINE
VIR.....(D/T).....49.95.....NA
PRODUCES 8 SIZES OF TEXT PRINT-OUT TO YOU EPSON,
COMMODORE, OKIDATA, OR PRO-WRITER PRINTER. TEXT FROM
3/4" TO 8" HIGH. ALSO PRINTS BORDERS.

INSTA-GRAPH
CIM.....(NA).....(NA).....NA



NEW ADDITIONS

CHARTPLOT-64
ABA.....(D).....84.95.....NA
SAME FEATURES AS 'CHARTPAK', ABOVE, BUT DRIVES VARIOUS
PLOTTERS (INCLUDING; AMDEK, HP, HOUSTON INST., STROBE,
SWEET-P, & ROLAND)
GRAF 64
HAN.....(NA).....29.95.....NA
CONVERTS MATH FUNCTIONS INTO GRAPHICAL ANALYSIS. DEFINE
A FUNCTION, SET LIMITS, PLOT GRAPH WITH EXTREMES,
INTERSECTIONS, ETC.



SPRITES & CHARACTER EDITORS

PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

SPRITEMASTER 64
ACC.....(D).....35.95.....****
JOYSTICK OR KEYBOARD SPRITE CREATION/ MULTI-COLOR/
SAMPLES INCLUDED/ ANIMATION ROUTINES INCLUDED/ SPRITES
MAY EASILY BE APPENDED TO USER PROGRAMS.

DELUXE SPRITE SHAPER
QUA.....(T/D).....29.95/31.95.....***
MULTI-COLOR SPRITE EDITOR.

SPRITE DESIGNER
ACA.....(NA).....16.95.....NA
BOASTS ELABORATE MANIPULATIONS FOR SPRITES INCLUDING:
MERGE, ROTATE, SHEAR, TRANSLATE, REVERSE, REFLECT,
INTERSECT, ETC.

SPRITE-64
CRD.....(NA).....49.95.....NA
ASSEMBLY LANG. / SUPPORTS 64 SPRITES ON SCREEN AT ONE
TIME / USE JOYSTICK OR PADDLES / ADDS VARIABLES TO BASIC
(SPRITE %, SX%, SY% ETC.) NO POKES NEEDED.

SPRITE-AID
ABA.....(T/D).....14.95/17.95.....NA
FULL-FEATURED SPRITE EDITOR; SAVES SPRITES AS
READY-TO-USE DATA STATEMENTS. SUPPORTS JOYSTIKS,
KEYBOARD, AND MULTI-COLOR.

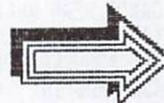
SPRITE EDITOR
LUN.....(T).....32.95.....NA
CREATE MULTI-COLORED SPRITES.

SPRITE WRITER
ACS.....(NA).....19.95/24.95.....NA

SPRITEWRITER
PIX.....(T).....18.95.....NA

SPRITE FUN 64
ENT.....(NA).....30.00.....NA

SPRITE GEN
FAN.....(D/T).....17.95/15.95.....NA



000

SPRITE EDITORS (CONT'D)



SPRYTEBYTER
 MTX.....(D).....34.95.....NA
 MENU-DRIVEN / SUPPORTS MULTI-COLOR / JOYSTICK OR
 KEYBOARD / M.L. ROUTINES / OVER 60 COMMANDS / ROTATE,
 INVERT, OVERT, SYMMETRY, AND/OR, REVERSE, ETC. / MOVIE
 MODE / CREATE UP TO 128 SPRITES PER FILE.

SPRITE MAKER
 GTR.....(T).....10.00.....NA
SUPER SPRITE
 LIT.....(D).....(NA).....NA
MULTI-COLOR CHAR. EDITOR
 JUS.....(D/T).....21.95/19.95.....NA
 CREATE YOUR OWN CHARACTER SETS. LOAD AND SAVE / 192
 CHARS. AT A TIME / ROTATION AND SHIFTS / CURSOR
 CONTROLLED

CHARACTER GENERATOR/EDITOR
 WED.....(D).....24.95.....NA
 "...POWERFUL HI-RES GRAPHICS & TEXT THRU REDEFINED
 CHARACTERS."

SPRITE GENERATOR
 WED.....(D).....24.95.....NA

GAME DESIGNER 64
 ENT.....(D/T).....35.95.....NA
 DESIGN GAME CHARACTERS, BACKGROUNDS, SCREENS/ ANIMATE UP
 TO 16 SPRITES/ LINK WITH OTHER PROGRAMS/ COMBINES WITH
 ENTECH'S STUDIO 64 (FOR ADDING SOUND ROUTINES).

SPRITE GRAPHICS DEV. PACKAGE
 TSI.....(D/T).....19.95.....NA
 EDIT 128 NORMAL OR MULTI-COLOR SPRITES/ 'HELP' FEATURE/
 35 COMMANDS/ MACHINE CODE ROUTINES/ 32 SPRITES
 DISPLAYABLE AT ONE TIME.

MUSIC



PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
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DANCING FEATS
 SFS.....(D/T).....29.95/24.95.....***+
 "THE ONE-MAN JOYSTICK BAND": GETS AN 'A' FOR
 ORIGINALITY! ACTUALLY TURNS JOYSTICK INTO A REAL-TIME
 INSTRUMENT. VERY ENTERTAINING, GOOD VISUAL
 ACCOMPANIMENT.

NOTE PRO II
 ELI.....(D/T).....49.95/46.95.....***+
 HIGH SPEED PLAY / 8 MEASURE TREBLE CLEF INPUT DISPLAY /
 VARIABLE DURATIONS / LEGATO OR STACCATO / TRANSPOSE / 8
 OCTAVE / RE-SEQUENCE / SID CONTROLS / FILE JOINING /
 TONE PRESETS

NOTE PRO I
 ELI.....(D/T).....27.95/24.95.....***
 SIMILAR TO NOTE PRO II BUT WITHOUT TRANSPOSE AND ARRANGE
 / 4 OCTAVES / ONE MEASURE INPUT DISPLAY / NO FILE JOIN

STUDIO 64
 ENT.....(D/T).....39.95.....***
 GENERATES GRAPHIC DISPLAY OF NOTES AS YOU PLAY/ 3
 VOICES/ VARIABLE SPEED PLAYBACK / STORES UP TO 8 MIN. OF
 MUSIC. COMPOSITIONS MAY BE ENTERED ONE VOICE AT A TIME
 VIA AN EDITOR, OR IN REAL TIME (THE PROBLEM WITH THE
 LATTER IS THAT YOU CAN'T HEAR WHAT THE OTHER 2 VOICES
 ARE DOING WHILE YOU'RE INPUTTING WHICH IS A BIG
 DRAWBACK!) ADDITIONAL MODULES BEING PREPARED: 'LEAD--
 SHEET WRITER' AND 'ADD MUS'IN' (LINKS YOUR MUSIC TO
 OTHER PROGRAMS)

SOUND SHAPER
 DUA.....(T/D).....9.95/11.95.....***
 KEYBOARD CONTROL OF SOUNDS. ALL FEATURES OF SID MAY BE
 MANIPULATED FROM GRAPHIC SCREEN MENUS. SOUNDS ARE
 AUTOMATICALLY CONVERTED INTO READY TO USE POKES AND DATA
 STATEMENTS FOR YOUR OWN PROGRAMS AT THE PUSH OF A KEY.

NOTE PRO BRIDGE
 ELI.....(D/T).....27.95/24.95.....NA
 M.L. SUBROUTINE WHICH MAY BE COPIED AND ADDED TO USER'S
 PROGRAMS ALLOWING ACCESS FROM BASIC TO NOTE PRO FILES.
 FULL DOCUMENTATION.

THE STAFF
 PMS.....(T/D).....14.95/19.95.....NA
 "POLYPHONIC MUSIC EDITOR AND GENERATOR. ENTER UP TO 93
 MEASURES OF 3 PART HARMONY ON EASY TO USE GRAPHIC
 DISPLAY."

SYNTHY-64
 ABA.....(T/D).....29.95/32.95.....NA
 CREATES VARIOUS SOUNDS AND MELODIES WITHOUT POKES VIA
 SIMPLIFIED COMMANDS ADDED TO BASIC.
 (6502 machine code listing...25.00)
 (manual only.....5.00)

MUSIC MAGIC
 ACS.....(T/D).....19.95/24.95.....NA
 DIRECT KEYBOARD CONTROL OF SOUNDS.

EARLY GAMES MUSIC
 COU.....(NA).....(NA).....NA
 ASSORTMENT OF GAMES THAT INTRODUCE 4 TO 12 YEAR OLDS TO
 THE BASICS OF MUSIC.

MUSIC MAKER
 COM.....(D/T).....24.95/19.95.....NA
 ENTER SHEET MUSIC NOTES FOR PLAYBACK IN 3 VOICES.
 INCLUDES SAMPLE TUNES.

MUSIC MAKER 64
 ENT.....(NA).....39.00.....NA

SUPER 64 MUSIC MAKER
 SEY.....(T).....19.95.....NA
 PLAY, MODIFY, SAVE, AND LOAD MUSIC.

DELTA MUSIC
 SPI.....(R).....(NA).....NA

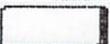
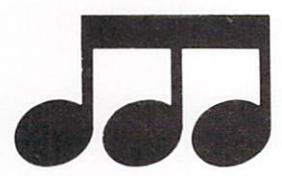
MUSICOMP
 COA.....(D).....39.95.....NA
 COLOR GRAPHICS/ MENU MODE/ BASIC-LIKE CODE EDITOR/ SHEET
 MUSIC ENTRY/ 50 PG. MANUAL.

INSTA-MUSIC
 CIM.....(R/D/T).....(NA).....NA
 WRITE, STORE, PLAY MUSIC.

MUSICWRITER - 64
 DEE.....(D).....(NA).....NA
 FROM THE MAKERS OF "M'FILE": CREATE, EDIT, PLAY 3-VOICE
 MUSIC/ COMPLETE CONTROL OF SID CHIP/ GENERATES SHEET
 MUSIC

SONGWRITER
 SCA.....(NA).....39.95.....NA
 SIMULATED PIANO ROLL GRAPHICS/ WRITE, EDIT, VARIABLE
 TEMPO PLAYBACK/ COMES WITH 29-SONG LIBRARY.

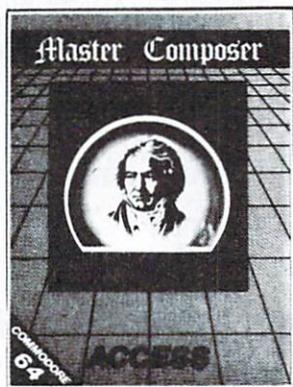
EAR-TRAINER
 HOR.....(D).....29.95.....NA
 6 PROGRESSIVE LEVELS TO HELP YOU SING ON-KEY!





NEW ADDITIONS

WHEN I'M 64 (AKA 'VOICEBOX')
 ALI.....(D).....29.95.....****+
 THIS MUSIC SYSTEM FROM 'ALIEN GROUP' IS ONE OF THE EASIEST TO USE WHILE STILL PROVIDING SOPHISTICATED FEATURES. UNLIKE ANY OTHER PACKAGE WE HAVE TRIED, 'WHEN I'M 64' ALLOWS REAL TIME RECORDING OF EACH OF THREE TRACKS (WITH THE OPTIONAL PLAYING OF THE OTHER TWO IN THE BACKGROUND) / TRACKS MAY BE INDIVIDUALLY RE-TIMED (SO YOU CAN WORK ON THE CORRECT NOTES FIRST, THEN WORRY ABOUT TIMING LATER) / VIBRATO AND REAL-TIME ACCENTS MAY BE 'PUNCHED-IN' WHILE LISTENING TO PLAYBACK. BUILT-IN METRONOME MAY BE PLAYED BEHIND OTHER TRACKS. SID CHIP EASILY CONTROLLED WITH SCREEN-ORIENTED EDITOR. THIS SYSTEM CAN BE TINKERED WITH BY KIDS OR ADULTS WITHOUT REFERING TO THE MANUAL UNTIL MORE POWERFUL FEATURES ARE NEEDED. EVEN MORE UNUSUAL IS AN OPTIONAL DISPLAY OF AN ANIMATED FACE WHICH 'SINGS' ALONG WITH THE MUSIC (TO ACTUALLY HEAR THESE VOCALS, YOU WILL NEED A \$129.00 SPEECH SYNTHESIZER) / A VOCALS EDITOR IS INCLUDED. NO PRINTOUT FACILITY. EXCELLENT VALUE.



MASTER COMPOSER
 ACC.....(D).....39.95.....****+
 WELL-EXECUTED FULL-FEATURED MUSIC EDITOR FOR DETAILED COMPOSITION OF 3-PART SCORES ON GRAPHIC STAFFS. PRINTS SCORES OUT TO MOST PRINTERS / FILE LINKING / AUDITION MODE FOR EASY FINE-TUNING OF INSTRUMENT SOUNDS DURING PLAYBACK / MEASURE DUPLICATE / SAVE & LOAD FROM DISK / INTERRUPT-DRIVEN, ALLOWING EASY PATCHING OF MUSIC TO EXISTING OR NEW PROGRAMS OF YOUR OWN / MORE.
MUSIC CONSTRUCTION SET

ELE.....(D).....<40.00.....****
 MUSIC EDITOR WITH DELIGHTFUL GRAPHICS, SCROLLING STAFFS, CUT & PASTE, TRANSPOSITION, JOYSTICK, KOALA-PAD, OR KEY-BOARD CONTROL, & HARD COPY OF MUSIC. THE FRUSTRATING THING ABOUT THIS EYE-OPENING ICON-BASED MUSIC SYSTEM IS THAT, WHILE ITS IMPLEMENTATION OF SOME VERY SLICK FEATURES IS IMPRESSIVE, IT COULD HAVE BEEN SO MUCH MORE. ESPECIALLY DISAPPOINTING ARE THE USE OF ONLY 2 VOICES, AND THE LIMITED SELECTION OF 13 INSTRUMENT SOUNDS FOR EACH (WITH NO WAY TO CREATE YOUR OWN!) THIS IS A NEAR CRIMINAL UNDER-UTILIZATION OF BOTH THE C64 AND THE OBVIOUS TALENT RUNNING WILD AT ELECTRONIC ARTS. (THE JOYSTICK ROUTINES SEEM LESS RESPONSIVE THAN IN 'PINBALL CONSTRUCTION SET' & THE KOALA PAD OPTION IS EVEN LESS RELIABLE) WE CAN ONLY HOPE THAT THE FOLKS AT ELECTRONIC ARTS WILL SOMEDAY GIVE US 'MUSIC CONSTRUCTION SET II'.

ULTISYNTH
 QUI.....(D).....(NA).....***
 LOADED TO THE GILLS WITH ELABORATE SOUNDING OPTIONS (PRETABS, GLIDE, LAYERING, ETC.). THE PROBLEM WITH THIS PRODUCT IS THAT, INSPITE OF THE OBVIOUS LABORS OF ITS DESIGNERS, ULTISYNTH IS TOO COMPLEX AND CONVOLUTED FOR STANDARD MODEL HUMANS TO USE (ALTHOUGH I FEEL AN OCTOPUS WITH A PHD COULD LEARN TO LOVE IT) EVEN THE AUTHOR SEEMS TO HAVE HAD MORE FUN DESIGNING IT THAN USING IT EVIDENCED BY THE SINGLE FEEBLE SAMPLE SONG INCLUDED ON THE DISK.

MODEL 64 SEQUENCER CARTRIDGE
 SEQ.....(R).....195.00.....NA
 FOR THE SERIOUS MUSICIAN OR ENTHUSIAST: THIS CARTRIDGE CONNECTS THE 64 SIMULTANEOUSLY TO AS MANY AS 16 VARIOUS MIDI-STANDARD SYNTHESIZERS & DRUM MACHINES TO PROVIDE STORAGE, SEQUENCING, AND MANAGEMENT OF 9 SEPARATE SEQUENCES OF MUSIC. EACH SEQUENCE MAY BE UP TO 4000 NOTES LONG AND CONSIST OF UP TO SIX SEPARATE OVERDUBBING TRACKS (THIS IS EQUIVALENT TO A SOLID-STATE, 6-TRACK STUDIO TAPE DECK!) ENTIRE ALBUMS MAY BE CONSTRUCTED AND STORED TO DISK! SEE NEXT ISSUE FOR IN-DEPTH REVIEW.



MUSICALC 1 (SYNTHESIZER & SEQUENCER)
 MAV.....(D).....74.95.....NA
 BASIC MODULE IN WHAT MAY BE THE MOST COMPLETE MUSIC SYSTEM YET PRODUCED FOR THE C64. MUSICALC 1 TURNS KEYBOARD INTO A THREE-VOICE SYNTHESIZER AND AN INTERACTIVE STEP SEQUENCER. PLAY ALONG WITH SONGS, COMPOSE SONGS, DEVELOP ORIGINAL INSTRUMENT SOUNDS, ELABORATE ON-SCREEN CONTROLS AND READ-OUTS. ADDITIONAL MODULES ADD SHEET MUSIC PRINT-OUT CAPABILITIES, VARIOUS PRE-PROGRAMMED RHYTHM AND MUSIC 'TEMPLATES', CUSTOM KEYBOARD SCALES, AND A PIANO-LIKE HARDWARE KEYBOARD.

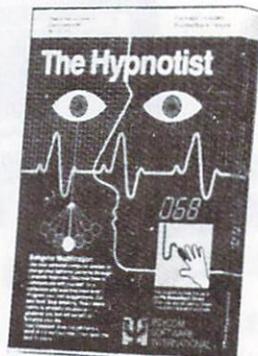
PERSONAL ENRICHMENT



DIET CALC
 MYS.....(D/T).....24.95/19.95.....
 TELL THE COMPUTER WHAT YOU ATE AND WHAT YOU DID, AND IT WILL CALCULATE YOUR GAIN (OR LOSS)
MODEL DIET
 SFS.....(D/T).....29.95/24.95.....***
 "ANALYZES YOUR DIET...BASED ON GOVERNMENT RESEARCH...TRACKS CALORIE INTAKE..." (SEE REVIEW THIS ISSUE).
AEROBICS
 SPI.....(D).....(NA).....NA
 LEADS YOU THROUGH WARM-UPS, STRETCHES, AEROBICS, & COOL-DOWN.
TOTAL HEALTH
 CSA.....(NA).....<30.00.....NA
 GUIDE TO DIET & EXERCISE: MONITOR FOOD INTAKE/ PLOT EFFECTS OF VARIOUS EXERCISE & EATING COMBINATIONS/ DATA ON 200 FOODS INCLUDES COVERING CALORIES, CARBOHYDRATES, SODIUM, FAT, AND PROTEIN/ CALCULATES DAYS TO REACH WEIGHT GOAL BASED ON USERS PLAN.

PERSONAL ENRICHMENT (CONT'D) ↓

BIORHYTHM+
 NLI.....(T).....14.50.....NA
 CLASSIC BIORHYTHM WITH AUDIO FEEDBACK & COMPATABILITY
 COMPARISONS/ GENERATES PRINTOUTS.
 EXPANDO-VISON PROGRAMS
 STI.....(NA).....39.95 EA.....NA
 SUBLIMINAL PROGRAMMING SYSTEM (REQUIRES #89 INTERFACE).
 CHOOSE FROM 8 PROGRAMS: WEIGHT CONTROL/EXERCISE,
 SMOKING/CALM NERVES, STRESS/POSITIVE THINKING,
 DRINKING/RESPONSIBILITY, ATHLETIC CONFIDENCE/GOLF, STUDY
 HABITS/MEMORY, CAREER/SUCCESS, SEXUAL CONFIDENCE.
 SYSTEM FLASHES MESSAGES TO YOUR TELEVISION FOR 1/30
 SECOND WHILE WATCHING YOUR FAVORITE SHOWS - TOO FAST TO
 NOTICE, BUT LONG ENOUGH TO BE ABSORBED BY THE
 SUBCONSCIOUS. MESSAGES MAY BE VIEWED IN SLOW-MOTION IF
 YOU WANT TO KNOW WHAT YOU'VE BEEN 'READING'.
 THE HYPNOTIST
 PSY.....(D/T).....87.95/79.95.....NA
 INTENDED FOR SELF-ADMINISTERED BEHAVIOR MODIFICATION/
 PROGRAM YOUR OWN POST-HYPNOTIC SUGGESTIONS/ INCLUDES
 PSYCOM'S BIOFEEDBACK DEVICE.



PERSONALITY ANALYZER
 PSY.....(D/T).....32.95/87.95.....NA
 ANALYZE SELF & OTHERS REGARDING PERSONALITY TYPE, CAREER
 POTENTIAL, TENDENCIES, COMPATIBILITIES ETC. - REQUIRES
 JOYSTICK.
 I-CHING PROGRAM
 CYG.....(D/T).....29.95/24.95.....NA
 HAVE YOUR 64 'THROW' AND INTERPRET HEXAGRAMS FROM THE
 ANCIENT CHINESE 'BOOK OF CHANGES'
 IQ64
 SNS.....(D/T).....24.95/19.95.....NA
 45-MINUTE, 60-QUESTION PROGRAM FOR AGES 9 & UP TESTS AND
 CALCULATES IQ/ INCLUDES EXPLANATIONS/ CLAIMS TO HELP
 IMPROVE IQ TEST PERFORMANCE.

NEW ADDITIONS

RELAX (TM) (STRESS-REDUCTION SYSTEM) (HARDWARE INCLUDED)
 SYN.....(D).....99.95.....NA
 THIS LOOKS LIKE ONE OF THE BEST APPLICATIONS FOR A
 PERSONAL COMPUTER TO COME ALONG IN SOME TIME. A TOTAL
 STRESS REDUCTION SYSTEM INCLUDING A THREE-SENSOR
 HEADBAND CONNECTED TO AN EMG (ELECTROMYOGRAPH) CONTROL
 UNIT, AUDIO TAPE WITH DEEP RELAXATION EXERCISES, A
 PERSONAL PROGRESS WORKBOOK, AND SOFTWARE PROVIDING
 GRAPHICAL REPRESENTATION OF STRESS VS. TIME WHICH CAN BE
 DIRECTED TO SCREEN & PRINTER AS WELL AS THREE TENSION--
 RELAXATION "GAMES" AND PROVISIONS FOR PROGRAMMING-IN
 SUBLIMINAL MESSAGES TO FURTHER AID IN STRESS-REDUCTION.
 DEVELOPED WITH THE AID OF SEVERAL DISTINGUISHED EXPERTS
 IN THE FIELD.

DIETRON

TMW.....(D).....(NA).....NA
 WEIGHT REDUCTION & CONTROL; CALCULATES POTIMAL DAILY
 CALORIC INTAKE / HELPS PLAN MENUS / CHECKS PROPOSED MEAL
 PLANS AGAINST 250 ITEM FOOD DATABASE AND OUTPUTS
 PERTINENT STATISTICS ON YOUR CHOICE / KEEPS CUMULATIVE
 RECORD OF EACH FAMILY MEMBER'S ACTUAL INTAKE.

MISCELLANEOUS SOFTWARE ↓

COMPUTER MECHANIC

SFS.....(D/T).....26.95/21.95.....***
 ANALYZES WIDE RANGE OF SYMPTOMS BASED ON USER INPUT:
 TROUBLE-SHOOTING GUIDE / GENERATES MAINTENANCE
 SCHEDULES/ HI-RES GRAPHICS SHOW CAR LOCATIONS BEING
 REFERED TO
 (SEE REVIEW ELSEWHERE THIS ISSUE.)

INSTA-SCHED

CIM.....(NA).....(NA).....NA
 PERPETUAL CALENDAR
 GTR.....(NA).....10.00.....NA
 THE MONTHLY MANAGER (TIME & BUDGET MGR.)
 COC.....(NA).....29.95.....NA

RECIPE BOX

ARI.....(D).....19.95.....NA
 MENU-DRIVEN 'KITCHEN DATA BASE': SEARCH BY INGREDIENT /
 SEARCH BY CATEGORY / SEARCH BY BOTH / MEASUREMENT &
 SERVING CALCULATIONS / DUMP TO PRINTER

DECISION MAKER

CRE.....(D/T).....19.95/14.95.....NA

CAR COSTS

CRE.....(D/T).....19.95/14.95.....NA

HOME INVENTORY SYSTEM

GAT.....(T).....9.95.....NA

HOME INVENTORY

CRE.....(D/T).....19.95/14.95.....NA

HOME INVENTORY

MIQ.....(NA).....29.95.....NA

UTILITY TRACKER & FORECASTER

MIQ.....(NA).....29.95.....NA

CARS&S

NLI.....(D/T).....27.50/24.50.....NA
 GRAPH & MONITOR CAR COST & EFFICIENCY/ INCLUDES
 INSURANCE, PAYMENTS, TAXES, LICENSE FEES & REPAIRS/
 PRINTED OR SCREEN REPORTS.

ACTI-TRIP/ACTI-SPEND/ACTI-MENU

SEI.....(NA).....24.95.....NA
 3 PROGRAMS IN ONE PACKAGE: TRIP PLANNING, SPENDING, &
 MENU (FOOD) PLANNING.

64 PAK

CSA.....(NA).....(NA).....NA
 TEN-PROGRAM BUNDLE FOR THE WHOLE FAMILY: 'FLASH CARDS'
 USER-DEFINED FLASH CARDS FOR DRILLS ON MATH, VOCAB ETC.
 / 'SPEED READ' RE-TYPE PHRASES (USER-DEFINABLE) FLASHED
 BRIEFLY ON THE SCREEN / 'SIGN TALK' TEACHES THE SIGNING
 HAND-CODE OF THE HEARING-IMPAIRED / 'LIFE EXPECTANCY' /
 'PERPETUAL CALENDAR' DISPLAY ANY MONTH FROM B.C. TO 9999
 A.D. / 'WORLD CLOCK' / 'STATES & CAPITALS' / 'MORTGAGE
 CALCULATOR' / 'BIG TIME' LARGE ON-SCREEN COLOR DIGITAL
 CLOCK / 'CASH REGISTER' SHOPPING SIMULATION TEACHES
 CHILDREN TO MAKE CHANGE.

PRO-BOWL

ACS.....(D).....199.95.....NA
 RECORD KEEPING AND HANDICAPPING FOR BOWLING LEAGUES
 (...WE WOULD ADD 'WELL-FUNDED' BOWLING LEAGUES)

BASKETBALL STATS

MWS.....(D).....39.50.....NA
 MENU-DRIVEN AID FOR COACHES: TRACK 18 PLAYERS THRU 30
 GAMES / REPORTS ON FIFTEEN STATISTICS (ELEVEN ARE
 PRE-DEFINED) / PRINTER SUPPORTED

MISCELLANEOUS (CONT'D)

FOOTBALL SCOUT

MWS.....(D).....79.50.....NA

GET THE JUMP ON YOUR RIVAL: ANALYZE OTHER TEAM'S OFFENSE / UP TO 50 PLAYS PER GAME STORED / 6 GAMES MAY BE LINKED FOR A 300- PLAY COMPOSITE REPORT. 3 REPORTS: INDIVIDUAL PLAYS, TENDENCIES, ZONE- WASH- DOWN- DISTANCE CHART.

PRO-GENY

ACS.....(?).....49.95.....NA

GENEALOGY PROGRAM/ CONFORMS TO LDS STANDARDS/ RECORDS FOR 4 GENERATIONS OF UP TO 10 CHILDREN EACH GENERATION.

NEW ADDITIONS

3G HORSE RACE HANDICAPPER

3GC.....(D/T).....29.95.....***

USES 10 OF THE MOST IMPORTANT FACTORS IN RACE OUTCOMES TO CALCULATE ODDS. USE DAILY RACING FORM TO PROVIDE PROGRAM WITH NECESSARY DATA. MANUAL INCLUDES TIPS ON USING THE ODDS GENERATED BY THIS SYSTEM.

THE HANDICAPPER (THOROUGHBRED & HARNESS VERSIONS)

FED.....(T).....29.95 EACH.....NA

CONSIDERS SPEED, DISTANCE, CLASS, TRACK CONDITION, POST POSITION, PAST PERFORMANCE, JOCKEY OR DRIVER ABILITY, ETC. TO RANK HORSES FOR EACH RACE. HANDICAP A RACE IN MINUTES, A WHOLE CARD IN LESS THAN AN HOUR. FOR BEGINNERS & VETERANS ALIKE. (44.95 FOR BOTH)

THE WORD

BRS.....(D).....199.95.....NA

COMPLETE KING JAMES V BIBLE ON DISK.

TOPICS

BRS.....(D).....49.95.....NA

DISK-BASED INDEX TO OVER 200 SCRIPTURE SUBJECTS- COMPANION PRODUCT TO 'THE WORD', ABOVE.

ARCADE & ACTION GAMES

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
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Q*BERT

PAR.....(R).....44.95.....*****

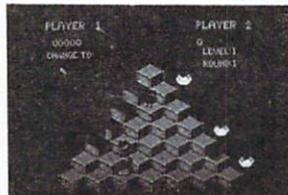
ABSOLUTELY FAITHFUL RENDITION OF THE COIN-OP FAVORITE. THE 64 VERSION SURPASSES ALL OTHERS/ SUPERB ANIMATION, SOUND, GRAPHICS AND GAME-PLAY.
(SEE 'GALLERY' WINTER '83/84 ISSUE)



DONKEY KONG

ATA.....(R).....44.95.....*****

THE ORIGINAL NINTENDO ARCADE GAME BROUGHT TO COMMODORE BY ATARI! IF YOU NEED THIS GAME DESCRIBED, YOU HAVE BEEN OFF THE PLANET FOR THE LAST COUPLE OF YEARS. THE 64 VERSION OUTSHINES EVEN THE ATARI VERSION.
(SEE 'GALLERY' WINTER '83/84 ISSUE)



CENTIPEDE

ATA.....(R).....44.95.....*****

ONCE AGAIN, A COMPLETELY CONVINCING ADAPTATION OF THE CLASSIC, WITH ALL THE NUANCES OF THE ORIGINAL.

DIG-DUG

ATA.....(R).....44.95.....*****

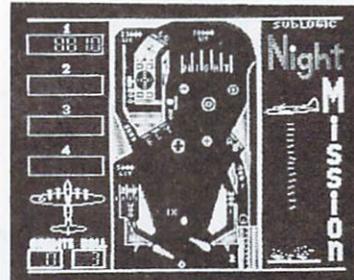
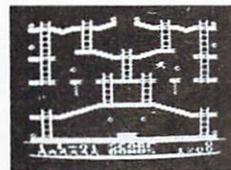
ATARI IS ESPECIALLY PROUD OF THIS CONVERSION TO THE 64/ WE LIKE IT TOO!

(SEE 'GALLERY' THIS ISSUE)

NIGHT MISSION PINBALL

SUB.....(D).....49.95.....*****

AWARD-WINNING PINBALL SIMULATION WITH TEN LEVELS OF PLAY/ ALSO FEATURES AN EDITOR FEATURE FOR CUSTOMIZING THE GAME.



JUMPMAN

EPY.....(D).....39.95.....*****

ONE OF THE ALL-TIME GREATS / YOU CAN PLAY THIS GAME FOR MONTHS WITHOUT GETTING BORED.

(SEE 'GALLERY' FALL '83 ISSUE.)

DAVID'S MIDNIGHT MAGIC

BRO.....(D).....34.95.....*****+

CONVINCING PHYSICS MAKE THIS PINBALL SIMULATION STAND OUT. (SOUND EFFECTS COULD HAVE BEEN MUCH BETTER).

(SEE 'GALLERY' FALL '83 ISSUE.)

GRIDRUNNER

HES.....(R).....39.95.....*****+

FAST & COLORFUL SOMEWHAT REMINISCENT OF ATARI'S 'CENTIPEDE' BUT WITH MANY ORIGINAL TWISTS.

(SEE 'GALLERY' FALL '83 ISSUE.)

WORMS

ELE.....(D).....35.00.....*****+

UNIQUE GAME IN WHICH PLAYERS (UP TO 4) PROGRAM THEIR COLORFUL, MUSICAL "WORMS" TO TAKE OVER AND DOMINATE THE GAME GRID. THE 64 WILL PLAY THE PARTS OF ANY MISSING PLAYERS.

(SEE 'GALLERY' THIS ISSUE)

ROBOTRON:2084

ATA.....(R).....44.95.....*****+

IF YOU LIKED IT IN THE ARCADES, YOU'LL BE HAPPY WITH THIS ATARI CONVERSION OF THE WILLIAMS GAME FOR THE 64.

(SEE 'GALLERY' WINTER '83/84 ISSUE)

PAC-MAN

ATA.....(R).....44.95.....*****+

IT'S THE 'REAL' THING. WHAT ELSE CAN WE SAY?

HARD HAT MACK

ELE.....(D).....35.00.....*****

ENTERTAINING ARCADE GAME, ALONG THE LINES OF, BUT NOT QUITE AS GOOD AS 'JUMPMAN'.

FROGGER

PAR.....(R).....(NA).....*****

AGAIN, A VERY GOOD TRANSLATION OF A POPULAR ARCADE GAME.

BANDITS

SIR.....(D).....39.95.....*****

GOOD SPACE GAME OF THE 'GALAXIAN' GENRE.

AXIS ASSASSIN

ELE.....(D).....35.00.....*****

SURVIVE THE WEB-SPINNING 'MASTER ARACHNID' AND RESCUE EXTRA MEN FROM ITS NEST.

MOTOR MANIA

UMI.....(D/T).....29.95.....*****

ONE OF THE EARLIEST M.L. GAMES THAT CAME OUT FOR THE 64 / IT'S STILL FUN AFTER ALL THESE MONTHS!
(SEE 'GALLERY' FALL '83 ISSUE.)



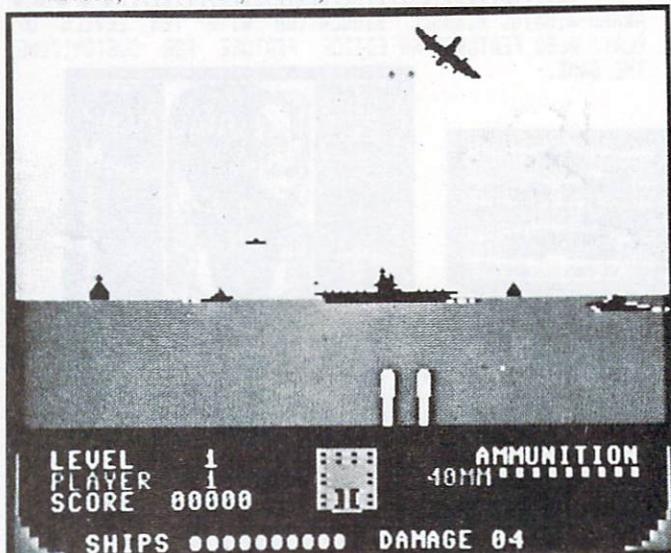
ARCADE & ACTION GAMES CONT'D

FROGGER

SIE.....(D).....34.95.....***
 (SEE "GALLERY" FALL '83 ISSUE.)

REPTON

SIR.....(NA).....39.95.....***
 A FIRST-RATE DEFENDER TYPE GAME! M.L. OF COURSE. GREAT ACTION, ANIMATION, SOUND, AND PLAY FEATURES.



BEACH-HEAD

ACC.....(D).....34.95.....***
 FIRST-RATE NAVAL BATTLE SIMULATION WITH MULTIPLE SCREENS, SMOOTH 3-D MACHINE-LANG. ARCADE-QUALITY ANIMATION AND SOUND.
 (SEE "GALLERY" WINTER '83/84 ISSUE)

WAYOUT

SIR.....(D).....39.95.....***
 BEST 3-D MAZE GAME WE HAVE SEEN/ FLOWING ANIMATION/ FREE 'WAYOUT' GLASSES!

DEFENDER

ATA.....(R).....44.95.....***-
 A CLASSIC IN THE ARCADES (I'M GLAD ATARI SPENT SOME OF MY QUARTERS ON THE R&D TO BRING THIS OUT ON CARTRIDGE FOR THE 64!), THE CONTROLS LACK THE ORIGINAL'S RESPONSIVENESS, AND LEAVE THE EARTH IN MUCH GREATER DANGER!

FORT APOCALYPSE

SYN.....(D/T).....34.95.....***-
 TAKE YOUR JET COPTER DOWN THRU TUNNELS AND CAVE. GOOD ARCADE ACTION, BUT THE DIFFICULTY OF SURVIVING MAKES THIS GAME A BIT FRUSTRATING: JOYSTICK.

METAMORPHOSIS

VCT.....(D/T).....19.95.....***+
 MULTI-SCREEN GAME REMINISCENT OF 'ROBOTRON'
 (SEE "GALLERY" WINTER '83/84 ISSUE)

PURPLE TURTLES

QUI.....(T).....29.95.....***+
 ENTERTAINING WELL-ANIMATED NON-VIOLENT GAME HAS YOU CROSSING A STREAM ON THE BACKS OF UNPREDICTABLE DIVING TURTLES (SORT OF LIKE 'FROGGER' IN CROSS-SECTION)
 (SEE "GALLERY" WINTER '83/84 ISSUE)

GALACTIC BATTLES

CYB.....(D).....19.95.....***+
 THIS SPACE ARCADE GAME HAS UNUSUAL SOUND-EFFECTS & NICE GRAPHICS.
 (SEE "GALLERY" WINTER '83/84 ISSUE)

SUPERCYCLES

PIO.....(D).....31.95.....***+
 'TRON' THEME/ DRIVE YOUR LIGHT-CYCLE PAST THE BADDIES WITHOUT RUNNING OUT OF FUEL/ TWO SCREENS/ JOYSTICK.
 (SEE "GALLERY" WINTER '83/84 ISSUE)

TOWERING INFERNO

PIO.....(D).....34.95.....***+
 THIS IS A CUTE GAME: CATCH THE LEAPING CHARACTERS IN YOUR FIREMAN'S NET/ LOOK OUT FOR THE LARGE ONES, THEY'LL SDAUSH YOU!
 (SEE "GALLERY" WINTER '83/84 ISSUE)

RETRO BALL

HES.....(R).....39.95.....***+
 M.L. AIR-HOCKEY SIMULATION, JOYSTICKS REQ'D.

PAKACUDA

CDC.....(T/D).....19.95/23.95.....***+
 THIS PAC-MAN CLONE WITH AN AQUATIC THEME IS WELL DONE.
 (SEE "GALLERY" FALL '83 ISSUE.)

CENTROPODS

CDC.....(T/D).....19.95/23.95.....***+
 CENTIPEDE THEME/ M.L. / JOYSTICK.

NEUTRAL ZONE

ACC.....(T/D).....34.95.....***+
 DEEP SPACE COMBAT/ ALL M.L. HI-RES. SMOOTH SCROLLING (360 DEG.) / 3-D REALISM / GREAT SOUND EFFECTS.

KONGO KONG

VCT.....(T/D).....19.95/22.95.....***+
 ROLLING BARRELS, LADDERS, & THE FAMOUS GORILLA.

ATTACK OF THE PHANTOM KARATE DEVILS

PHA.....(D/T).....34.95.....***+
 LOVE THE NAME! MARTIAL-ARTS THEME/ SEND YOUR BLACK-BELTED WARRIOR UP AGAINST DEADLY NINJAS. PUNCHES, KICKS & LEAPS CONTROLLED BY JOYSTICK/ LOOK OUR FOR ASSORTED DEADLY PROJECTILES. GOOD SPRITE ANIMATION.
 (SEE "GALLERY" WINTER '83/84 ISSUE)

KILLER PILLER

CAS.....(D).....9.99.....***+
 SIMILAR TO 'CENTIPEDE' WITH SOME INTERESTIN TWISTS/ GOOD GRAPHICS AND SOUND (NO, THE PRICE IS NOT A MISPRINT).
 (SEE "GALLERY" WINTER '83/84 ISSUE)

GRIDDER

MDG.....(D/T).....24.95/19.95.....***

LASER STRIKE

ISI.....(D/T).....29.95/24.95.....***
 ORIGINAL GRAPHICS ADD APPEAL TO THE FAMILIAR CRUISE, SHOOT, & BOMB THEME.
 (SEE "GALLERY" WINTER '83/84 ISSUE)

FAST EDDIE

SIR.....(D).....34.95.....***
 CUTSIE GAME GETS OLD FAST. NONETHELESS, THE GRAPHICS ARE SMOOTH AND EVERYTHING WORKS.

TORPEDO

SUS.....(T/D).....25.95/27.95.....***
 SUB-HUNT GAME WITH GAUGES AND A SONAR SCREEN.

RUNWAY 64

SUS.....(T/D).....25.95/27.95.....***
 INSTRUMENT-BASED FLIGHT SIMULATOR GAME. NOT ANIMATED.

ANNIHILATOR

VCT.....(NA).....19.95.....***
 SMART-BOMBS & BLASTERS, ANIMATION

CANDY-MAN

STA.....(T).....24.95.....***
 MUNCH THRU THE FAMILIAR MAZE. M.L. W/ SCROLLING WINDOW. USES KEYBOARD GRAPHICS.

GAME PAK

COM.....(T).....14.95.....***
 3 GAMES: DRAGON CHASE, DEFLECT, & FLIP-IT.

3-D MAN

NUF.....(T).....19.95.....NA
 HOW PAC-MAN WOULD LOOK FROM INSIDE THE MAZE/ SPRITES, SOUND, JOYSTICK.

ARCADE & ACTION GAMES CONT'D

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
CHOPLIFTER				
BRO.....(R).....44.95.....NA				
A POPULAR HOME ARCADE GAMES. NOW FOR THE 64 / JOYSTICK.				
JUMPMAN JR.				
EPY.....(R).....(NA).....NA				
CARTRIDGE SEQUEL TO THE POPULAR "JUMPMAN"/ ADDS MANY MORE SCREENS, PUZZLES, AND CHALLENGES.				
MINER 2049ER				
RES.....(NA).....(NA).....NA				
SERPENTINE				
BRO.....(R).....39.95.....NA				
M.L. HUNGRY SNAKES / JOYSTICK.				
SAMMY LIGHTFOOT				
SIE.....(NA).....(NA).....NA				
QUEST OF THE EAGLE				
FER.....(D/T).....28.75.....NA				
PERHAPS THE ONLY SOFTWARE YET TO COME OUT OF CEDAR RAPIDS IDWA/ AN INTERESTING- LOOKING STAR-TREK TYPE SPACE GAME.				
SNOKIE				
FUN.....(D/T).....34.95.....NA				
15-SCREEN ARCADE GAME WITH GOOD-LOOKING COLOR GRAPHICS AND A FRIENDLY LOOKING PENGUINOID IN THE STARRING ROLE.				
FLIP AND FLOP				
FIR.....(NA).....(NA).....NA				
GOOD-LOOKING GRAPHICS IN THIS NEW ARCADE GAME.				
WATERLINE				
TRO.....(D).....(NA).....NA				
RESCUE PASSENGERS AND GOLD FROM YOUR SINKING SHIP.				
ATTACK OF THE MUTANT CAMELS				
HES.....(R).....44.95.....NA				
SEQUEL TO 'GRIDRUNNER' / FAST AND FUN / JOYSTICKS.				
APE CRAZE / LOGGER / SUPERCUDA / PEGASUS ODYSSEY / ESCAPE MCP				
CDC.....(D/T).....27.95.EA.....NA				
MOONDUST / TRASHMAN / ASTROBLITZ / SAVE NEW YORK (ALL REQUIRE JOYSTICK)				
CRE.....(R).....34.95.EA.....NA				
POOYAN / MOON SHUTTLE				
DAS.....(D).....34.95.EA.....NA				
ALL-STAR BASEBALL / PITSTOP				
EPY.....(NA).....(NA).....NA				
TWO ANIMATED ARCADE GAMES, ONE IS A BASEBALL SIMULATION, THE OTHER IS AUTO-RACING.				
SPACE SENTINEL				
T&F.....(D).....29.95.....NA				
SPRITE & CHAR. GRAPHICS WITH 3-VOICE SOUND.				
CRUSH-CRUMBLE-CHOMP				
EPY.....(D).....29.95.....NA				
DINOSAURS VISIT YOUR CITY- YOU ASK THEM TO LEAVE.				
EVOLUTION				
SDP.....(NA).....(NA).....NA				
99 LEVELS, ARCADE SOUND & GRAPHICS.				
SLAM BALL / DRELBS				
SYN.....(T/D).....34.95 EA.....NA				
HIGH-RES. M.L. ANIMATED ARCADE GAMES.				
TWERPS/ TURMOIL/ DEADLY DUCK/ FANTASTIC VOYAGE/ ALPHA/ BLADE OF BLACKPOOL/ CRITICAL MASS/ SNAKE BYTE/ SPIDER CITY/ SQUISH/ TYPE ATTACK				
SIR.....(NA).....39.95 EA.....NA				
AIR STRIKE / JET BOOT JACK / VENUS VOYAGERS / TOPSEE TURVEE / MONSTER SMASH				
DMD.....(R/D).....< 40.00.EA.....NA				

SPORE WAR				
DIG.....(T/D).....14.95/19.95.....NA				
ARCADE SHOOT-EM-UP.				
SUBWAR 64				
CCI.....(D/T).....23.95/19.95.....NA				
SUB-HUNT SIMULATION GAME WITH GAUGES, PERISCOPE VIEW, AND SONAR.				
SKIER 64				
ABA.....(T/D).....14.95/17.95.....NA				
JOYSTICK OR KEYBOARD. SOUND & SPRITES.				
SEAWOLFE				
AAR.....(D/T).....24.95/19.95.....NA				
M.L. SEA- WAR GAME / JOYSTICK.				
ZEUS				
AAR.....(D/T).....24.95/19.95.....NA				
M.L. / THUNDERBOLTS, GODS, & SHIELDS.				
LAZER BLAZER				
ACS.....(D/T).....24.95.....NA				
FAST-MOVING CYCLE GAME/ JOYSTICKS				
4-GAME PACK				
ADA.....(D/T).....29.95.....NA				
SERPENTS/ ATOMIC MAN/ ALIEN INVASION/ HEAD ON.				
MISSION 64				
BRI.....(T+D).....19.95.....NA				
SPACE SHOOT-EM-UP / JOYSTICK OR KEYS.				
STAR LEAGUE BASEBALL				
GAM.....(NA).....(NA).....NA				
FINAL CONFLICT				
MIS.....(NA).....(NA).....NA				
ROADTOAD / CHICKEN CHASE				
M&B.....(T).....19.95.....NA				
M.L. / HI-RES COLOR GRAPHICS & SOUND.				
KOOKY CLIMBER / SHOOTING GALLERY				
REN.....(D/T).....24.95.....NA				
CROSSFIRE / JAWBREAKER				
SIE.....(D/T).....34.95.EACH.....NA				
CYCLONS				
SNX.....(D/T).....31.95/27.95.....NA				
ALL M.L. HI-RES GRAPHICS & SOUND.				
CHOMPER MAN				
VCT.....(D/T).....22.95/19.95.....NA				
ZWARK				
SWC.....(D/T).....24.95/19.95.....NA				
ALL M.L. HI-RES / SPRITES / SOUND				
SUICIDE STRIKE / JUICE / KID GRID				
TRO.....(NA).....34.95 EA.....NA				

NEW ADDITIONS

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
BLUE MAX				
SYN.....(D/T).....34.95.....*****				
STRAFING & BOMBING ACTUALLY MADE FUN. VERY DETAILED ANIMATION, GRAPHICS, AND SOUND. BLUE MAX IS LIKE A WORLD WAR I VERSION OF 'ZAXXON', WITH ANGLED SCROLLING, AND REALISTIC SHADOW UNDER PLANES. READOUTS FOR FUEL, DAMAGE, WIND, LANDING GEAR, ETC.				
(SEE 'GALLERY' THIS ISSUE)				
ZEPPELIN				
SYN.....(D/T).....34.95.....*****				
A WONDERFULLY ANIMATED, CONVOLUTED GAME! THIS MAY LOOK LIKE SOME OTHER FLY-THRU-THE-TUNNELS GAMES, BUT THIS ONE IS REALLY ADDICTIVE.				
(SEE 'GALLERY' THIS ISSUE)				
BUGABOD				
QUI.....(D/T).....29.95/24.95.....*****				
HIGH MARKS FOR ORIGINALITY! WHIMSICAL FANTASY GAME IN WHICH YOU ARE A CUTE LITTLE FLEA TRYING TO AVOID A FLEA-EATING PRTERODACTYL!				
(SEE 'GALLERY' THIS ISSUE)				

ARCADE GAMES (CONT'D)



BRISTLES

FIR.....(D).....<40.00.....****
LIVELY GAME STARS PETER THE PAINTER. FOUR PLAYERS CAN TRY TO PAINT THE MANY ROOMS, DECIPHER THE SECRET MESSAGE. ACTION, ROMANCE, ELEVATORS... WHAT MORE COULD A JOYSTICK-JOCKEY ASK FOR.
(SEE 'GALLERY' THIS ISSUE)

DUEL

PID.....(D).....36.95.....****
YOU'LL RECOGNIZE 'JOUST' RIGHT AWAY IN THIS WELL EXECUTED CLONE FROM PIONEER. ONE OR TWO PLAYERS.
(SEE 'GALLERY' THIS ISSUE)

THE BALL'S REVENGE

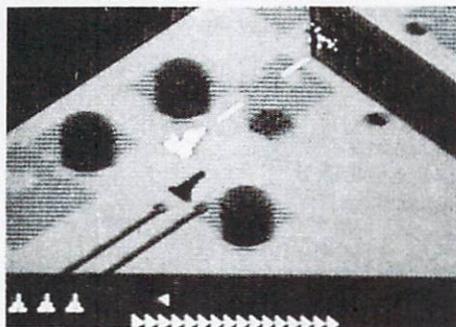
TQL.....(D).....29.95.....****
ENGAGING LOCKER-ROOM HI-JINX. BOP VARIOUS JOCKS WITH YOUR BEACH-BALL AS THEY SCOOT ACROSS THE SCREEN. GREAT MUSIC! (THIS IS THE BEST SELECTION OF A 5-PROGRAM DISK CALLED 'QUANTUM CACHE')
(SEE 'GALLERY' THIS ISSUE)

PERPLEXIAN CHALLENGER

PRE.....(D/T).....29.95.....****
THE BEST 'FLYING THRU SPACE, LOOKING THRU THE VIEWSCREEN' GAME WE'VE SEEN. THIS NIFTY RENDITION HAS LOTS OF LITTLE GOODIES, ESPECIALLY THE CUNNING SOUND EFFECTS! EVEN THE 'GAME-OVER' SEQUENCE IS A GEM.
(SEE 'GALLERY' THIS ISSUE)

POGO JOE

SCR.....(D).....<40.00.....****
3-D, FULLY ANIMATED, MULTIPLE-SCREEN GAME OF THE 'DIBERT' PERSUASION. IF YOU CAN FINISH THE 10TH SCREEN AND CORRECTLY REPORT THE WORD THAT APPEARS, YOU GET TO ENTER SCREENPLAY'S DRAWING FOR \$10,000! EVEN IF YOU DON'T GET THE CASH, YOU'LL HAVE FUN.
(SEE 'GALLERY' THIS ISSUE)



ZAXXON

SYN.....(D/T).....34.95/39.95.....NA
3-D EFFECT WITH ANGLED SCROLLING, SHADOWS, LOOKS LIKE A WINNER.

GLOBAL THERMONUCLEAR WAR!

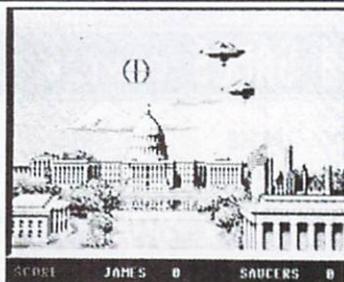
STF.....(D).....34.95.....NA
ACTION/STRATEGY GAME (GAME?) WITH FULL GRAPHICS, ANIMATION, SOUND EFFECTS / FEATURES 'HAL' SOFTWARE SPEECH. YOU CAN BE THE BAD GUYS OR THE GOOD GUYS - NUKING IT OUT FROM THE COMFORT OF YOUR EASY-CHAIR.

FLIP & FLOP

FIR.....(D).....<40.00.....NA
INVENTIVE ANIMATED GAME HAS YOU HOPPING ALL OVER THE PLACE (THEN, JUST WHEN YOU GET THE HANG OF THINGS, YOUR SUDDENLY UPSIDE DOWN!)

MAN FROM N-10 / FLASHMAN

TQL.....(D).....19.95.....***+
'MAN FROM N-10' IS A WELL-DONE 'MISSION-IMPOSSIBLE' TYPE GAME. 'FLASHMAN', ON THE OTHER HAND,... WELL, THINK OF IT AS A FREE GIFT.



SAUDER ATTACK!

SAC.....(D/T).....29.50.....NA
THE LITERATURE SHOWS A VERY IMPRESSIVE COLOR SCREEN PHOTO. COULD BE GOOD!

HI-RISE

MLI.....(D).....(NA).....NA
INTERESTING: LOOKS LIKE THE COMPUTER VERSION OF THE GREAT CHILDRENS BLOCK-BALANCING GAME, 'BLOCK-HEAD'.
DINO EGGS

MLI.....(D).....(NA).....NA
PREHISTORIC THEME MULTI-LEVEL ARCADE GAME.

CONVENTIONAL GAMES



VENDOR CODE	MEDIA	PRICE	RTG.
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==>> ODESTA'S "MIND OF MAN" SERIES IS NOW AVAILABLE FOR THE 64. THESE ARE ABSOLUTELY THE BEST! (MAY BE PURCHASED SEPARATELY OR TOGETHER IN A CLASSY BOX AT A REDUCED PRICE.) (INCLUDES CHESS 7.0 / ODIN / & CHECKERS 2.1).

CHESS 7.0

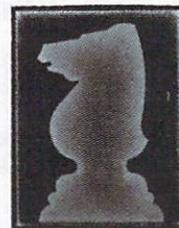
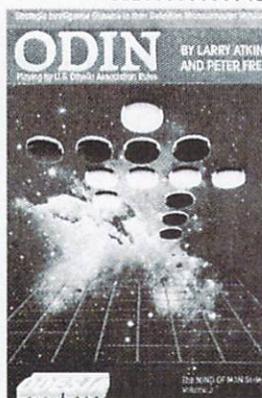
ODE.....(D).....69.95.....****
THESE GAMES DON'T JUST PLAY AGAINST YOU, THEY TEACH AND HELP YOU ANALYZE THE GAME AND YOUR PLAYING STYLE. YOU CAN SET UP SITUATIONS, REPLAY GAMES, SWITCH SIDES, REVEAL GRAPHICALLY WHICH PIECES AFFECT OR ARE AFFECTED BY OTHER PIECES, WATCH THE COMPUTER 'THINK', GET ADVICE FROM THE COMPUTER IF YOU'RE STUCK. 3 KEYS CONTROL ALL FUNCTIONS. LEVELS OF PLAY FROM BEGINNER TO MASTER.

HOW ABOUT A NICE GAME OF CHESS?

ODE.....(D).....29.95.....****
SAME ANALYTICAL FEATURES & PLAYS THRU ALL BUT THE HARDEST LEVELS OF CHESS 7.0 ABOVE, INCLUDES SEVERAL ON-SCREEN GRAPHICALLY ILLUSTRATED CHAPTERS OF INSTRUCTION FROM PIECE IDENTIFICATION & OPENINGS TO DEVELOPMENT AND ENDGAMES. THIS IS PROGRAMMING DESIGN, EXECUTION, AND DOCUMENTATION AT ITS FINEST!
(SEE 'GALLERY' THIS ISSUE)

CHECKERS 2.1

ODE.....(D).....49.95.....NA



ODIN (OTHELLO)

ODE.....(D).....49.95.....NA

CONVENTIONAL GAMES CONT'D



RENAISSANCE (OTHELLO)
 UMI.....(T).....29.95.....****
 (SEE "GALLERY" FALL '83 ISSUE)

GRANDMASTER (CHESS)
 UMI.....(T).....32.95.....****
 (SEE "GALLERY" FALL '83 ISSUE)

WORDRACE
 DON.....(D/T).....24.95/19.95.....***+
 FOR 1-4 PLAYERS/ 2000 WORDS AND DEFINITIONS/ MULTIPLE
 CHOICE GUESSING GAME/ WORDS, SPORTS, & FAMOUS PERSONS
 SECTIONS.

COMPELLO (OTHELLO)
 FAN.....(D/T).....17.95/15.95.....NA

SARGON II
 HAY.....(D/T).....(NA).....NA
 ONE OF THE ORIGINAL COMPUTER CHESS PACKAGES FOR MICRO--
 COMPUTERS.

60
 HAY.....(D/T).....(NA).....NA
 THE CLASSIC ORIENTAL BOARD GAME.

BANDIT (SLOT MACHINE SIMULATION)
 CAS.....(NA).....15.99.....NA

CASINO CRAPS
 6PM.....(T).....12.95.....NA

64 BLACKJACK
 DES.....(T).....18.00.....NA

64 KENO
 DES.....(T).....16.00.....NA

ROCKY LARUE'S CASINO
 GAT.....(T).....29.95.....NA
 SLOTS / BLACKJACK / KENO / POKER / CRAPS / & MADAM
 MAGENTA'S LOUNGE! ALL INCLUDED.

BACKGAMMON
 STC.....(T).....24.00.....NA

64 YAHTZEE
 GAT.....(T).....20.00.....NA
 SPRITES AND SOUND FOR UP TO 10 PLAYERS.

MONOPOLY
 MYS.....(D/T).....24.95/19.95.....NA

KONNECT FOUR
 6PM.....(T).....10.95.....NA

CODEBREAKER
 6TR.....(T).....20.00.....NA

EUCHRE
 HUT.....(D/T).....29.95.....NA
 FOUR HANDED EUCHRE: YOU VS. THE 64- GOOD LUCK!

CRIBBAGE 64
 LIT.....(D/T).....(NA).....NA

CRIBBAGE
 ABA.....(T/D).....14.95/17.95.....NA

SEARCH SERIES
 T&F.....(T).....19.95.....NA
 FIND WORDS IN GRIDS OF LETTERS: 3 PACKAGES, EACH WITH 3
 CATEGORIES: WORDSEARCH (CAPITALS/ JUMBLED/ ANIMALS) -
 SPORTSEARCH (PRO TEAMS/ COLLEGE TEAMS/ SPORT GAMES) -
 ARCADESEARCH (HOME VIDEO GAMES/ ARCADE VIDEO GAMES/
 FAMOUS VIDEO GAME CHARACTERS).

64 MIND BOGGLER
 DES.....(T).....15.00.....NA

SPELLATHON
 FAN.....(D/T).....21.95/19.95.....NA

WORDLORD
 6TR.....(T).....15.00.....NA

WORD MATCH
 SIM.....(NA).....14.95.....NA

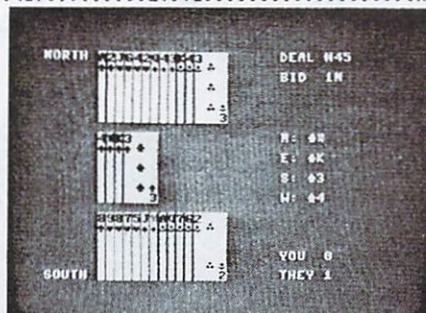
SCRAMBLERS (3 WORD GAMES)
 RAM.....(T).....19.95.....NA
 NUMBER JOTTO
 SIM.....(NA).....14.95.....NA
 QUIZAGON
 CSI.....(NA).....(NA).....NA
 "6000 QUESTIONS EXPLORE YOUR KNOWLEDGE" IN THE AREAS OF
 SCIENCE, SPORTS, ENTERTAINMENT, AND POTPOURRI.

NEW ADDITIONS

CASINO 64 (SLOTS & POKER)
 TOL.....(D).....19.99.....****
 'SLOTS' IS WELL DONE WITH SMOOTH ANIMATION AND GREAT
 SOUND-EFFECTS. WE FOUND IT VERY CLOSE TO THE VIDEO
 SLOTS IN VEGAS (BOTH IN PLAY AND ODDS). 'POKER' IS A
 DECENT SIMULATION OF THE NEW VIDEO POKER GAMES IN THE
 CASINOS.
 (SEE 'GALLERY' THIS ISSUE)

BACKGAMMON
 ODE.....(D).....(NA).....NA
 NEW FROM THE 'MIND OF MAN' FOLKS. YOU CAN EXPECT THIS
 TO BE THE DEFINITIVE COMPUTER BACKGAMMON PRODUCT FOR
 SOME TIME.

CASINO SPECIAL (VEGAS ODDS: DRAW POKER/ BLACK JACK/ SLOTS)
 SMX.....(D).....29.95.....NA



BRIDGE
 HAN.....(NA).....39.95.....NA
 FULL COLOR / HI-RES GRAPHICS.

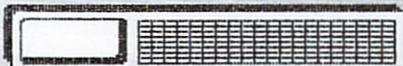
PUZZLE MANIA
 RDS.....(D).....(NA).....NA
 AT LAST, ON-SCREEN COLOR GRAPHICS JIGSAW PUZZLES! COMES
 WITH 7 PUZZLES INCLUDED, OR CREATE YOUR OWN 16-COLOR
 PICTURES AND THE PROGRAM WILL TURN THEM INTO PUZZLES
 (WHICH MAY BE SAVED TO DISK)! SIX LEVELS OF DIFFICULTY.
 COMPETE OR COOPERATE, SAVE WORK IN PROGRESS. NEAT.

CRYPTOPUZZLES (SIX AVAILABLE)
 PZL.....(NA).....11.95 EACH.....NA
 EACH IS A SET OF ENCRYPTED MESSAGES WHICH YOU MUST
 DECODE BY WRITING PROGRAMS THAT WILL BREAK THE CODE.

CASINO ROULETTE
 POR.....(D/T).....19.95.....NA
 SOUND, COLOR, GRAPHICS. BOARD DISPLAY SHOWS CHIPS
 PLACED / AMERICAN OR EUROPEAN STYLE RULES / MULTIPLE
 PLAYERS.



KEN USTON'S PROFESSIONAL BLACKJACK (TM)
 SCR.....(D).....(NA).....NA
 THE LAST WORD IN BLACKJACK SOFTWARE: DUPLICATES RULES
 AND VARIATIONS FOR 70 OF THE WORLD'S CASINOS / CREATES
 OVER 39 MILLION PLAYING SITUATIONS / COLORFUL GRAPHICS
 AND SOUND / INCLUDES EXTENSIVE CARD-COUNTING EXERCISES.
 (MR. USTON WAS REPORTEDLY RAKING IN BIG \$\$\$ FROM THE
 BLACKJACK TABLES AT THE WINTER CES SHOW, WHEN NOT
 OCCUPIED WITH SOFTWARE MARKETING ACTIVITIES, SO HE MAY
 KNOW WHAT HE'S TALKING ABOUT!)

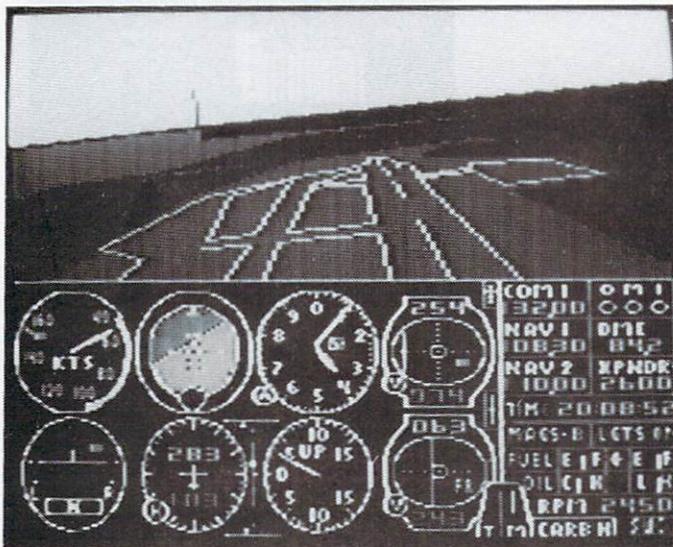


STRATEGY & SIMULATION GAMES

PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

>> AVALON HILL GAME COMPANY ALSO HAS SEVERAL GAMES WRITTEN FOR THE PET WHICH RUN FINE ON THE 64 (CHARACTER GRAPHICS ONLY). TITLES INCLUDE: / TANKTICS / ANDROMEDA CONQUEST / MIDWAY CAMPAIGN / B-1 NUCLEAR BOMBER / DRAW POKER / NUKEMAR /.

AHG.....(T).....16.00 - 24.00...***
SILICON WARRIOR
 EPY.....(D).....<40.00.....NA
 3-D CHESS-LIKE ACTION/STRATEGY GAME. GOOD GRAPHICS.
 KENTUCKY DERBY
 SIM.....(NA).....19.95.....NA
 64 FINANCE
 DES.....(T).....20.00.....NA
 STOCK MARKET SIMULATION
 WALL STREET
 TMW.....(T/D).....24.95.....NA
 FUR TRAPPER
 BRI.....(T).....14.95.....NA
 HIGH SEAS
 BRI.....(T).....14.95.....NA



FLIGHT SIMULATOR II
 SUB.....(D).....49.95.....NA
 HI-RES REAL-TIME COLOR ANIMATED FLIGHT SIMULATOR; PRACTICE TAKEOFFS, LANDINGS, & AEROBATICS IN YOUR PIPER 181 CHEROKEE ARCHER, OR FLY INTO A WORLD WAR I DOGFIGHT. INCLUDES 80 AIRPORTS IN N.Y., CHICAGO, SEATTLE, AND L.A./ ADJUSTABLE WEATHER CONDITIONS/ COMPLETE INSTRUMENTATION.

HELLCAT ACE
 MPS.....(R/T).....29.95.....NA
 3-D COMBAT FLYING SIMULATION.

WINGMAN / MIG ALLEY ACE
 MPS.....(R/T).....34.95.EACH.....NA
 "PLAYER VS. PLAYER, HEAD TO HEAD, SPLIT SCREEN 3-D COMBAT FLYING SIMULATIONS

JURY TRIAL
 NAV.....(NA).....29.00.....NA
 YOU ARE THE PROSECUTOR/ THE COMPUTER IS THE JURY/ THOUSANDS OF CASES POSSIBLE IN THIS COURTROOM SIMULATION.

EAGLES
 STR.....(D).....39.95.....NA
 FLY THE CLASSIC WAR-PLANES, OR DESIGN AND FLY YOUR OWN

CHAMPIONSHIP GOLF
 HAY.....(D/T).....(NA).....NA
RINGSIDE SEAT
 STR.....(D).....39.95.....NA
 SEMI-ANIMATED BOXING SIMULATION- ARRANGE THE MATCH-UPS OF THE CENTURY, SEE WHO WOULD HAVE WON.

NEW ADDITIONS

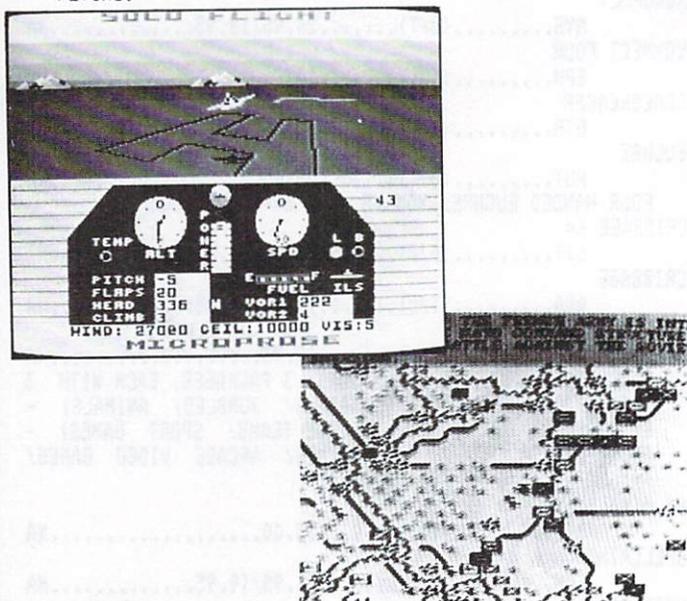
COMBAT LEADER
 STR.....(D).....39.95.....****
 SCROLLING HI-RES BATTLEFIELD SHOWS TREES, ROCKS, TOPOGRAPHY, ENEMY ARMOR. COMMAND YOUR 5 TANKS TOGETHER, OR INDIVIDUALLY, DEPLOY FOOT TROOPS, SEND COMMANDS VIA RADIO (ON SCREEN COMMAND LINE.) DESIGN MODE ALLOWS YOU TO CREATE YOUR OWN SCENARIOS. SIMPLE OR VERY ELABORATE VERSIONS MAY BE PLAYED.

DRAGONRIDERS OF PERN
 EPY.....(D).....<40.00.....****
 BASED ON THE POPULAR ANNE MCCAFFREY FANTASY NOVELS. YOU ARE ONE OF THE WEYR LEADERS, RIDING YOUR DRAGON, FIGHTING THE DEADLY 'THREAD' AND MANEUVERING THRU THE DELICATE POLITICS OF THE LORD HOLDERS.
 (SEE 'GALLERY' THIS ISSUE)

POOL 64
 ABA.....(D/T).....17.95/14.95.....****-
 PRETTY NICE POOL SIMULATION. AIMS & SHOOT WITH KEYBOARD / REALISTIC PHYSICS
 (SEE 'GALLERY' THIS ISSUE)

IFR (FLIGHT SIMULATOR)
 ACA.....(D/T).....29.95.....****
 THIS FLIGHT SIMULATOR, WHILE LACKING A TERRAIN VIEW, IS DETAILED FUNCTIONALLY WITH APPARENTLY ACCURATE INSTRUMENTATION AND RESPONSES (I'M NO PILOT SO HOW DO I KNOW?). YOU GET RATED FOR YOUR PERFORMANCE LANDING AT VARIOUS AIRPORTS. (MAKE SURE YOU'VE GOT THE LANDING GEAR DOWN!)

SOLO FLIGHT
 MPS.....(D/T).....34.95.....NA
 GREAT-LOOKING REAL-TIME LIGHT AIRPLANE SIMULATION. 3-D TERRAIN GRAPHICS, MULTIPLE AIRPORTS, VARYING CONDITIONS, FULL INSTRUMENTATION, AIR-MAIL GAME MODE, VFR & IFR FLYING.



NATO COMMANDER
 MPS.....(D/T).....34.95.....NA
 ON-SCREEN SCROLLING EUROPEAN WAR MAP / REAL-TIME / FIVE SCENARIOS / NEWS SERVICE UPDATES / YOU COMMAND INFANTRY, MECHANIZED ARMOR, AND HELICOPTERS.

STRATEGY & SIMULATION CONT'D

PANZER-JAGD (TANK HUNT)
 AHG.....(D).....25.00.....NA
 WWII EASTERN FRONT GRAPHIC WAR GAME,
 T.A.C.
 AHG.....(D).....40.00.....NA
 TACTICAL ARMOR COMMAND IN WORLD WAR II. HI-RES GRAPHICS
 & SOUND. FIVE SCENARIOS. CONTROL EIGHT VEHICLES, GUNS,
 & SQUADS SIMULTANEOUSLY.
 COMPUTER STOCKS AND BONDS
 AHG.....(D).....20.00.....NA
 PLAY THE STOCK MARKET (WITH THE COMPUTER'S MONEY).

GAMES COLLECTIONS

CURSOR 64 (#1-#5)
 CUR.....(T).....12.95 EACH.....***
 64 COLLECTION (#1 THRU #6)
 PUB.....(T/D).....10.00 EACH.....***+
 AN EXCELLENT VALUE: AT LEAST 25 PROGRAMS PER DISK OR
 TAPE.

TEXT ADVENTURE GAMES

====>> THE INFOCOM ADVENTURE SERIES ARE THE LEADING TEXT-
 BASED ADVENTURE GAMES. THEY ALL INCORPORATE A VERY
 POWERFUL LANGUAGE INTERPRETER (PARSER) WHICH HAS A
 VOCABULARY OF ABOUT 600 WORDS, ALLOWING INPUT OF WHOLE AND
 MULTIPLE SENTENCES INCLUDING ADJECTIVES (IE: TAKE THE ROUGH
 OBJECT AND THE LONG DEVICE. PUT THE OBJECT AND THE DEVICE
 IN THE OPEN CONTAINER.). THIS IS VERY IMPRESSIVE TO
 EXPERIENCE AND GIVES AN UNCANNY SENSE OF INTELLIGENCE IN
 THE MACHINE. (INFOCOM EMPHASIZES THAT GRAPHICS HAVE BEEN
 DELIBERATELY OMITTED TO ENHANCE THE USE OF THE IMAGINATION.
 WE FEEL IT IS MORE LIKELY DUE TO THE DIFFICULTY & EXPENSE
 OF WRITING GRAPHICS ROUTINES FOR THE WIDE NUMBER OF SYSTEMS
 WHICH THEIR GAMES WILL RUN ON NOW. WE FEEL THAT SIMPLE
 GRAPHIC ON-SCREEN MAPPING WOULD AD TREMENDOUSLY TO THESE
 OTHERWISE EXCELLENT GAMES AND NAIL A 5-STAR RATING TO
 BOOT!)

(* NOTE: MOST OF THE INFO-DESIGNS GAMES ARE NOW AVAILABLE
 UNDER THE COMMODORE LABEL AT LOWER PRICES AND IN LESS
 ATTRACTIVE PACKAGING.)



ZORK-I (ALSO II & III)
 INF.....(D).....39.95.EACH.....***
 THE ORIGINAL ADVENTURE CLASSIC (AND 2 SEQUELS).

DEADLINE
 INF.....(D).....49.95.....****+
 YOU ARE THE DETECTIVE SOLVING A MURDER IN THIS EXCITING
 ADVENTURE. VERY REALISTIC CHARACTERS WITH DISTINCT
 PERSONALITIES
 STARCROSS
 INF.....(D).....39.95.....***
 SCIENCE FICTION THEME.
 SUSPENDED
 INF.....(D).....49.95.....****+
 (SEE "GALLERY" FALL '83 ISSUE.)
 INFIDEL/ ENCHANTER/ THE WITNESS/ PLANETFALL/ SORCERER
 INF.....(D).....49.95 EACH.....NA
 4 MORE "INTERACTIVE FANTASIES" FROM THE COMPANY THAT
 WROTE THE BOOK ON INTERACTIVE FANTASY.
 DUNGEONS OF DEATH / ESCAPE FROM MARS / PYRAMID
 AAR.....(D/T).....19.95/14.95.EA.....NA
 TREASURE PAK (ADVENTURE / CAVES OF SILVER / SHUTTLE VOYAGE)
 COM.....(D/T).....19.95/14.95.....NA
 CARNAC CAVERNS
 LIT.....(NA).....(NA).....NA
 EERIE MANSION
 MYS.....(D/T).....24.95/19.95.....NA
 WHO-DUN-IT / BANSHEE CASTLE
 RAM.....(NA).....19.95 EA.....NA
 ADVENTURE PAK 1 (JACK AND THE BEANSTALK / COMPUTER
 ADVENTURE / MOON BASE ALPHA
 VCT.....(D/T).....22.95/19.95.....NA
 ADVENTURE PAK 2 (AFRICAN ESCAPE / HOSPITAL ADVENTURE / BOMB
 THREAT)
 VCT.....(D//T).....22.95/19.95.....NA

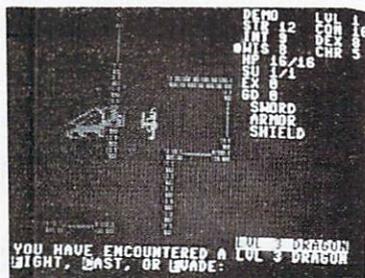
GRAPHIC ADVENTURE GAMES

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
TEMPLE OF APSHAI	EPY.....(D/T).....		39.95.....	****+
(SEE "GALLERY" FALL '83 ISSUE.)				
UPPER REACHES OF APSHAI	EPY.....(D/T).....		19.95.....	***
EXPANSION MODULE FOR "TEMPLE" ABOVE.				
CURSE OF RA	EPY.....(D/T).....		10.95.....	***
EXPANSION MODULE FOR "TEMPLE" ABOVE.				
SWORD OF FARGOAL	EPY.....(D/T).....		29.95.....	***
"JUNIOR" VERSION OF TEMPLE GAMES. SIMPLER COMMAND INTERFACE FOR YOUNGER OR LESS PATIENT PLAYERS.				
GOTMORG'S LAIR (SEMI-GRAPHIC)	PRG.....(D/T).....		39.95.....	***
OCCASSIONAL HI-RES GRAPHICS, CUSTOM SCRIPT FONTS, AND SOUNDS HIGHLIGHT THIS DETAILED ADVENTURE GAME.				
GRAVE ROBBERS	VCT.....(T).....		14.95.....	***
NOW INCLUDES A BONUS GAME WHICH YOU CAN ACCESS UPON SOLVING THE ADVENTURE.				
MURDER ON THE ZINDERNEUF	ELE.....(D).....		40.00.....	NA
GATEWAY TO APSHAI	EPY.....(R).....(NA).....			NA
CARTRIDGE SEQUEL TO "TEMPLE" SERIES.				
QUIZARDRY	PIQ.....(D).....		36.95.....	NA
GRAPHICS ADVENTURE GAME IS SORT OF A CROSS BETWEEN 'TRIVIAL PURSUIT', AND DUNGEONS AND DRAGONS. ADVANCE THRU THE GAME AND FIND THE SIX KEYS USING YOUR KNOWLEDGE OF THE OBSCURE.				

GRAPHIC ADVENTURES CONT'D

ROBBERS OF THE LOST TOMB
 TMW.....(T/D).....24.95.....N.A.
 WARRIOR OF RAS SERIES (DUNZHIN / KAIV / WYLDE / ZIGGURAT)
 INS.....(D/T).....39.95 EA.....NA
 REAL-TIME ADVENTURES IN M.L. WITH HI-RES COLOR GRAPHICS,
 SOUND.
 GYPSUM CAVES
 ADI.....(D/T).....15.95/14.95.....NA
 THE WIZARD'S TOWER
 AAR.....(D/T).....19.95/14.95.....NA
 MOUNTAIN KING
 CBS.....(NA).....(NA).....NA

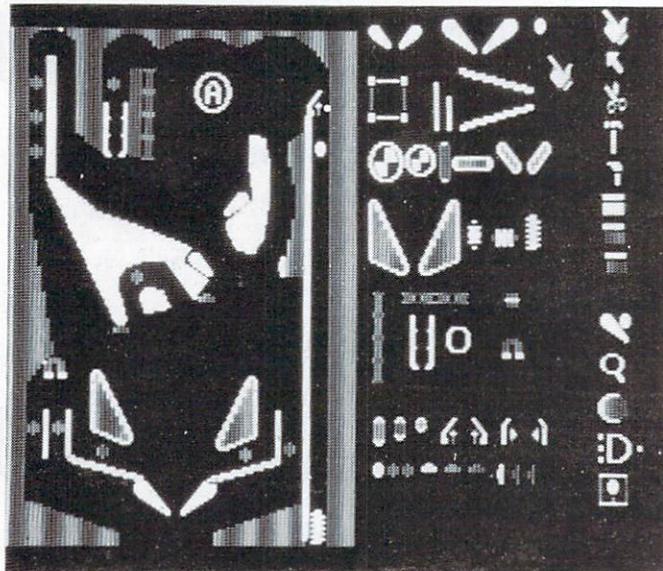
NEW ADDITIONS



TELENGARD
 AHS.....(D).....23.00.....NA
 REAL-TIME FANTASY ROLE-PLAYING GAME. MONSTERS & MAGIC
 ABOUND.
 S.A.G.A. SERIES (SCOTT ADAMS GRAPHIC ADVENTURE)
 ADV.....(NA).....(NA).....NA
 THESE HI-RES GRAPHICS ADVENTURES ARE COMPATIBLE WITH THE
 VOTRAX VOICE SYNTHESIZER (ENABLING THEM TO TALK!).
 UNICORN ADVENTURE
 LGN.....(D/T).....29.95.....***+
 6TH GRADER DAWN LOGGINS & HER MOM WROTE AND NOW MARKET
 THIS INTERESTING GRAPHIC ADVENTURE CONCERNED WITH A BABY
 UNICORN. WRITTEN ALL IN BASIC WITH CHARACTER GRAPHICS.
 THE GOLDEN BATON
 CDC.....(D).....27.95.....***+
 A NOTICEABLY BRITISH ADVENTURE (WITH ITS PETROL AND
 SPANNERS) INTERESTING SCENES WITH A SORT OF 'GRAPHICS ON
 DEMAND', THAT ONLY DRAWS PICTURES WHEN YOU WANT TO SEE
 WHERE YOU ARE. ONLY PROBLEM IS, THE DRAWING IS A BIT
 SLOW AND MAY FRUSTRATE LESS PATIENT ADVENTURERS.
 (SEE 'GALLERY' THIS ISSUE)
 INSTITUTE
 SCR.....(D).....29.95.....NA
 WATCH THE FOUR 'DREAMS' TO GET CLUES IN THIS FREUDIAN
 ADVENTURE.

OTHER RECREATIONAL SOFTWARE

UP FOR GRABS
 SPI.....(R).....34.95.....***
 FUN CROSSWORD-TYPE PUZZLE FOR UP TO FOUR PLAYERS OF
 VARIOUS AGES AND SKILLS. JOYSTICKS OR PADDLES. GOOD
 GRAPHICS.
 FRACTION FEVER
 SPI.....(R).....34.95.....***
 MOONDUST
 CRE.....(R).....34.95.....NA
 UNUSUAL GAME WHICH CREATES MUSIC AND PLEASING GRAPHICS



PINBALL CONSTRUCTION SET (BILL BUDGE)
 ELE.....(D).....40.00.....****
 INFO-64'S CHOICE FOR BEST RECREATIONAL SOFTWARE OF 1983.
 MUCH MORE THAN A GAME, YOU CAN BUILD ALMOST ANY PINBALL
 GAME YOU CAN IMAGINE USING A SUPER PARTS BOX OF
 COMPONENTS, THEN GO TO A SCREEN THAT LETS YOU CONTROL
 GRAVITY, REBOUND STRENGTH ETC. NEXT, YOU CAN
 GRAPHICALLY HOOK UP THE TARGETS AND SOUND EFFECTS FROM A
 GRAPHIC WIRING DIAGRAM SCREEN. FINISHED GAMES MAY BE
 OFF-LOADED TO DISK AND RUN INDEPENDENT OF THE ORIGINAL
 PROGRAM. COMES WITH SEVERAL PRE-DESIGNED GAMES FOR
 INSTANT PLAY. WE WANT TO SEE MORE OF THIS GOLD FROM
 ELECTRONIC ARTS!
 (SEE 'GALLERY' THIS ISSUE)

IN SEARCH OF THE MOST AMAZING THING
 SPIN.....(D).....39.95.....NA
 ANOTHER UNUSUAL GAME WHICH EXPOSES CHILDREN TO
 PROBLEM-SOLVING (WITH ALIENS), ECONOMICS, NAVIGATION,
 ETC.



FACEMAKER
 SPI.....(R/D).....34.95.....NA
 STORY MACHINE
 SPI.....(R/D).....34.95.....NA
 KINDERCOMP
 SPI.....(R/D).....29.95.....NA
 COSMIC LIFE
 SPI.....(R).....(NA).....NA
 MAGGIE
 RAM.....(T).....19.95.....NA
 MAGGIE IS RELATED TO 'ELIZA', THE SIMULATED
 PSYCHOLOGIST. YOU SUPPLY THE COUCH.
 SPACE CADET
 FAN.....(D/T).....17.95/15.95.....NA



EDU-GAMES



UP FOR GRABS

SPI.....(R).....34.95.....****
 FUN CROSSWORD-TYPE PUZZLE FOR UP TO FOUR PLAYERS OF VARIOUS AGES AND SKILLS. JOYSTICKS OR PADDLES. GOOD GRAPHICS.

FRACTION FEVER
 SPI.....(R).....34.95.....****+
 HOP YOUR POGO STICK ONTO THE RIGHT FRACTION SQUARES, AND AN ELEVATOR WILL LIFT YOU UP TO HIGHER (AND MORE DIFFICULT) LEVELS. GUESS WRONG AND YOU MAY BE IN FOR A FALL.

(SEE 'GALLERY' THIS ISSUE.)

LEARNINGWARE/WIZARD OF WORDS/THE GAME SHOW (ETC.)

CAI.....(D).....(NA).....NA
 COMPREHENSIVE-SOUNDING LINE OF EDUCATIONAL SOFTWARE: ALL INCLUDE COLOR ANIMATION, BUILT-IN LIBRARY OF SUBJECTS, AND AUTHORIZING FEATURES FOR INDIVIDUAL TAILORING. FREE BACKUP DISK & GUARANTEED. (WE ARE INTRIGUED WITH THE GAME-SHOW FORMAT OF THREE OF THESE PACKAGES- THE STUDENT BECOMES A GUEST ON A TV GAME SHOW PRESUMABLY MASTERING THE SUBJECT IN THE COURSE OF PERFORMING WELL ON THE 'TV SHOW'- SOUNDS LIKE A GREAT APPROACH!)

PINBALL MATH

TAY.....(D/T).....24.95/19.95.....NA
 TRIVIA!

DIG.....(T/D).....14.95/19.95.....NA
 YOUR CHOICE OF GENERAL & MOVIES / SCIENCE & HISTORY / LITERARY & QUOTATIONS.

EARLY GAMES SERIES

CSI.....(?).....(NA).....NA
 FUN LEARNING ACTIVITIES FOR 2 1/2 TO 12 YRS. THESE USE PICTURE MENUS AND GRAPHICS AND COVER SHAPE, NUMBER, & LETTER EXPOSURE/ MUSIC/ ELEM. MATH/ FRACTIONS ETC.

NEW ADDITIONS

THE FACTORY

SNB.....(D).....39.95.....****
 'THE FACTORY' IS A WONDERFUL EDU-GAME WHICH STIMULATES PROBLEM-SOLVING, VISUALIZATION, AND SPATIAL COMPREHENSION. PLAYERS MUST USE A VARIETY OF MACHINES TO CREATE SIMPLE TO COMPLEX PARTS. (I JUST WISH THERE WERE A FEW MORE OF THE DELIGHTFUL ANIMATED MACHINES)
 (SEE 'GALLERY' THIS ISSUE)

PERPLEXITY

DAB.....(D/T).....29.95.....****+
 A SERIES OF CLASSIC 'THINKING PUZZLES' THE BEST OF WHICH IS 'ELECTRO-CONNECTION' WHICH HAS YOU TRYING TO ROUTE 'WIRING' ACROSS THE SCREEN WITHOUT CROSSING OVER YOURSELF (LIKE CIRCUIT DESIGN).
 (SEE 'GALLERY' THIS ISSUE)

FLOWER POWER

SOH.....(D).....19.95.....****+
 WHILE WORKING ON YOUR VARIOUS AREAS OF MATH, YOU WILL BE GROWING A COLORFUL GARDEN OF FLOWERS (WRONG ANSWERS GROW WEEDS).
 (SEE 'GALLERY' THIS ISSUE)

LITTLE RED RIDING HOOD

PLA.....(D).....29.95.....****
 ONE OF A SERIES OF BEDTIME STORIES. REQUIRES 'EDUMATE LIGHT PEN'. FEATURES SOFTWARE-SYNTHEZIZED VOICE (FROM FREDDY THE FROG AKA "S.A.M."- THE SOFTWARE ANIMATED MOUTH.)
 (SEE 'GALLERY' THIS ISSUE)

CHARLIE AND THE CHOCOLATE FACTORY

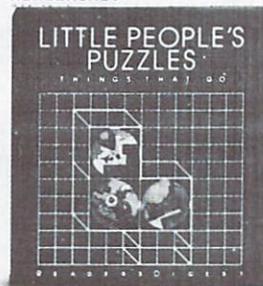
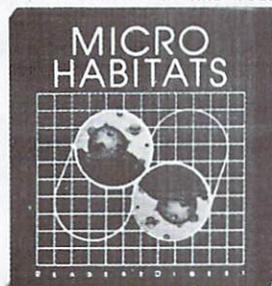
BY R. PAUL KAY
 and E. The country ...
 suddenly -- be -- up -- a
 candy-buying -- everybody
 -- practically -- that
 -- remaining -- fully
 women -- seen -- into
 and -- ten
 candy -- at -- time -- tears
 the -- and
 eagerly -- for -- stint
 solden

M-SS-NG L-NKS

SNB.....(D).....39.95.....NA
 PAGES FULL OF TEXT FROM CLASSICS OF CHILDREN'S LITERATURE APPEAR WITH MISSING WORDS. AS THE PLAYER FILLS IN BLANKS WITH LETTERS AND THE PASSAGE UNFOLDS, WRITING, READING, SPELLING, GRAMMAR, AND COMPREHENSION SKILLS ARE PAINLESSLY ABSORBED AND SHARPENED.

THE POND

SNB.....(D).....39.95.....NA
 GETTING YOUR FROG ACROSS THE POND STIMULATES EXPERIMENTATION AND VISUAL REASONING.



MICRO HABITATS / LITTLE PEOPLE'S PUZZLES / ALPHABET BEASTS

RDS.....(D).....(NA).....NA
 SOME OF THE INTERESTING-LOOKING SOFTWARE COMING OUT OF READER'S DIGEST FOR KIDS. WHAT WE HAVE HERE ARE PUZZLES, A CREATIVE CONSTRUCTION SET, AND 'KOOKY, UNSPOOKY' ALPHABET CRITTERS / ALL WITH COLOR, SOUND, ANIMATION, AND MUSIC.

THE TOY BOX

M&M.....(D).....34.95.....NA
 COOPERATIVE PLAY ENVIRONMENT OFFERS DRAWING, AND GAME-PLAYING TO TEACH COOPERATION AND COMMUNICATION SKILLS AS WELL AS ABC'S NUMBERS, WORDS, SHAPES & PATTERNS.

PROGRAMMING LANGUAGES



LOGO

CBM.....(D).....<80.00.....****
 A NO-CONTEST BEST BUY, AND PROBABLY THE FINEST PIECE OF SOFTWARE TO BEAR THE COMMODORE LABEL TO DATE.
 (SEE REVIEW THIS ISSUE)

VANILLA PILOT

TAM.....(D/T).....29.95.....****+

PILOT II

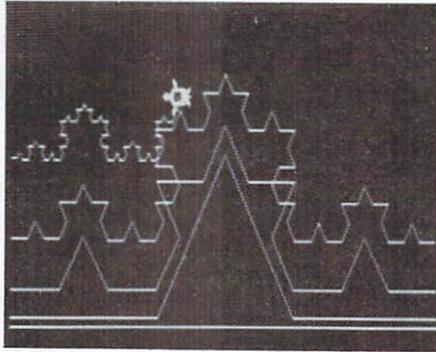
TAM.....(D).....49.95.....NA
 ENHANCED VERSION OF VANILLA PILOT: 25 EDITING COMMANDS, 29 TURTLE GRAPHIC COMMANDS, AND 23 PROGRAM COMMANDS/ SIMPLIFIED ROUTINES FOR SPRITES, HIRES, & SOUND/ MIXED TEXT AND HI-RES TURTLE GRAPHICS/ INTEGRAL SPRITE EDITOR.

C64 FORTH

PER.....(D).....99.95.....****+
 FORTH 79 WITH EXTENSIONS, FULL SCREEN EDITOR AND ASSEMBLER, SUPPORTS HI-RES, CHARACTER, AND SPRITE GRAPHICS, SOUND CAPABILITIES. FULL I/O, IEEE AND BASIC DATA FILE COMPATABILITY, MANUAL WITH EXAMPLES OF BASIC TO FORTH CONVERSIONS, TRACE FOR DEBUGGING.
 (SEE REVIEW THIS ISSUE)

PROGRAMMING LANGUAGES CONT'D

C64-FORTH



FULLFORTH+
 CGR.....(D).....100.00.....NA
 ENHANCED FIG FORTH: STRINGS, FLOATING POINT, EDITOR,
 COND. ASSEMBLER, INTERPRETER. TARGET COMPILER ABLE FOR
 50.00.

64-FORTH
 BSS.....(D).....59.95.....NA
 FIG FORTH WITH EXTENSIONS: VIRTUAL MEMORY / COMPILED
 CODE / TEXT EDITOR AND MACRO ASSEMBLER / DISK & PRINTER
 I/O / DOUBLE PRECISION MATH / FILE HANDLING WORDS /
 COMES WITH 400 WORDS.

FORTH
 MIN.....(D/T).....37.95.....NA
 FIG-FORTH WITH ASSEMBLER / EDITOR / FLOATING POINT /
 GRAPHICS / SOUND / TUTORIAL / SUPPORT. (ALSO ABLE ARE
 TWO TUTORIALS FOR \$13 EA.: GAMES, GRAPHICS, AND SOUND /
 ARTIFICIAL INTELLIGENCE.)

SUPER FORTH 64
 PAE.....(D).....89.00.....NA
 SUPPORTS SOUND, HI RES, COLOR, & SPRITES/ "SAVE TURNKEY"
 GENERATES DISTRIBUTABLE APPLICATIONS DISKS/ CONDITIONAL
 MACRO ASSEMBLER/ SUPPORTS ALL I/O AND 64 PERIPHERALS.

64 FORTH
 HES.....(R).....59.95.....NA
 FIG-TYPE IMPLEMENTATION WITH FULL-SCREEN EDITOR AND
 HORIZONTAL-SCROLLING WINDOW.

TRI FORTH
 TRI.....(?).....(NA).....NA

TINY FORTH
 ABA.....(D/T).....27.95/24.95.....NA

KMM PASCAL
 CGR.....(D).....85.00.....NA
 "...TRUE COMPILER THAT GENERATES MACHINE CODE FROM
 PASCAL SOURCE...EDITOR, COMPILER, TRANSLATOR INCLUDED."

ZOOM PASCAL
 ABA.....(D).....39.95.....NA
 PRODUCES 6502 MACHINE CODE/ FEATURES: FLOATING POINT,
 INTEGERS, STRINGS, FILE HANDLING.

Z-80 VIDEO PAK (WITH CP/M)
 DAT.....(R&D).....299.95.....NA
 CP/M OPERATING SYSTEM AND Z80 MICROPROCESSOR WITH
 80-COL. DISPLAY GENERATOR ALL IN ONE PACKAGE.

ACTION
 OSS.....(R).....99.00.....NA
 SOON TO BE RELEASED FOR THE 64. CLAIMS TO BE FASTEST
 8-BIT LANGUAGE (OVER 100 TIMES THE SPEED OF BASIC).
 128-COLUMN SCREEN EDITOR / MONITOR MODE / ONE-PASS
 COMPILER.

TURTLE GRAPHICS II
 HES.....(R).....59.95.....NA

COMAL

CML.....(D).....19.95.....NA
 ENTHUSIASTICALLY DESCRIBED AS A LANGUAGE POSSESSING THE
 BEST ATTRIBUTES OF BASIC, PASCAL, FORTH, AND ASSEMBLER,
 THIS RELATIVE NEW-COMER IN THE HIGH-LEVEL LANGUAGE SCENE
 SUPPORTS: 40 GRAPHICS STATEMENTS, 10 SPRITE STATEMENTS,
 TURTLE GRAPHICS, HIGH SPEED, RUN-TIME COMPILATION, AUTO
 LINE NUMBERING/RENUMBERING, MERGE, LONG VARIABLE NAMES,
 NAMED PROCEDURES, PARAMETER PASSING, LOCAL & GLOBAL
 VARIABLES, RANDOM ACCESS DISK FILES, END OF FILE DETECT,
 MORE. BOOKS AND NEWSLETTERS ALSO AVAILABLE FROM THE
 FOLKS. FOR A THOROUGH TREATMENT OF THE SUBJECT, SEE
 'COMMODORE' MAGAZINE- VOL4, NUMBER 3 (FALL '83).

CRYSTAL

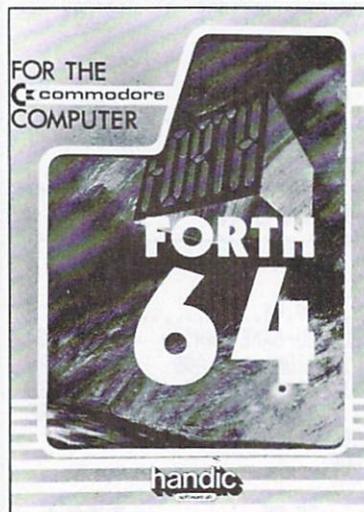
CYB.....(D).....<60.00.....NA
 DEVELOPMENT LANGUAGE ALLOWS INTERMEDIATE LEVEL BASIC
 PROGRAMMERS TO CREATE SOPHISTICATED GAMES. TOTAL
 CONTROL OF SPRITES, INTERRUPTS, SOUND, ANIMATION, ETC.
 USES NO BASIC MEMORY, AND GENERATES STAND-ALONE CODE
 WHICH CAN BE RUN ON ANY 64.

NEVADA COBOL
 CBM.....(D).....<50.00.....NA
 REQUIRES USE OF CP/M CARTRIDGE (ABOVE)

CP/M 2.2
 CBM.....(D).....<75.00.....NA

CP/M
 EST.....(R).....349.00.....NA

NEW ADDITIONS



FORTH 64
 HAN.....(R).....39.95.....NA
 INCLUDES TEXT EDITOR AND MACRO ASSEMBLER. PRINTER AND
 DISK I/O SUPPORTED.

NEVADA FORTRAN
 CBM.....(D).....<50.00.....NA
 REQUIRES USE OF CP/M CARTRIDGE (ABOVE)

APPLICATIONS GENERATORS

THE FOLLOWING THREE PROGRAMS ARE UNUSUAL IN THAT, WHILE WE RESPECT THE EFFORT, QUALITY, CARE, (AND PRESUMABLY SINCERITY) THAT HAVE GONE INTO THEM, WE ARE OF THE OPINION THAT THIS TYPE OF SOFTWARE (AS GOOD AS IT SOUNDS ON PAPER) IS FUNDAMENTALLY A WASTE OF THE CONSUMER'S TIME AND MONEY. THUS THE FOUR STAR RATING FOR PRODUCT QUALITY, ALONG WITH OUR RECOMMENDATION TO APPLY YOUR MONEY AND ENERGY ELSEWHERE (IE TOWARD A GOOD DATABASE MANAGER PRODUCT).

(SEE 'WHY YOU DON'T NEED AN APPLICATIONS GENERATOR' ELSEWHERE THIS ISSUE)

THE LAST ONE

BSS.....(D).....99.95.....****
THIS IS A PROGRAM THAT WRITES BASIC PROGRAMS FOR THE USER BASED ON THE USERS CONCEPTS WHICH ARE EXTRACTED BY THE COMPUTER THRU A QUESTION & ANSWER PROCESS. WHEN "THE LAST ONE" HAS ALL THE INFORMATION IT NEEDS, IT WRITES THE PROGRAM (WHICH CAN NOW STAND ALONE AND BE RUN WITHOUT THE PARENT PROGRAM). GENERATES FLOW CHARTS AND DOCUMENTATION FOR YOUR NEW PROGRAM. (IF YOU HAVE AN APPLE II OR IIE, THIS SAME SOFTWARE COSTS \$395; ON EVERYTHING ELSE IT GOES FOR \$495!)

CODEWRITER

DYT.....(D).....(NA).....****
ALSO WRITES FINISHED STAND-ALONE APPLICATIONS IN BASIC. 'WORK IN PLAIN ENGLISH...DRAW ANY SCREEN LAYOUT, ADD ANY CALCULATIONS...OR HELP MESSAGES YOU NEED...CODEWRITER WRITES ALL THE BASIC CODE.'

HOME FILEWRITER

DYT.....(D).....69.00.....NA
HOME VERSION OF CODEWRITER (ABOVE)/ LACKS MENU AND REPORT GENERATING CAPABILITIES, THO THESE CAN BE ADDED LATER VIA EXPANSION SOFTWARE.

EXTENSIONS TO 'BASIC'

SYSRES

SOL.....(D).....95.00.....****
ABSOLUTELY LOADED WITH FEATURES; FAST-SCROLLING/ RE-DEFINE KEYS/ AUTO & RE-NUMBER/ TRUE MERGES/ FIND-CHANGE WITH WILD-CARDS/ SPACE AND REM REMOVAL/ 3 TRACE MODES TO NAME A VERY, VERY FEW. MAY NOT BE SUITABLE FOR THE CASUAL USER DUE TO COMPLEXITY (THO WE KNOW SEVERAL PEOPLE WHO USE ONLY THREE OR FOUR OF THE SCORES OF COMMANDS AND FUNCTIONS AND FEEL THEY HAVE GOTTEN MORE THAN THEIR MONEY'S WORTH).

GRAPHDDS

INT.....(D).....39.95.....NA
ADDS 12 DOS COMMANDS / 11 HI-RES GRAPHICS COMMANDS / 5 LO-RES GRAPHICS COMMANDS / & 12 MISC. COMMANDS TO BASIC. INCLUDES 20-COMMAND MINI-MON.

BASIC AID

MTS.....(D).....29.95.....NA
DISK UTILITIES INCLUDE: RENUMBER/ SEARCH & REPLACE/ SUBROUTINE EXTRACT/ PROGRAM MERGE/ LINE NUMBER & VARIABLES CROSS-REF.

SCREEN GRAPHICS 64

ABA.....(D/T).....27.95/24.95.....NA
ADDS OVER 20 COMMANDS TO BASIC FOR DRAWING LINES, BOXES, PLOTTING POINTS, MANIPULATING SPRITES. HI-RES & MULTI-COLOR MED.-RES. MODES.

POWER 64

PRL.....(D).....49.95.....****
ADDS DOZENS OF COMMANDS LIKE: MERGE, SEARCH AND REPLACE, RENUMBER, ETC.



ULTRABASIC-64

ABA.....(D/T).....42.95/39.95.....****
ADDS 50 COMMANDS TO BASIC INCLUDING GRAPHICS, MUSIC, AND TURTLE COMMANDS. BUILT-IN SCREEN-DUMP ROUTINES FOR MOST PRINTERS.

(SEE REVIEW: WINTER '83/84 ISSUE)

SIMON'S BASIC

CBM.....(R).....(NA).....NA
THIS CARTRIDGE IS IN LIMITED PRODUCTION, BUT HARD TO FIND. THOSE WHO HAVE FOUND A COPY HAVE LOTS OF GOOD THINGS TO SAY ABOUT IT; ADDS 114 COMMANDS TO BASIC. HI-RES / STRUCTURED PROGRAMMING / MUSIC COMMANDS / & PROGRAMMING AIDS SECTIONS.

PROGRAM EDITOR

WEO.....(?).....29.95.....NA
REWRITE, TROUBLESHOOT & DEBUG; WALKTHRU & QUICKTRACE/ USER-DEFINED FUNCTION KEYS.

D.A.M. (DISK ACCESS MANAGER)

CAN.....(D).....99.95.....NA
PROVIDES FOR ADVANCED DISK-ACCESSING: SUPPORTS SEQUENTIAL ACCESS WITH FIXED AND VARIABLE LENGTH RECORDS/ DIRECT ACCESS BY RECORD #/ INDEXED ACCESS/ KEYS TO 256 BYTES/ MULTIPLE INDICES PER FILE/ RECORDS TO 32,000 BYTES/ 65,000 RECORD PER FILE/ MULTIPLE VOLUMES EXCEEDING DISKETTE CAPACITY/ FILE UTILITIES/ INTERFACES TO BASIC, ASSEMBLER, & OTHER LANGUAGES.

ADVANCE SCREEN AND CHARACTER SET

WEO.....(D).....49.95.....NA
'EXPANDS SCREEN ACCESS. SCROLL 50 ROWS VERTICALLY, 40-120 HORIZONTALLY. FREES 4K OF MEMORY WITH IMPROVED CHARACTER SET'.

SUPER BASIC

RTC.....(D).....<35.00.....NA
ADDS: BASIC 4.0 COMMANDS/ ADDS EXTENDED GRAPHICS & SOUND COMMANDS/ ADDS "B"-SERIES BASIC EXTENSIONS

NEW ADDITIONS

BASIC AID

RTC.....(D).....39.95.....NA
ADDS 33 COMMANDS TO BASIC INCLUDING: FIND, CHANGE, MERGE, MOVE, HEX & BINARY CONVERSIONS, ETC.

MASTER-64

ABA.....(D).....84.95.....NA
ADDS NEARLY 100 COMMANDS TO BASIC COVERING: SCREEN MANAGEMENT, ISAM FILE MANAGEMENT, PRINTER, BASIC 4.0, MACHINE LANGUAGE MONITOR, DIRECT DISK ACCESS, 22 DIGIT PRECISION MATH, DATE CONTROL, AUTO & RENUMBER, PRINT USING, TRACE, ETC. 160 PG. MANUAL.

GRAPHICS BASIC

HES.....(R).....49.95.....NA
SUPPORTS HI-RES GRAPHICS, SPLIT-SCREENS, WINDOWS, SPRITES & MUSIC.

HESKIT 64

HES.....(R).....49.95.....NA
ADDS 22 SINGLE-STROKE EDITING COMMANDS PLUS 30 EXTENSIONS TO BASIC INCLUDING AUTO NUMBERING, SEARCH & REPLACE, COMPRESSION, AND REDEFINITION OF KEYS.

COMPILERS

PETSPEED
 SMA.....(D).....150.00.....NA
 POPULAR COMPILER USED BY MANY SOFTWARE DEVELOPERS
 CURRENTLY. CBM APPROVED.

TINY BASIC COMPILER
 ABA.....(T/D).....19.95/22.95.....NA
 FLOATING POINT COMPILER SUPPORTS IF/THEN, END, INPUT,
 GOSUB, GOTO, PRINT, REM, RETURN, STOP, USR, PEEK, AND
 ALL MATH FUNCTIONS. PRODUCES A COMMENTED LISTING OF
 EQUIVALENT 6502 CODE TO SCREEN OR PRINTER.

BASM (COMPILER/ ASSEMBLER)
 COA.....(D).....99.95.....NA
 "...UP TO 130 TIMES FASTER THAN BASIC...USES THE SYNTAX
 OF BASIC WITH ASSEMBLY LANGUAGE DATA TYPES AND
 ADDRESSING MODES."

DTL COMPILER 64
 CIM.....(NA).....(NA).....NA

64 COMPILER
 DES.....(NA).....100.00.....NA

BASIC COMPILER
 JOU.....(?).....29.95.....NA

INSTA-SPEED
 CIM.....(?).....(NA).....NA

PROGRAMMING ENVIRONMENT

PRODUCT NAME	VENDOR CODE	MEDIA	PRICE	RTG.
MAE (MACRO ASSEMBLER EDITOR)				
EAS.....(D).....99.95.....NA				
COMPLETE 6502 DEVELOPMENT SYSTEM/ WIDELY USED IN THE SOFTWARE INDUSTRY. INCLUDES WORDPROCESSOR.				
PAL 64 (6502 ASSEMBLER)				
PRL.....(D).....49.95.....NA				
BRAD TEMPLETON'S 'FASTEST & EASIEST TO USE' ASSEMBLER SUPPORTS STANDARD MOS MNEMONICS.				
DECHON				
GOS.....(NA).....14.95.....NA				
EDIT & INSPECT CONTENTS OF MEMORY. CONVERT BETWEEN FOUR NUMBER BASES.				
MACROFIRE				
EPI.....(?).....89.00.....NA				
70-COMMAND SCREEN EDITOR/ 3-PASS ASSEMBLER WITH MACRO-1000+ LABELS/ M.L. MONITOR.				
PTD-6510				
PTE.....(D).....65.10.....NA				
ADVANCED DEBUGGER: STEP, BREAKPOINTS, WINDOWING, SUPER COMPLEX CONDITIONAL BREAKS, SYMBOLIC DEBUGGING, PATCH, SHOW PRIOR 128 STEPS, COMPILED BASIC-LIKE LANGUAGE				
6502/6510 PROFESSIONAL DEVELOPMENT SYSTEM				
HES.....(T).....29.95.....NA				
ONE- OR TWO-PASS ASSEMBLER USING STANDARD MOS MNEMONICS AND OPERAND FORMATS.				
HESMON 64				
HES.....(R).....39.95.....NA				
6502/6510 M.L. MONITOR WITH MINI-ASSEMBLER.				
MINI-MON				
INT.....(T/D).....24.95.....NA				
CMAR 64				
CIM.....(NA).....(NA).....NA				
DEVELOP 64				
FRE.....(D/T).....59.95/54.95.....NA				

NEW ADDITIONS

GLOUCESTER COMPUTER C-64 CODEFAX 6502
 BY STEVE BOLGER COPYRIGHT 1983

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1FFE 00 BRK
1FFF 00 BRK
2000 2000 A9 LDA #04
2001 04
2002 2002 8D STA SCRNCLR
2003 2003 21
2004 2004 73
2005 2005 3
2006 2006 A9 TSTPROG
2007 2007 FF 4
2008 2008 48 PHA
2009 2009 A9 LDA #<TSTPROG-1
200A 200A FF 5
200B 200B 20 JSR TSTPROG-6
200C 200C FF 6
200D 200D FF
200E 200E 00 BRK
    
```

A:10 DE ORIGIN A:8: 2000 END A:9: 3FFF

7 LINK CDE END AT: ENDCDE \$2100

CODEFAX 6502

GLD.....(D).....69.00.....NA
 FIRST IN THE NEW CODEFAX FAMILY OF DEVELOPMENT SOFTWARE:
 100% M.L. PROGRAM OPENS AN INTERACTIVE WINDOW ANYWHERE
 IN MEMORY/ DETAILED WINDOW DISPLAY SHOWS: ACTUAL
 ADDRESS, WORK ADDRESS, MACHINE CODE, 7-CHAR. LABELS,
 ASSEMBLY CODE, REFERENCES & OPERANDS, PROMPTS & ERRORS,
 START OF WORKSPACE, END OF WORKSPACE, & MODE. EXTENSIVE
 I/O SUPPORT AVAILABLE FROM THE WINDOW ENVIRONMENT.
 MAKES STEP BY STEP, TRIAL & ERROR EXPERIMENTATION A SNAP
 WITHOUT CONFUSING 'PSEUDODPS', 'CONDITIONALS', 'MACROS',
 ETC. "SIMPLER TO USE THAN 'MONITOR' PROGRAMS, YET MORE
 POWERFUL THAN THE USUAL TWO PASS ASSEMBLER...MAKES
 MACHINE CODE PROGRAMMING FUN!"
 (ALSO AVAILABLE ON EPROM FOR OWNERS OF GLOUCESTER'S
 'PROMQUEEN' @ \$39.00)

CODEFAX 8085 CROSS ASSEMBLER / CODEFAX 6800 CROSS ASSEMBLER

GLD.....(D).....(NA).....NA
 COMING SOON: TWO 'CODEFAX' CROSS-ASSEMBLERS WILL LET YOU
 USE THE C64 FOR DEVELOPING CODE FOR OTHER PROCESSORS
 QUICK FIX (THE SUPER DEBUGGER)

GBF.....(D).....(NA).....NA
 SINGLE-STEPPING PROGRAM ALLOWS ASSEMBLY LANGUAGE
 PROGRAMMERS TO MONITOR THE EFFECTS OF EACH STEP OF THEIR
 PROGRAM. DISPLAYS CONTENTS OF ALL REGISTERS PLUS
 CONTENTS OF MEMORY LOCATIONS YOUR PROGRAM IS USING.

BACKUP & COPY SOFTWARE

THE CLONE MACHINE (now with UNGUARD)

MWD.....(D).....49.95.....***
 COPIES ALL FILE TYPES, INDIVIDUALLY OR ENTIRE DISK/
 SUPPORTS UP TO FOUR DRIVES. WE FOUND THE OPERATION
 CONVENIENT AND DEPENDABLE (THO NO FASTER THAN MOST
 STANDARD BACK-UPS)/ THE EDITING FEATURES ARE GREAT:
 DETAILED DIRECTORIES ARE DISPLAYED WITH TRACK, FILE, &
 RECORD INFO- CHANGES ARE MADE TO TITLES, ID'S, HEADERS
 ETC. BY SIMPLY TYPING OVER OLD TEXT- MANY OTHER
 FUNCTIONS AVAILABLE USING SPECIAL FUNCTION-KEY
 ASSIGNATIONS. 'UNGUARD' IS A SEPARATE PROGRAM ALLOWING
 ANALYSIS AND RECONSTRUCTION OF THE DELIBERATE ERROR
 TRACKS USED IN MOST COPY-PROTECTION SCHEMES. THE
 TECHNIQUE IS SOMEWHAT INVOLVED AND TAKES A GOOD DEAL OF
 USER INTERVENTION.

BACKUP/COPY SOFTWARE CONT'D

SUPER COPY 64

RTC.....(D).....39.95.....***+
 IT IS HARD TO RATE THIS COPY PACKAGE; ON THE ONE HAND, IT IS THE FASTEST WE HAVE SEEN- BACKING UP A FULL DISKETTE IN LESS THAN 10 MINUTES! ON THE OTHER HAND, THE TWIN SINGLE DRIVE OPTION WOULD NOT WORK FOR US AT ALL, NECESSITATING SWAPPING DISKS THRU FOUR PASSES (THIS STILL BEATS THE 6 PASSES USUALLY REQUIRED BY CONVENTIONAL BACKUPS). THE OTHER (MINOR) ANNOYANCE WAS THAT WE GENERALLY HAD TO INITIALIZE THE DRIVE TO GET SUPERCOPY TO LOAD PROPERLY. THE SPEED, HOWEVER, IS THE BOTTOM LINE HERE, & OUTWEIGHS THESE OTHER CONSIDERATIONS.

INFO-64 DOES NOT CONDONE
 UNAUTHORIZED COPYING OF SOFTWARE
 WHETHER FOR PROFIT OR FUN.
 WE DO, HOWEVER, SUPPORT
 THE SOFTWARE PURCHASER'S RIGHT
 TO HAVE PERSONAL BACKUPS
 OF VALUABLE SOFTWARE, AND TO THAT END
 LIST THE FOLLOWING COMMERCIAL PROGRAMS
 WHICH PROVIDE THIS CAPABILITY TO VARYING DEGREES.

DISK DUPLICATOR

H&H.....(D).....9.95.....***
 NO-FRILLS MACHINE LANG. COPY ROUTINE. 6-PASSES FOR FULL DISKETTE. RELIABLE AND PRICED RIGHT.
 DISKIT 64
 PTE.....(D).....75.00.....NA
 FAST SINGLE DISK BACKUP WITH UTILITIES.
 64 DISK CLONE
 DES.....(D).....15.00.....NA
 ONE-PASS BACKUP FOR 2 SINGLE DRIVES.
 COPY CAT 64 (DISK BACKUP W/ UTILS.)
 VIM.....(D).....19.95.....NA
 COPYMAKER
 CGR.....(D).....30.00.....NA
 FAST SINGLE DRIVE BACKUP ROUTINE.
 BACKUP V1.0
 SWP.....(T).....24.95.....NA
 CASSETTE BACKUP ROUTINES.

NEW ADDITIONS

CANADA A/M (ARCHIVAL MAKER)

SKY.....(D).....39.99.....***+
 THIS IS THE EASIEST TO USE BACKUP SYSTEM AVAILABLE TO DATE THAT WILL BREAK MUCH OF THE COPY-PROTECTION IN USE. INFORMATIVE ON-SCREEN STATUS PEADOUTS, USER SIMPLY SWAPS DISKS WHEN PROMPTED, CANADA A/M DOES THE REST.
 ULTRA COPY 64
 ULT.....(D).....39.95.....NA
 CLAIMS TO COPY 98% OF ALL DISK SOFTWARE (INCLUDING MUCH COPY-PROTECTED). RECREATES ERRORS: 20,21,22,23,27, & 29.

MISCELLANEOUS UTILITIES

MENU MAGIC

SIM.....(NA).....19.95.....NA
 DISKETTE FILER
 SIM.....(NA).....24.95.....NA

CASSETTE FILER

SIM.....(NA).....14.95.....NA
 PRINTER UTILITY PROGRAMS
 CAR.....(T).....19.95.....***+
 ALLOWS SCREEN DUMPS TO EPSON, GEMINI, OR PROWRITER PRINTERS. REVERSE DUMPS / FROM PROGRAM OR KEY-TRIGGERED. ALSO PROVIDES FOR PRINTING OF GRAPHICS CHARACTER SET. INCLUDES LARGE-FONT BANNER ROUTINES FOR PRINTER.
 PET LOADER
 ECI.....(T).....23.95.....NA
 PET EMULATOR
 CBM.....(D).....19.95.....***+



AXE/RECOVER

HAC.....(D).....23.99.....***
 * THIS IS A COMBINATION HARDWARE & SOFTWARE PRODUCT. THE AXE IS A SMALL CARTRIDGE WHICH PLUGS IN WHERE YOUR MODEM USUALLY GOES- IT HAS A PUSHBUTTON SWITCH WHICH IS PUSHED TO REACTIVATE THE 64 WITHOUT CLEARING MEMORY. THE M.L. RECOVER SOFTWARE ALLOWS RECOVERY OF PROGRAM IN MEMORY AT THE TIME THE AXE IS ACTIVATED. USES: 'UN-NEW' A PROGRAM, CIRCUMVENT PROTECTED PROGRAMS (FOR LEGITIMATE PURPOSES OF COURSE) WHICH USE LIST, SAVE, & RUN/STOP DISABLING/ STOP 'RUNAWAY' DISKS/ RESTART CARTRIDGES & SIMILAR OPERATIONS.
 DISK SUPPORT 64
 H&H.....(D).....14.95.....***
 RE-CREATE
 RTC.....(D).....<35.00.....NA
 READS ANY ASCII FILES AND CONVERTS THEM TO FORM READABLE BY RICHVALE'S "SCRIPT-64" WORDPROCESSOR.
 ADDS TWELVE DISK COMMANDS (SIMILAR TO COMMODORE WEDGE).
 ADVANCE SERIAL DOS
 WED.....(D).....49.95.....NA
 PROMISES TO LOAD & SAVE PROGRAMS TWICE AS FAST ON YOUR 1541 THRU REPROGRAMMING OF DRIVE.
 EZ/DISK
 SFT.....(D).....29.95.....NA
 DISK UTILITIES/ SIMILAR FEATURES TO COMMODORE WEDGE.
 DISK RETRIEVER
 H&H.....(D).....9.95.....NA
 ALLOWS FOR RECOVERY OF ACCIDENTALLY SCRATCHED FILES AND PROGRAMS FROM DISK.
 FASTFIND FOR THE DATASETTE
 WED.....(D).....14.95.....NA
 'LOAD & SAVE PROGRAMS AT 'FAST FORWARD'
 ADVANCE 1500 PRINTER PROGRAM
 WED.....(D).....49.95.....NA
 'SPEEDS OPERATION OF 1515/1525 PRINTER TO 50 CPS. ADDS FULL DESCENDERS.'
 SOFTLOC
 SFP.....(D).....29.95.....NA
 WITH THIS PACKAGE, USERS MAY MODIFY THEIR DISKS TO BE COPY- & LIST-PROTECTED. 3 SYSTEMS: 7-DIGIT ACCESS CODE, ENCODED PROGRAMS, MODIFIED DISKETTE DIRECTORY.

TELECOMPUTING



PRODUCT NAME
VENDOR CODE MEDIA PRICE RTG.

SMART 64 TERMINAL +3
MTS.....(NA).....49.95.....*****
USER-DEFINED PARAMETERS (BAUD, PARITY ETC.) / COMPILED BASIC/ ONE-KEY LOG-ON / UP & DOWN-LOAD / 28k SAVE BUFFER / BASIC TO TEXT TO BASIC CONVERSION / PRINTER SET-UPS / BUILT-IN WEDGE COMMANDS / TIMER / WORDPRO- COMPATIBLE / FORMATTED END-OF-LINE / ENTIRE 28K BUFFER DUMPS TO DISK IN 3.5 MIN. / VISUAL INDICATION OF BUFFER SPACE REMAINING / ECHO OF TRANSMITTED DATA / SPECIALLY DESIGNED TO OPTIMIZE ACCESS TO COMPUSERVE & COMMODORE'S COMPUSERVE DATABASE. (THIS IS THE WAY YOU GET FREE SOFTWARE WITH YOUR MODEM.) NOW SUPPORTS 1650 AUTO-DIAL MODEM, DATA-20 80 COLUMN HARDWARE, DOWNLOADS AT UP TO 1200 BAUD (WITH THE RIGHT HOST PROTOCOL), ALSO WORKS WITH MSD DRIVES. CONTINUOUSLY DISPLAYED TIME-OF-DAY CLOCK WITH ALARM.

COMPUSERVE EXECUTIVE FOR THE 64
CSV.....(D).....49.95.....*****
COMPUSERVE'S VIDTEX PROGRAM IS A FULL-FEATURED SMART TERMINAL PACKAGE. THE OPTIMIZED FOR COMPUSERVE'S OWN INFORMATION SERVICE, TERMINAL PARAMETERS CAN BE EASILY MODIFIED FOR USE WITH A WIDE RANGE OF HOST COMPUTERS. SOME FEATURES: 32K SAVE BUFFER/ DUMP TO PRINTER/ DEFINABLE FUNCTION KEYS/ INTERPRETS COMPUSERVE'S COMMANDS FOR SPECIAL VIDEO TEXT AND GRAPHICS EFFECTS/ AUTO LOGON/ "B" PROTOCOL ERROR-PROTECTED FILE TRANSFER.

MOUTHPIECE
EHS.....(D).....39.95.....*****
UP/DOWNLOAD- 30K BUFFER- SUPPORTS VARIOUS PRINTERS- DEFINABLE FUNCTION KEYS- ON-SCREEN HELP & STATUS DISPLAYS- SUPPORTS 110 TO 1200 BAUD MODEMS- MACHINE LANG.

KTERM VERSION 2
KAT.....(NA).....14.95.....*****+
30K SAVE BUFFER/ LISTABLE BASIC/ AUDIBLE KEY-CLICK/ KEEP- DISCARD KEYS/ ONE-KEY LOG-ON / UP, DOWN-LOADING.

'64 TERMINAL
MID.....(NA).....29.95.....*****
SMOOTH SCROLLING/ 24K SAVE BUFFER/ FULL-SPEED XMIT AND RECEIVE/ MENU SELECTABLE TERM. CONFIGURATION (PARITY, BAUD, ETC)/ DUMP TO PRINTER OR SCREEN ONLY. (NO UP/DOWN LOAD)

AVCOR VIDEOTEX SOFTWARE PACKAGE
AVC.....(D).....UNDER 100.00.....NA
THIS PROMISES A WHOLE NEW DIMENSION TO TELECOMPUTING AS WE KNOW IT NOW. NAPLPS COMPATIBLE COMMANDS IMPLEMENTED INCLUDE: DOMAIN/ TEXT (SUBCOMMANDS; ROTATION, PATH, INTER-CHARACTER SPACING, INTER-ROW SPACING, CHARACTER FIELD DIMENSIONS) / TEXTURE/ SET COLOR/ SELECT COLOR/ WAIT/ RESET/ POINT/ LINE/ ARC/ RECTANGLE/ POLYGON/ FIELD/ INCREMENTAL POINT/ UNDERLINING/ CANCEL/ NULL/ 8 & 7 BIT MODE/ UNPROTECTED FIELDS. INTERPRETS INCOMING COLORS TO THE NEAREST C64 COLOR. USES FULL 320 X 200 HI-RES. PERMITS EITHER 300 OR 1200 BAUD COMMUNICATIONS. THIS SYSTEM APPARENTLY DOES WITH SOFTWARE WHAT COSTS \$400- \$1000 TO DO WITH HARDWARE ON OTHER PERSONAL COMPUTERS.

SUPERTERM '64
MID.....(T).....99.00.....NA
SIMILAR TO '64 TERMINAL (ABOVE) WITH UP AND DOWN LOADING. COMPACK

CGR.....(NA).....129.00.....NA
THIS IS A SERIAL INTERFACE, CABLE, AND SOFTWARE PACKAGE FOR TELECOMPUTING; FEATURES DOWNLAD AND FILE-CONVERSIONS (ASCII, BASIC, BINARY, & MAE). YOU SUPPLY THE MODEM.

CTE ("DUMB" TERMINAL SOFTWARE, SELECTABLE BAUD RATE)
MSD.....(NA).....(NA).....NA
SMART TERMINAL
BYR.....(D/T).....18.95/16.95.....NA

SMOOTH SCROLLING / TRANSMITS ALL ASCII CONTROL CODES / KEY REPEAT / 4 PRE-LOAD LINES / MENU DRIVEN / TRANSMITTED AND RECEIVED CHARACTERS IN DIFFERENT COLORS. OMNICOMM

STG.....(D/T).....34.95.....NA
UP-DOWN LOAD / DUMPS TO PRINTER.

INTEL-TERM
RTC.....(D).....<50.00.....NA
SMART TERMINAL SOFTWARE FROM RICHVALE TELECOMMUNICATIONS INCLUDES "COLOR 80" (SEE 'DOUBLE-TAKE' THIS ISSUE), AND EMULATES THE POPULAR VT-100 TERMINAL.

```

#8 Return to Menu      CTRL 88:02:48
#1 Start: on-off
#3 Printer: on-off     #6 Disk: open-close
#5 Save: on-off       File:
#7 Window: on-off
    
```

Dial your access number. When carrier is heard, press #1, then connect modem.



COMMANDER ULTRA TERMINAL-64
CRQ.....(R).....69.95.....NA
SELECTABLE TERMINAL PARAMETERS/ DOWNLOAD TO DISK/ DUMP TO PRINTER/ ELAPSED-TIME INDICATOR

TRANS-TERM
DAY.....(D).....29.95.....NA
'SMART' TERMINAL PROGRAM/ DOWNLOAD TO DISK

DIAL-FILE
DAY.....(D).....14.95.....NA
STORE, RETRIEVE, AND DIAL 140+ PHONE NUMBERS FROM SOFTWARE.

MAGIC WAND 64
WEO.....(?).....109.95.....NA
THIS SMART TERMINAL PROGRAM CLAIMS TO ENABLE COMMODORE MODEMS (1600 AND 1650) TO COMMUNICATE AT 1200 BAUD (OR MORE)! UP & DOWNLOADING.

NEW ADDITIONS

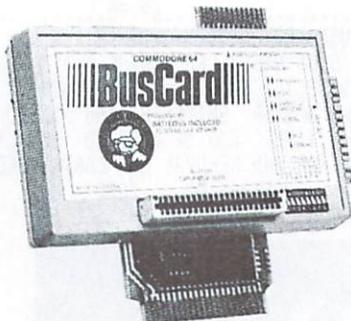
COMMTERM-64
M&M.....(D).....39.95.....NA
UP & DOWNLOAD / AUTO DIAL, ANSWER, HANG-UP / INCLUDES SEPARATE TEXT EDITOR FOR PREPARING UPLOAD TEXT. (SEPARATE VERSION AVAILABLE FOR DATA-20 80-COLUMN BOARD)

QUICKLINK
QBF.....(D).....(NA).....NA
SMART TERMINAL SOFTWARE WORKS WITH QUICK BROWN FOX WORDPROCESSOR / UP & DOWNLOAD / MENU DRIVEN / SUPPORTS 1650 AUTOMODEM WITH AUTO REPEAT DIALING / SUPPORTS DATA-20 80 COLUMN BOARD.

VIP TERMINAL
SFL.....(NA).....49.95.....NA
CLAIMS 40, 64, 80, & 106 COLUMN SOFTWARE DISPLAY / MACHINE CODE / 15 ENTRY PHONE DIRECTORY / 20 PROGRAMMABLE KEYS / AUTO DIAL & REDIAL / USES DISK AND PRINTER SIMULTANEOUSLY / USE FILES AS LARGE AS YOUR DISK.

GENERAL INTERFACES

C64-LINK
 RTC.....149.95.....***
 DATA TRANSFER BETWEEN ANY DEVICE AND ANY OTHER DEVICE
 (IE: SERIAL-PARALLEL, IEEE-SERIAL, PARALLEL-SERIAL ETC.
 / BASIC 4.0 COMMANDS / SIMPLE NETWORKING OF SEVERAL
 64'S / M.L. MONITOR / RESIDENT TERMINAL SOFTWARE / CP/M
 COMPATIBILITY.



BUSCARD
 BAT.....199.00.....NA
 ADDS 'BASIC 4' COMMANDS / IEEE INTERFACE / FULLY
 COMPATIBLE WITH OTHER SOFTWARE / BUILT-IN CENTRONICS
 PRINTER PORT / RESIDENT M.L. MONITOR.
 VICTREE
 SEW.....89.95.....NA
 ADDS BASIC 4.0 COMMANDS; PROVIDES PRINTER INTERFACE FROM
 USER-PORT.
 INTERPOD
 HES.....149.95.....NA
 ACCESS UP TO 30 RS232 AND IEEE DEVICES THRU SERIAL PORT OF
 64.
 VIC/64 SWITCH
 BSS.....149.95.....NA
 LINKS UP TO 8 64'S WITH SHARED DISK DRIVE AND PRINTER.
 CEENET
 SEW.....(NA).....NA
 NETWORKS UP TO 64 CBM 64'S TOGETHER. ALL MAY SHARE
 COMMON PERIPHERALS. APPLICATIONS SOFTWARE SUPPORTS
 INTER-NETWORK MAIL, TERMINAL LINKING, FILE PROTECTION,
 AND DATABASE SUPPORT. UP TO 255 CEENETS CAN BE
 INTERCONNECTED.
 MULTI-LINK
 RTC.....ABOUT \$100 PER COMPUTER.....NA
 WILL CONNECT UP TO SIXTY-FOUR 64'S IN A LOCAL NETWORK
 UNDER CONTROL OF ONE 'MASTER' 64/ ESPECIALLY SUITED FOR
 EDUCATIONAL ENVIRONMENT.
 OCTOPUS
 COB.....79.95.....NA
 ALLOWS AS MANY AS 8 64'S TO SHARE THE SAME DISK DRIVE OR
 PRINTER/ MANUAL SWITCHING CONTROLS ACCESS PRIORITY.



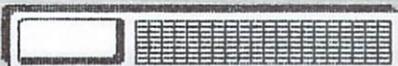
A/D - D/A & DATA ACQUISITION

UNIVERSAL LABORATORY INTERFACE
 GEM.....750.00.....NA
 2 12-BIT ANALOG OUTPUTS AND INPUTS / 1 8-BIT DIGITAL
 OUTPUT AND INPUT. PROGRAMMABLE FROM BASIC WITH PEEKS AND
 POKES.

TEMPERATURE MEASUREMENT AND CONTROL
 AME.....129.00.....NA
 DISPLAY GRAPHICS / HARD COPY OUTPUT / ALARMS AND SET
 POINTS / DISK FILE DATA STORAGE / 1 - 256 SENSORS / .01
 DEG. ACCURACY.
 SEQUENCER
 GLO.....299.00.....NA
 M.L. ROM SOFTWARE WITH A PLUG-IN HARDWARE INTERFACE
 CONTAINING 16 OPTO-ISOLATED INPUTS AND OUTPUTS WHICH CAN
 BE INDIVIDUALLY ADDRESSED. SOFTWARE PROVIDES FOR
 TESTING OF INPUTS AND OUTPUTS FOR VARIOUS LOGIC AND
 ACTIVITY STATES. STEPPER MOTOR DRIVE ROUTINES UNDER
 TIMED INTERRUPTS / 3 COUNTDOWN TIMERS (1 SEC. TO 18 HRS)
 VIC/64 RELAY CARTRIDGE
 BSS.....59.95.....NA
 PLUGS INTO USER PORT; 6 RELAY OUTPUTS / 2 OPTOCOUPERS
 FOR INPUTS. TURN APPLIANCES ON/OFF UNDER PROGRAM
 CONTROL.
 VICONTROLLER
 SEN.....59.95.....NA
 CONTROL UP TO 256 LIGHTS, APPLIANCES, ETC. COMMANDS: ON
 / OFF / ALLON / ALLOFF. USES BSR REMOTE SWITCHES / PLUGS
 INTO USER PORT.
 AUTO CLOCK
 PRG.....129.95.....NA
 SOFTWARE CONTROL OF AC DEVICES / 256 YEAR CALENDAR / 2K
 CMOS BATTERY BACKED RAM / MENU-DRIVEN SOFTWARE / 19 USER
 ACCESSIBLE SUBROUTINES
 COMPUTER-CONTROLLED HOME SECURITY SYSTEM
 JAN.....195.00.....NA
 KIT PROVIDES SOFTWARE AND CARTRIDGE FOR CONNECTING AND
 CONTROLLING SWITCHES AND ALARMS



HOME AUTOMATIC WEATHER STATION (HAWS)
 VAI.....199.95.....NA
 COMMERCIAL WEATHER-SENSOR PACKAGE AND SOFTWARE FOR
 TRACKING & FORECASTING THE WEATHER. PLOTS HISTORICAL
 TRENDS AND GRAPHICALLY DISPLAYS TRENDS/ MONITORS: DEEW
 POINT, TEMP, HUMIDITY, & ATMOS. PRESSURE. MANUAL PLUS
 METEOROLOGY INSTRUCTIONAL MATERIALS ON DISK & PRINTED.
 SIMPLE CONNECTION/DISCONNECTION.
 BUSSTER A64
 CMC.....495.00.....NA
 DIGITAL LINE INPUT MODULE / SELF CONTAINED IEEE BUS-
 COMPATIBLE DEVICE / READS AND STORES DATA FROM UP TO 64
 DIGITAL TTL LEVEL LINES, THEN SENDS INFORMATION BACK TO
 COMPUTER/ PROGRAMMABLE THRU BASIC.
 MW-311C UNIVERSAL INPUT-OUTPUT BOARD
 MWE.....225.00.....NA
 16-CHANNEL A/D; 1-CHANNEL D/A OUTPUT; 16 HIGH-CURRENT
 DISCRETE OUTPUTS.
 MULTI-LAB
 COB.....239.95.....NA
 "LAB ON A CARD...MAKE VOLTMETERS...CONVERTERS...DIGITAL
 SENSORS...FREQUENCY SYNTHESIZERS...MORE"
 DATAONE (A/D CONVERTER - DIGITAL I/O)
 CGR.....249.00.....NA
 16 CHANNEL, 12-BIT A/D CONVERTER. 12-BIT D/A CONVERTER.
 12 DIGITAL INPUTS. 10 DIGITAL OUTPUTS. C-MOS REAL-
 TIME CLOCK CALENDER WITH BATTERY BACKUP.



STANDARD INTERFACES

PRODUCT NAME VENDOR CODE	PRICE	RTG.
CIE (IEEE 488 INTERFACE)		
MSD.....(NA).....		NA
C232 (RS232 INTERFACE)		
MSD.....(NA).....		NA
CX-6402 RS232 INTERFACE		
ECX.....	59.95	NA
ADA 6410 (RS232 INTERFACE)		
CMC.....	79.00	NA
MODEM INTERFACE		
BMT.....	21.95	NA

VIDEO ENHANCEMENT

VIDEO PAK 80		
DAT.....	179.95	****
40 COL. COLOR/ 80 COL. MONOCHROME: INCLUDES TERMINAL AND SCREEN-PRINT SOFTWARE.		
Z-80 VIDEO PAK		
DAT.....	299.95	NA
ABOVE FEATURES PLUS CP/M COMPATIBILITY VIA BUILT-IN Z-80 MICROPROCESSOR.		
COLOR-80 SOFTWARE		
RTC.....(DISK).....	39.95	***
80 COLUMNS FROM SOFTWARE. USES NO BASIC RAM / COMPATIBLE WITH C-64 LINK. (SEE 'DOUBLE-TAKE' THIS ISSUE).		
SCREENMAKER		
CGR.....	179.95	NA
80 COL. BOARD WITH SOFTWARE LINK.		
VID (VIDEO IMPROVEMENT DEVICE)		
CAC.....	29.95	***
PLUG THIS LITTLE WIDGET INTO YOUR 5-PIN VIDEO PORT AND HOOK YOUR T.V. TO THE USUAL RF PLUG. VISIBLE IMPROVEMENT OF PICTURE QUALITY ON MANY TV'S (SEE 'DOUBLE-TAKE' FALL '83 ISSUE.)		
WAVE 80-COLUMN VIDEO BOARD		
MCI.....	139.95	NA

NEW ADDITIONS

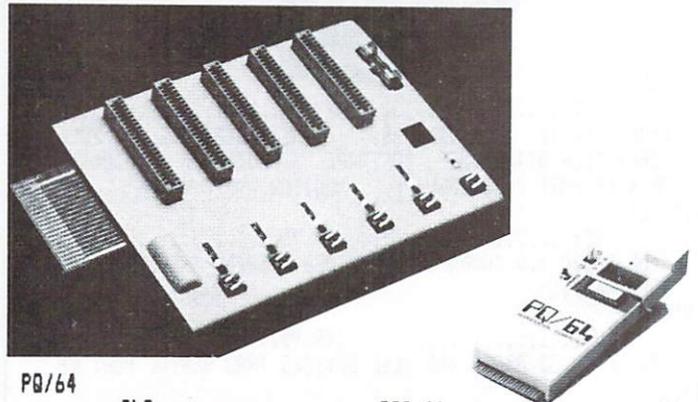


B.I.-80		
BAT.....(NA).....		NA
HARDWARE 80-COLUMNS. ADDS BASIC 4.0 COMMANDS.		

EXPANSION BOARDS

EXPANDOPORT 4		
MSD.....(NA).....		NA
4 PORTS WITH FUSE AND RESET.		
4-SLOT EXPANDER		
PTI.....	69.95	NA
4 SLOTS, 4 TOGGLE SWITCHES, RESET & FUSE.		
SOFTWARE BOX		
SAW.....	149.00	NA
8 SLOTS, EACH SWITCHED, 110 V. OUTLETS, RESET, OPTIONAL 5 V. POWER SUPPLY.		

BUSMASTER (6-SLOT, SWITCH SELECT, FUSED, LEDS)		
RAN.....	79.95	NA
BUSMASTER-II		
RAN.....	99.95	NA
SAME AS ABOVE ONLY W/ SOFTWARE SELECTABLE SLOTS (ALLOWS MEMORY PAGING TO 6X64 K)		
7-SLOT EXPANDER BOARD		
BAZ.....	69.00	NA
4-SLOT EPROM CARD		
BAZ.....	59.00	NA
CARDBOARD 5		
CAR.....	69.95	****
ATTRACTIVE, FUSE-PROTECTED 5-SLOT EXPANSION BOARD FOR THE 64. EACH SLOT HAS 4 LED STATUS INDICATORS AND TWO SWITCHES TO DIRECTLY CONTROL VARIOUS MEMORY AND ACCESS FUNCTIONS. TWO MASTER SWITCHES AND INDICATORS ALLOW OVERRIDE AT ANY TIME. CAN BE USED TO SIMPLY ELIMINATE CONSTANT INSERTION AND REMOVAL OF CARTRIDGES, OR WITH SWITCHES AND IMAGINATION, SOME MORE INTRIGUING APPLICATIONS BECOME POSSIBLE.		



PQ/64		
GLD.....	299.00	NA
64 VERSION OF 'PROMQUEEN'- READS, PROGRAMS, EDITS, & RUNS 2500 & 2700 SERIES EPROMS. W/ SOFTWARE.		
PQ/64 RS		
GLD.....	49.00	NA
PERFORMS RS-232 VOLTAGE CONVERSIONS FOR PQ/64.		
DATSPAN (3 SLOTS/ ROTARY SWITCH)		
COB.....	59.95	NA
SMARTSLOT (THE INTELLIGENT EXPANSION BUS)		
PRG.....	99.95	NA

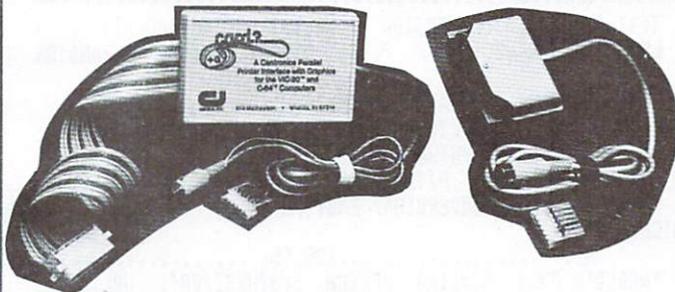
OTHER INTERFACES

AP MODULAR PAK (3-PART APPLE EMULATOR SYSTEM)		
PID.....	ABOUT 600.00	NA
WE'VE HEARD IT BEFORE, BUT THIS APPEARS TO BE THE REAL THING. CONSISTS OF 3 MODULES:		
1) AP BUSS: CONTAINS 8 STANDARD APPLE II PERIPHERAL SLOTS AND 4 C64 EXPANSION SLOTS PLUS A POWER SUPPLY WHICH REPLACES THE 64'S AND HAS ENOUGH MUSCLE FOR ALL EXPANSION SLOTS.		
2) AP "CPU" CARD: THE HEART OF THE SYSTEM, PLUGS INTO THE AP BUSS AND HANDLES ALL APPLE II TO C64 CONVERSION.		
3) AP DOS CARD: TRANSFORMS THE 1541 DISK DRIVE INTO AN APPLE II COMPATIBLE DRIVE.		
WITH THE COMPLETE MODULAR PAK YOU MAY RUN ALL APPLE II SOFTWARE ON YOUR 64 AND HAVE IT RUN EXACTLY AS IF IT WERE ON THE APPLE II. YOU MAY ALSO USE ANY PERIPHERALS DESIGNED FOR THE APPLE II (INCLUDING ADDITIONAL MICROPROCESSORS LIKE THE 6809, 6800, 8088, 8086 ETC.) OR, USE A RANA DISK DRIVE WITH YOUR 64 (AND, IF YOU HAVE AN APPLE, THE DOS CARD ALLOWS YOU TO USE IT WITH A 1541!). LOOK FOR A REVIEW IN AN UPCOMING ISSUE OF INFO-64.		

OTHER INTERFACES CONT'D

- 1540 UPGRADE ROM
 CBY.....<40.00.....NA
 AS FAR AS WE KNOW, THIS IS THE ONLY PUBLIC SOURCE OF THIS PRODUCT. TURNS A 1540 DISK DRIVE INTO A 1541.
- CARDETTE
 CAR.....39.97.....***
 INTERFACE ALLOWS USE OF NON-CBM CASSETTE DECKS. IT SEEMS THAT THE ECONOMY TYPE TAPE DECKS ACTUALLY WORK BETTER WITH THIS THAN THE PREMIUM TYPES.
- CBM 64 RABBIT CARTRIDGE
 EAS.....39.95.....NA
 CLAIMS 6X NORMAL CASSETTE LOAD & SAVE. WITH 12 ADDITIONAL COMMANDS.
- GRIZZLY
 EPD.....(NA).....NA
 UNINTERRUPTABLE POWER SYSTEM: KEEP COMPUTING FOR TWENTY MINUTES AFTER A TOTAL POWER OUTAGE. GIVES YOU TIME TO SAVE YOUR FILES, ETC.
- LEMON / LIME / PEACH / ORANGE
 EPD.....(NA).....NA
 LINE OF AC FILTERS AND SURGE PROTECTORS TO PROTECT COMPUTER EQUIPMENT.
- VIAC
 INC.....34.95.....NA
 NON-CBM CASSETTE INTERFACE.
- SUPER BLOCKSAVER
 COB.....34.95.....NA
 SOFTWARE AND CARTRIDGE ALLOWS MAKING BACKUP COPIES OF C64 CARTRIDGES TO DISK.
- CB-2
 COB.....39.95.....NA
 ALLOWS MAKING BACKUPS OF CASSETTE SOFTWARE- USES ONE OR TWO CASSETTE DRIVES.

PRINTER INTERFACES

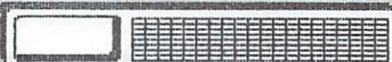


- CARD/PRINT + 6
 CAR.....79.95.....***
 FULL COMMODORE CHARACTER SET TRANSLATION (AS WELL AS ASCII VALUES FOR NON-IMPLEMENTED CHARACTERS). THIS AT THE SAME PRICE THAT MADE THE OLD CARD/PRINT A GREAT VALUE IN PRINTER INTERFACES. (SUITABLE FOR USE WITH: OKIDATA 82,94,92,94, EPSON MX 80, RX 80, FX 80, GEMINI 10X, PROWRITER, CITOH 8510, NEC 8023, AXIOM GP 100, AND BANANA PRINTERS.) THERE ARE SOME PROBLEMS WITH SOME GEMINI PRINTERS DUE TO ROM CHANGES WHICH CARDCO SAYS CAN BE FIXED BY CONTACTING STAR MICRONICS FOR A REPLACEMENT ROM. WE DON'T LIKE THE INTERNAL DIP SWITCHES WHICH ARE HARD TO GET AT (YOU HAVE TO COMPLETELY OPEN THE HOUSING) AND NEED SOME FIDDLING WITH TO GET SET UP PROPERLY. OTHERWISE, THIS IS A PRETTY GOOD VALUE.
- PRINT-64
 COB.....69.95.....NA
 SIMILAR TO PRINTMASTER ABOVE/ PRINTS GRAPHICS CHARACTERS.

- CARD/PRINT B
 CAR.....49.95.....***
 ENHANCED REPLACEMENT FOR THE OLD CARD/PRINT 'A' AT A MUCH LOWER PRICE. FEATURES INCLUDE NEW HOUSING WHICH MOUNTS NEATLY TO BACK OF 64 INSTEAD OF HANGING OUT AT THE END OF THE CABLE / 3 MICRO-SWITCHES FOR LOCKING THE PRINTER AND INTERFACE IN VARIOUS CONFIGURATIONS.
- MW-302 PRINTER INTFC.
 MWE.....119.95.....NA
 CONNECTS 64 SERIAL PORT TO CENTRONICS-TYPE PARALLEL PRINTERS. TRANSLATES CBM ASCII TO STANDARD ASCII.
 DATA 20 PRINTER INTERFACE (CONNECTS TO MODEM PORT)
 DAT.....69.95.....NA
- CX-6401 SERIAL TO PARALLEL PRINTER INTFC.
 ECX.....89.95.....NA
- CPI (PARALLEL PRINTER INTFC.)
 MSD.....79.95.....NA
- TYMAC 'CONNECTION'
 MWD.....119.00.....NA
 INTELLIGENT PARALLEL INTFC. USES DISK/SERIAL PORT / DISPLAYS FULL GRAPHICS SET OR CONVERTS TO TEXT EQUIVALENT / PRINTER RESET SWITCH / LED INDICATORS/ FACTORY CONFIGURED TO YOUR PRINTER MODEL.
- TYMAC PARALLEL CABLE W/ DRIVER
 MWD.....29.95.....NA
 PRINTER SPECIFIC 'ECONOMY' INTERFACE: SOFTWARE ABLE ON DISK TO SUPPORT GRAPHICS PRINTING.
- SMART ASCII
 MID.....59.95.....NA
 USES THE MODEM PORT, SO YOU CAN'T CONVENIENTLY USE YOUR PRINTER MODEM AT THE SAME TIME. WE CONSIDER THIS TO BE A SERIOUS LIMITATION.
- PRINTMASTER-64
 COB.....89.95.....NA
 CENTRONICS-TYPE PARALLEL INTERFACE FOR EPSON OR GEMINI: PRINTS THE FULL COMMODORE GRAPHICS SET/ ADDS 16 COMMANDS TO BASIC/ TEXT & GRAPHIC SCREEN DUMPS/ UN NEW COMMAND.
- SPOOL-Z-9 32K PRINTER BUFFER (SPOOLER)
 JVB.....279.95.....NA
 A SPOOLER TAKES PRINTER DATA VERY QUICKLY FROM THE COMPUTER, HOLDS IT, AND FEEDS IT TO THE PRINTER AT THE PRINTERS PACE- MEANWHILE, THE COMPUTER IS IMMEDIATELY FREE TO CONTINUE WITH OTHER TASKS. LARGER BUFFER SIZES ABLE (TO 128K) AT HIGHER COST.
- MICRO SPOOLER
 CNS.....(NA).....NA
 COMPLETE RANGE OF SPOOLERS WITH VARYING FEATURES, CAPACITIES, & PRICES.
- ADVANCE 1500 PRINTER PROGRAM (SOFTWARE)
 WEO.....49.95.....NA
 CLAIMS TO INCREASE SPEED OF 1515 AND 1525 PRINTERS TO 50 CPS. ADDS FULL DESCENDERS.
- L&L PRINTER INTERFACE CARD
 L&L.....70.00.....NA
 FOR GEMINI 10X PRINTER/ INCLUDES COMMODORE SPECIAL CHARACTER LISTING MODE.

NEW ADDITIONS

- GRAPPLER CD
 ORA.....<120.00.....NA
 A RESPECTED NAME IN APPLE CIRCLES, ORANGE MICRO IS RELEASING A 'GRAPPLER' FOR THE C64. CONNECTS TO BOTH THE SERIAL PORT AND THE EXPANSION SLOT (WITH FEED-THRU FOR BOTH) AND PROVIDES MANY MODES OF PRINTER OPERATION INCLUDING: EXACT 1525 EMULATION INCLUDING GRAPHICS CHARACTERS FOR EPSON, STAR, OKIDATA, PROWRITER, NEC AND OTHERS / MULTIPLE SCREEN-DUMP ROUTINES FOR HI-RES AND BLOCK GRAPHICS, DOUBLE SIZED, INVERTED, ROTATED, EMPHASIZED GRAPHICS, & INTEGRAL TEXT FORMATTING COMMANDS.



MASS STORAGE



QUICKDISK (5", 8", SINGLES & 3.5" DUAL)
 CGR.....595.00, 1095.00, 995.00.....NA
 10 X SPEED OF 1541 DRIVES. (CHECK COMPATIBILITY WITH
 COMMERCIAL SOFTWARE BEFORE BUYING).

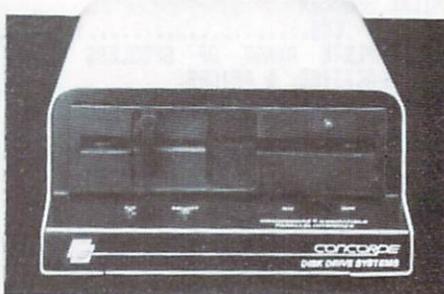
MSD SINGLE DISK DRIVE
 MSD.....399.00.....NA
 HIGH DEGREE OF COMPATIBILITY WITH 1541 DISK SOFTWARE /
 SOFTWARE- RECONFIGURABLE OPERATING SYSTEM / SERIAL &
 IEEE INTERFACES (IEEE INTERFACE AT EXTRA COST).

UNITRONICS WAFERDRIVE MODULE
 UNI.....UNDER 100.00.....NA
 THIS IS AN IMPLEMENTATION OF THE EXATRON STRINGY-FLOPPY
 TECHNOLOGY IN A 64-COMPATIBLE PLUG-IN (USER PORT) WAFER
 DRIVE. CLAIMS SOME OPERATIONS AS FAST AS 1541 (NOT HARD
 TO BELIEVE). COMES WITH 2 BLANK WAFERS AND ONE GAME
 (MINER 2049ER) ON WAFER. COMPANY HOPES TO HAVE 30-40
 COMMERCIAL PROGRAMS ABLE ON WAFER THIS FALL.

ACCESS-M (MEMORY EXPANSION TO 1 MEGABYTE)
 MOS.....250.00.....NA
 COMES WITH 64K RAM WHICH MAY BE EXPANDED IN 64K
 INCREMENTS UP TO 1 MEGABYTE. PROPRIETARY MEMORY-
 MANAGEMENT TECHNIQUE (NOT BANK SWITCHED)/ COMES WITH
 DISK- EMULATION SOFTWARE (RAMDISK) AND MEMORY MANAGEMENT
 SOFTWARE. PLUGS INTO CARTRIDGE SLOT AND PROVIDES 2 FREE
 EXPANSION SLOTS PLUS 4 RAM BOARD SLOTS (EACH RAM BOARD
 CAN HOLD 256K (4 64K CHIPS). SOME 3RD PARTY SOFTWARE
 HOUSES ARE ALREADY WORKING WITH MOSAIC ON NEW SOFTWARE
 PACKAGES WHICH WILL TAKE ADVANTAGE OF THIS HUGE AMOUNT
 OF RAM.
 (SEE ARTICLE IN WINTER '83/84 ISSUE)

NEW ADDITIONS

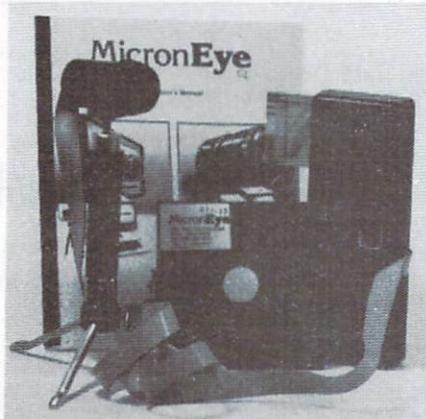
MSD DUAL DISK DRIVE
 MSD.....695.00.....NA
 DUAL VERSION OF MSD SINGLE DRIVE ABOVE. CAN BE
 CONFIGURED AS EITHER A DUAL DRIVE OR TWO SINGLE DRIVES.
 IEEE INTERFACE AT ADDITIONAL COST.



CONCORDE C-321P DUAL PARALLEL DRIVE
 CPS.....356.00.....NA
 A NEW ENTRY INTO THE EXPANDING 3RD PARTY HARDWARE FIELD.
 PARALLEL INTERFACE BUILT-IN AND READY TO GO. CAN
 SUPPORT UP TO 3 SLAVE UNITS FOR A 4-DRIVE MAXIMUM
 SYSTEM. (SLAVES WILL COST LESS THAN THE MASTER UNIT).
 174K STORAGE CAPACITY.

DP-2000 DUAL PURPOSE DATA/AUDIO CASSETTE
 EDC.....(NA).....NA
 COMES WITH CONNECTING CABLE FOR C64 BUT CAN BE USED WITH
 OTHER COMPUTERS, OR AS A CONVENTIONAL CASSETTE RECORDER
 WHEN NOT NEEDED AT THE COMPUTER. GOOD IDEA.

SENSORY PERIPHERALS



MICRON EYE CAMERA
 MTI.....295.00/485.00.....****
 TWO MODELS OF SOLID STATE IMAGING DEVICE (THE DIFFERENCE
 BEING IN THE MAXIMUM DISTANCE DEVICE MAY BE FROM
 COMPUTER). BOTH CONNECT TO EXPANSION PORT OF 64,
 SOFTWARE INCLUDED ALLOWS DISPLAY OF IMAGES TO SCREEN.
 GRAY- SCALE / SOFTWARE CONTROLLED SHUTTER / FRAME STORE
 & RECALL.
 (SEE REVIEW IN WINTER '83/84 ISSUE)

VOTRAX PERSONAL SPEECH SYSTEM
 VOT.....395.00.....****
 255 PROGRAMMABLE FREQUENCIES FOR SOUND EFFECTS / 16
 AMPLITUDES / SIMULTANEOUS SPEECH AND EITHER MUSIC OR
 SOUND EFFECTS / 8-OCTAVE 3-VOICE MUSIC / SERIAL AND
 PARALLEL INTFCs. INCLUDED / BUILT-IN PROGRAMMABLE CLOCK
 / EXCEPTION TABLES / PROGRAMMABLE RATE AND INFLECTION /
 3500 CHAR. BUFFER / REAL TIME CLOCK WITH 8 USER-DEFINED
 ALARMS / BAUDS FROM 75 TO 9600 / MORE!

SPEAKEASY (WITH 64 ADAPTER)
 PPP.....91.95.....NA

COMVOICE
 6EN.....149.00.....NA
 TEXT-TO-SPEECH CONVERSION / UNLIMITED VOCABULARY / 4
 LEVELS OF INFLECTION / PLUGS DIRECTLY INTO EXPANSION
 PORT.

S.A.M. (SOFTWARE ACTIVATED MOUTH)
 DON.....(D).....34.95.....****
 SOFTWARE SPEECH SYNTHESIZER; NATURAL (WELL...) SOUNDING
 SPEECH/ VARIABLE PITCH, SPEED, INFLECTION/ ENGLISH
 TEXT-TO-SPEECH CONVERSION/ EASY TO USE IN PROGRAMS.

VOICEBOX
 ALI.....129.95.....NA
 "WORLD'S ONLY SINGING SPEECH SYNTHESIZER": UNLIMITED
 VOCABULARY/ NATURAL SOUNDING/ INFLECTION CONTROL/
 TEXT-TO-SPEECH & PHONEME INPUT/ PLUGS INTO USER PORT/
 INCLUDES BUILT IN SPEAKER, VOLUME & PITCH CONTROLS.
 (WORKS WITH 'WHEN I'M 64' MUSIC AND SINGING SYSTEM)

NEW ADDITIONS

SMARTVOICE
 UFS.....199.00.....NA
 SPEECH SYNTHESIZER PLUGS DIRECTLY INTO MODEM PORT AND
 RESPONDS TO SIMPLE BASIC STATEMENTS. SPEED AND PITCH
 CONTROL, AUTOMATIC INFLECTION, EXTERNAL VOLUME CONTROL.

MODEMS



1650 AUTO-DIAL / AUTO-ANSWER
 CBM.....<120.00.....****
 300 BAUD/ INCLUDES AUTO-DIAL, AUTO-ANSWER SOFTWARE AND
 TERMINAL SOFTWARE (TERMINAL SOFTWARE ALLOWS SETTING
 TERMINAL PARAMETERS, BUT HAS NO SAVE BUFFER OR
 UP/DOWN-LOADING)
 VICMODEM
 Commodore Bus. Machines.....49.95.....****
 HESMODEM I
 HES.....69.95.....****
 FUNCTIONALLY SIMILAR TO VICMODEM / TERMINAL SOFTWARE
 INCLUDED FOR 64.
 MIGHTY MODEM
 PPP.....79.95.....NA
 300 BAUD MODEM W/ TERMINAL SOFTWARE
 BAZ.....89.00.....NA



AIR-1
 MRC.....199.00.....NA
 CARTRIDGE CONNECTS TO SHORTWAVE RADIO, & CONVERTS MORSE
 CODE OUTPUT TO PRINTED TEXT ON SCREEN / SENDS AND
 RECEIVES RTTY / FEATURES ON-SCREEN TUNING & HARDCOPY
 OUTPUT.
 AM DM LOADER
 MIP.....<70.00.....NA
 THIS UNIQUE RECEIVE-ONLY MODEM IS CAPABLE OF ACCEPTING
 COMPUTER DATA FROM COMMERCIAL RADIO OR CABLE TV
 TRANSMISSIONS AT SPEEDS UP TO 4800 BAUD USING
 PROPRIETARY TECHNOLOGY. THEORETICALLY, SPEEDS OF 9600
 BAUD CAN BE ACHIEVED- ALLOWING DOWNLOADING OF A TYPICAL
 VIDEO GAME IN ABOUT 4 SECONDS. (THIS OPENS UP A WHOLE
 NEW MARKET FOR CABLE TV.)
 AUTO-PRINT MICROCONNECTION
 MIP.....149.00.....NA
 DIRECT CONNECT, AUTODIAL, AUTOANSWER MODEM
 SIMULTANEOUSLY DIRECTS DATA TO YOUR PRINTER AS WELL AS
 YOUR SCREEN. INCLUDES TERMINAL SOFTWARE.

NEW ADDITIONS

HESMODEM II
 HES.....99.95.....NA
 AUTO ANSWER/DIAL MODEM INCLUDES TERMINAL SOFTWARE.

USER INPUT DEVICES



POWERPAD
 CBI.....99.95.....NA
 12" X 12" TOUCH-SENSITIVE INPUT PAD USES OVERLAYS ALONG
 WITH ASSORTED APPLICATIONS CARTRIDGES COVERING A WIDE
 RANGE OF ART, MUSIC, AND EDUCATIONAL PROGRAMS. THE PAD
 HAS A UNIQUE SENSING ARRANGEMENT THAT RECOGNIZES
 SIMULTANEOUS ACTIVATION OF MULTIPLE POINTS ON THE ACTIVE
 SURFACE.



KOALA PAD (WITH SOFTWARE)
 KOA.....99.00.....****
 MEDIUM-SIZED INPUT PAD RESPONDS TO FINGER OR STYLUS
 PRESSURE. RUBBED PLASTIC/ COMES WITH 'KOALA PAINTER'
 COLOR DRAWING SOFTWARE. 'KOALA PAINTER' IS AN EXCELLENT
 IMPLEMENTATION OF ISLAND GRAPHICS' 'MICRO-ILLUSTRATOR'
 SOFTWARE: USES THE 64'S 16 COLORS PLUS 136 MIXED-COLORS.
 FEATURES 'DOOPS' MISTAKE CORRECTION, SOPHISTICATED BLOCK
 MOVES, QUAD-SYMMETRIC MIRROR MODE, COLOR SWAPS, & MANY
 OTHER DAZZLING EFFECTS! THIS IS ONE OF THE 10 BEST
 PRODUCTS OF 1983!
 (SEE REVIEW: WINTER '83/84 ISSUE)

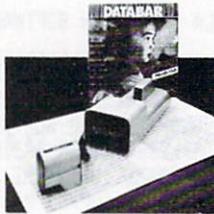
FLEXIDRAW LIGHT PEN (WITH 'PENWARE' DRAWING SOFTWARE)
 INK.....<150.00.....****
 PROFESSIONAL GRADE LIGHT PEN (WITH SINGLE PIXEL
 RESOLUTION). THIS IS NOT A TOY (ALTHOUGH IT IS LOTS OF
 FUN & THE SOFTWARE IS EXTREMELY EASY TO USE). INCLUDES
 SOPHISTICATED MACHINE LANG. DRAFTING SOFTWARE/ A
 SEPARATE BASIC ROUTINE FOR PROGRAMMABLE GRAPHICS/ SPRITE
 EDITOR AND ANIMATOR/ READY-TO-USE TEMPLATES FOR
 ELECTRONIC CIRCUITS, GREEK SYMBOLS, & MUSIC COMPOSITION,
 LIGHT PEN MUSIC SYNTHESIZER/ AND A LIBRARY OF SAMPLE
 DRAWINGS.
 (SEE REVIEW: WINTER '83/84 ISSUE)

QUICKSHOT JOYSTICK (SUCTION-CUP BASE / DUAL FIRE BUTTONS)
 SVI.....12.95.....****
 DATAWAfer
 DIC.....(NA).....NA
 UNIQUE PACKAGE IS SAID TO REPLACE JOYSTICKS, LIGHT PENS,
 TRACKBALLS, AND CONVENTIONAL 'MICE'. WIRELESS MOUSE
 WORKS ON SENSITIVE TABLET (UP TO 20" X 20" AVAILABLE).
 JOY&SENSOR
 SUN.....34.95.....NA
 STICK-LESS JOYSTICK. TOUCH-SENSITIVE FLAT- PANELS
 ACCOMPLISH BOTH MOVEMENT AND 'FIRE- BUTTON' TASKS.
 ACCOMMODATES RIGHT OR LEFT HANDED PLAYERS.
 KRAFT JOYSTICK
 KSC.....14.95.....NA
 ENJOYSTICK (RIGHT OR LEFT- HAND JOYSTICK)
 T6P.....(NA).....NA
 ZIRCON TRACKBALL
 ZIR.....29.95.....NA
 EDUMATE LIGHT PEN
 PGI.....29.95.....NA
 THIS PEN IS COMPATIBLE WITH P.I.'s CHILDREN'S
 EDUCATIONAL SOFTWARE.
 TECH-SKETCH LP-10 LIGHT PEN
 TEC.....39.95.....****
 THIS IS AN 'ECONOMY' LIGHT PEN. (INCLUDES SOME
 UNINSPIRING AND SLOW DRAWING SOFTWARE).
 HI-RES LIGHT PEN
 SYM.....150.00.....NA
 INDUSTRIAL LIGHT PEN. TOUCH-TIP & PUSH-TIP MODELS.

USER INPUT DEVICES CONT'D

OSCAR BAR-CODE READER

DTB.....79.95.....NA
 NIFTY LITTLE BAR-CODE READER (USES A SPECIAL IN-HOUSE BAR CODE SCHEME, DOES NOT READ UPC CODE LIKE ON THE FRONT OF THIS MAGAZINE). YOU CAN GET THE BAR-CODE READER FREE WITH A TWO-YEAR SUBSCRIPTION TO THE 'DATABAR MAGAZINE' (EACH COPY OF WHICH HAS 8 PROGRAMS WRITTEN IN BAR-CODE). (BEFORE YOU GET TOO EXCITED, THE SUBSCRIPTION WILL COST YOU 240.00)



CARDKEY/1

CAR.....39.95.....NA
 16 KEYS / CAN BE PLUGGED INTO JOYSTICK PORT OR PIGGY-BACKED WITH KEYBOARD CONNECTOR ELIMINATING THE NEED FOR DRIVER SOFTWARE, AND AVOIDING SOFTWARE COMPATIBILITY PROBLEMS.

FLEXIKEY SYSTEM

6SS.....69.95.....NA
 20- KEY NUMERIC PAD. EACH KEY MAY BE DEFINED TO HAVE 3 VALUES/ DRIVER SOFTWARE IN BASIC

10-KEY PAD

QUA.....69.95.....NA
 NUMERIC KEYPAD
 COP.....69.95.....NA

CABLES, GADGETS, ETC.

MONITOR CABLE (5-PIN/ CHROMA, LUMA, AUDIO, AUDIO RETURN)

MSD.....29.95.....*****

SOUND BOX

HES.....14.95.....NA

PROVIDES STANDARD RCA PHONO CONNECTIONS FOR EASY HOOK UP TO STEREO ETC.

VIDEO CABLE (5-PIN TYPE)

DAT.....12.95.....NA

AUDIO/VIDEO CABLE (5-PIN TYPE)

QUA.....9.95.....NA

UNIVERSAL TAPE INTERFACE & DUPLICATOR

MWD.....49.50.....NA

FREEDOM (5' REMOTE KEYBOARD KIT)

PRS.....39.95.....NA

POWERMASTER (RUN YOUR 64 OFF YOUR CIGARETTE LIGHTER)

RAN.....(NA).....NA

SOFTWARE PROTECTION DEVICES

SOF.....5.98 TO 18.60.....NA

LINE OF SECURITY 'DONGLES' WHICH USE THE SECOND JOYSTICK PORT.

THE SIGNAL

ZAX.....29.95.....NA

CONVENIENCE DEVICE GIVES AUDIO SIGNAL WHEN VARIOUS CASSETTE OPERATIONS ARE COMPLETED/ ALLOWING UNATTENDED CASSETTE USE.

VAAB

INC.....19.95.....NA

PROVIDES FOR EASY CONNECTION TO AUDIO AND VIDEO COMPONENTS- USES STANDARD RCA PLUGS.

FIREFLY- PORTABLE POWER FOR COMPUTERS

6NA.....(NA).....NA

NEW ADDITIONS

TB-1 DATA CASSETTE COPIER

T&M.....24.95.....*****
 CONNECTS TWO DATA CASSETTES TO MAKE BACKUP COPIES OF CASSETTE SOFTWARE INCLUDING MACHINE LANGUAGE AND COPY-- PROTECTED PROGRAMS. GOLD-PLATED CONTACTS.

FURNITURE & ENCLOSURES

ROLLTOP 100

MCA.....36.00.....*****
 WE HAVE TRIED THEM ALL, AND THIS IS THE MOST CONVENIENT AND SPACE-EFFICIENT LARGE-CAPACITY DISK STORAGE SYSTEM WE HAVE SEEN. HOLDS 100 DISKETTES BETWEEN 11 DIVIDERS. LOCKING SECURITY VERSION ALSO AVAILABLE (\$46.00).

CT130 COMPUTER DESK

BUS.....169.95.....*****

CTA131 HUTCH (GOES ON TOP OF CT130)

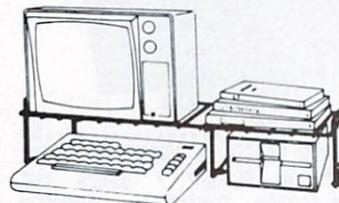
BUS.....99.95.....*****

CTA132 MONITOR/PRINTER PLATFORM

BUS.....17.95.....*****

CT120 ROLL-ABOUT TABLE

BUS.....79.95.....*****
 THIS WILL HOLD EITHER A 64 AND DISK DRIVE (MONITOR RAISED OVER KEYBOARD) OR A VERY LARGE PRINTER.



THE ORGANIZER

BRG.....29.95.....NA

WIRE-FRAME STYLE HOLDER FOR MONITOR ETC.

SOLID OAK FURNITURE

FIN.....VARIES.....NA

VERY HANDSOME- SEND OR CALL FOR THEIR BROCHURE.

SOUND TRAP

TRC.....129.00.....*****

WELL-DESIGNED AND ATTRACTIVE SOUND REDUCTION ENCLOSURE FOR WIDE RANGE OF PRINTERS. FITS EPSON & GEMINI. SOUND ATTENUATION IS GOOD. CAN BE POSITIONED TO DO DOUBLE DUTY AS A COPY HOLDER.

TRAVELMASTER

SOC.....79.00.....*****

LOCKING MOLDED POLYETHYLENE CASE SIZED & FOAM-PADDED FOR ONE 64 AND DRIVE.

CM703 CASE (HOLDS 64 AND DISK DRIVE)

CCC.....129.00.....NA

DISKBANK

AMA.....7.95.....*****

HANDY INTERLOCKING DISK- STORAGE MODULES.

CS1632 STORAGE CABINET

HYT.....89.95.....NA

LOCKING CABINET WITH ROOM FOR YOUR KEYBOARD AND DISK- DRIVE.

DESKTOPPER

MAD.....49.95.....NA

OAK STAND HOLDS TWO DRIVES ABOVE KEYBOARD. TV OR MONITOR GOES ON TOP.

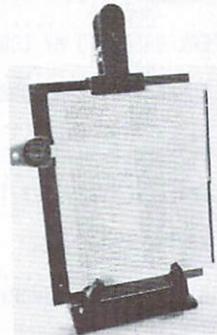
SYSTEM ORGANIZER

CPI.....79.95.....NA

(ADD \$20 FOR MONITOR TURNTABLE) THIS UNIT HOLDS MONITOR AND DISK DRIVES ABOVE KEYBOARD WITH EXTRA CUBBY-HOLES FOR OTHER GOODIES. OAK VENEER.

MORE FURNITURE & ENCLOSURES

PRINTER STAND (OAK VENEER / MATCHES ORGANIZER)
 CPI.....44.95.....NA
DISK-DEX (MATCHING OAK VENEER- HOLDS 50 DISKETTES)
 CPI.....29.95.....NA
COMPUMATE 101 (OVER-KEYBOARD ACRYLIC MONITOR STAND)
 PCT.....39.95.....NA
MAG-RAK
 R&L.....34.95.....NA
 HANDY-LOOKING GADGET FOR HOLDING MAGAZINES & BOOKS NEAR YOUR WORK-STATION.



DOT MATRIX PRINTERS

GEMINI DELTA 10
 SMI.....649.00.....*****
 160 CPS / SERIAL & PARALLEL INTERFACES. INCLUDED / HAS ALL FEATURES OF THE 10-X (BELOW) PLUS LARGER BUFFER. THIS ENTIRE ISSUE OF INFO-64 IS PRINTED ON THIS PRINTER. WE HAVE BEEN VERY IMPRESSED BY ALL OF STAR'S PRODUCTS SO FAR, AND THEY JUST KEEP GETTING BETTER.

GEMINI 10-X
 SMI.....399.00.....*****
 120 CPS / DOWNLOADABLE CHARACTER SETS / FRICTION, TRACTOR, & ROLL FEEDS / USER- REPLACEABLE PRINT-HEAD / STANDARD RIBBONS / WIDE VARIETY OF FONTS & CHAR. SIZES / EPSON FX-80 CODE COMPATIBLE. BECAUSE OF ITS PRICE & PERFORMANCE, WE CONSIDER THIS PRODUCT TO BE THE LEADING 'PRINTER OF THE MASSES'.

MANNESMANN TALLY MT 160
 MAN.....699.00.....*****
 A FAST, HIGH-QUALITY PRINTER WITH VERY GOOD CORRESPONDENCE- GRADE PRINT & GRAPHICS. CONSTANT OPERATION AT FULL SPEED NOT RECOMMENDED DUE TO OVERHEATING POSSIBILITY.

VP42 THERMAL PRINTER
 ALP.....209.95.....*****



EPSON FX-80
 EPS.....695.00.....*****
 160 CPS/ WIDELY-SUPPORTED POPULAR PRINTER WITH VARIOUS FONTS AND PITCHES/ DOT-GRAPHICS/ DOWNLOADABLE FONTS/ SHEET AND PIN-FED PAPER HANDLING.

GEMINI STX-80
 SMI.....199.00.....NA
 THERMAL / 80-COLUMN / GRAPHICS CAPABLE.

CARDPRINTER/DM1
 CAR.....149.05.....NA
 DOT MATRIX IMPACT / 40 COLUMN / 50 CPS / STANDARD ADDING MACHINE (NOT THERMAL) PAPER / 2-COLOR PRINTING / BUILT-IN 64 INTERFACE / FULL CBM GRAPHICS CHARACTER SET INCLUDING REVERSED / HI-RES GRAPHICS / EXPANDED PRINT / UTILITY SOFTWARE INCLUDED.

TRANSTAR 315 COLOR
 TRA.....599.00.....NA
 30 SHADES OF COLOR IN A SINGLE (IF SOMEWHAT SLOW (50 CPS)) PASS.

IMP
 ICD.....129.95.....NA
 30 CPS / 64 INTERFACE BUILT-IN / 24 COLUMN / PRINTS ENTIRE CBM GRAPHICS SET / GRAPHICS CAPABLE.

PRINTELEX
 CPE.....145.00.....NA
 COMPACT 40-COLUMN, 160 CPS THERMAL PRINTER. SERIAL-PARALLEL BUILT-IN / DOT GRAPHICS.

RITEMAN
 INR.....(NA).....NA
 EPSON WORK-ALIKE, LOOK-ALIKE WITH 120 CPS.

IMPACT "40" THERMAL PRINTER
 FID.....160.00.....NA
 DIRECT-CONNECT TO 64: NO EXTRA INTERFACING/ 40-CHARACTER LINE/ USES STANDARD ADDING MACHINE PAPER/ 65 CPS PRINT SPEED.

NEW ADDITIONS

RADIX-10 (STAR MICRONICS)
 SMI.....<850.00.....NA
 ALL FEATURES OF DELTA-10 ABOVE, BUT AT AN EYE-OPENING 200 CPS!

LEGEND 800
 LPP.....<350.00.....NA
 80 CPS / 40 SOFTWARE SELECTABLE TYPE STYLES / BIT GRAPHICS / BI-DIRECTIONAL LOGIC SEEKING / SQUARE DOT NLQ PRINT-HEAD / TRACTOR & FRICTION FEED.

M120/10
 BCE.....349.00.....NA
 120 CPS / CORRESP. QUALITY MODE / CONNECTS DIRECTLY TO C64 WITHOUT SEPARATE INTERFACE / BI-DIRECT., LOGIC--SEEKING / TRACTOR OR SHEET-FEEDER MODELS AVAILABLE.

DAISYWHEEL PRINTERS

TRANSTAR 130
 TRA.....895.00.....NA
 16 CPS / BI-DIRECTIONAL / DIABLO CODE COMPATIBLE / WORDPRO-3 FEATURES COMPLETELY SUPPORTED / FRICTION FEED

TRANSTAR 120
 TRA.....(NA).....NA
 14 CPS / DIABLO CODE COMPATIBLE / WORDPRO-3 FEATURES COMPLETELY SUPPORTED / FRICTINN FEED

LQ/1
 CAR.....649.95.....NA
 14 CPS DAISY WHEEL / COMES FULLY INTERFACED FOR 64 AS WELL AS STANDARD PARALLEL / SUPPORTS UNDERLINING, BOLD & SHADOW PRINT / TRUE PROPORTIONAL CHARACTER SPACING. SOFTWARE SUPPLIED FOR TYPEWRITER EMULATION / CAN ALSO BE USED AS A TWO COLOR DOT GRAPHIC PRINTER FOR CUSTOM LETTER HEADS AND LOGOS.

TTX-1014
 TTX.....649.00.....NA
 COMPACT DAISYWHEEL / 140 WPM / SERIAL & PARALLEL INTERFACES BUILT-IN

NEW ADDITIONS

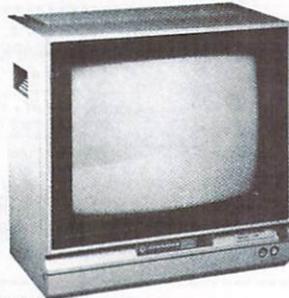
POWER TYPE
 SMI.....(NA).....NA
 STAR'S FIRST DAISYWHEEL ENTRY: 18 CPS / 10, 12, 15 CPI, AND PROPORTIONAL SPACING / 100 TYPE FONTS AVAILABLE / REVERSE PAPER FEED / BOTH SERIAL & PARALLEL INTERFACES.



DISPLAYS

1702 COLOR MONITOR

CBM.....299.00.....*****
 THIS IS ONE OF THE NICEST THINGS COMMODORE HAS DONE SINCE INTRODUCING THE 64. MAKE SURE YOU TAKE ADVANTAGE OF THE HI-PERFORMANCE BACK-PANEL INPUTS. ONE OF THE TOP TEN PRODUCTS OF THE YEAR.



PANASONIC CT-160 (10" COLOR MONITOR)	PAN.....350.00.....***+
AMDEK COLOR-1 (12" COLOR MONITOR)	AMD.....399.00.....***
PANASONIC CT-1112 (10" COLOR MONITOR/ T.V.)	PAN.....399.00.....***+
AMDEK VIDED 300 (12" 80-COL. GREEN MONITOR)	AMD.....199.00.....***+
AMDEK VIDED 300A (12" 80-COL. AMBER MONITOR)	AMD.....215.00.....***+
GORILLA MONITOR (12" 80-COL. GREEN SCREEN)	LEP.....99.00.....NA
TRANSTAR 20 (12" 80-COL. GREEN SCREEN)	TRA.....170.00.....NA

INFORMATION SERVICES

PRODUCT NAME	VENDOR CODE	HOOK-UP	PRICE/HR(EVES.)	RTG.
COMPUSERVE	CSV.....	30.00.....	6.00.....	***
SOURCE	SRC.....	100.00.....	7.75.....	***
DELPHI INFORMATION SERVICE	DEL.....	49.95.....	5.00.....	NA

PUBLICATIONS

PRODUCT NAME	VENDOR CODE	PRICE/ISSUE	TIMES/YR.	RTG.
COMPUTE! (COVERS MANY MICROS, THE 64 HAS BECOME A DOMINANT THEME)	CPU.....	2.95.....	12.....	***
COMPUTE!'S GAZETTE (VIC & 64 MAG)	CPU.....	2.50.....	12.....	***
COMMANDER (COMMODORE ONLY)	MSS.....	2.95.....	12.....	***+
TRANSACTOR (COMMODORE ONLY)	TRX.....	(NA).....	6.....	***+

NEW ADDITIONS

RUN (VIC & 64)	WGI.....	2.95.....	12.....	***
AHOY! (COMMODORE ONLY)	III.....	2.50.....	12.....	***-

BOOKS & MISC. REFERENCE

PRODUCT NAME	VENDOR CODE	PRICE	RTG.
PROGRAMMER'S REFERENCE GUIDE	CBM.....	19.95.....	***
THE ELEMENTARY 64	DMD.....	14.95.....	***
YOUR COMMODORE 64	OSB.....	12.95.....	***
I SPEAK BASIC TO MY COMMODORE 64	HAS.....(NA).....		***+
THE ELEMENTARY COMMODORE 64	DMD.....	14.95.....	***+
THE COMMODORE 64 MUSIC BOOK	BDB.....	14.95.....	NA
COMPLETELY DEVOTED TO THE SUBJECT OF MAKING MUSIC WITH YOUR 64.			
THE MASTER MEMORY MAP	EDU.....(NA).....		NA
GUIDE TO 64'S MEMORY, AND HOW TO CONTROL IT WITH PEEKS AND POKES.			
INSIDE THE COMMODORE 64	FRE.....FREE (\$).....		NA
(*) FREE WITH PURCHASE OF DEVELOP-64 SOFTWARE. GUIDE TO MACHINE LANGUAGE, ASSEMBLY LANGUAGE, MACHINE ARCHITECTURE / SAMPLE PROGRAMS WITH EXPLANATIONS.			
HOW TO MAKE MONEY WITH YOUR CBM 64	PRA.....	4.95.....	NA
PRINTER PROGRAMMING MANUALS	REH.....	15.00.....	NA
MANUAL FOR GETTING THE MOST OUT OF YOUR EPSON PRINTER AND 64. (WOULD PROBABLY APPLY TO GEMINI TOO) / SCREEN DUMPS / SIDWAYS PRINTING, ETC.			
PAL	PMP.....	9.95.....	***
YOU REALLY GET YOUR MONEY'S WORTH WITH THIS PAD OF PRINTED AIDS. KEYBOARD TEMPLATES / SCREEN LAYOUT GRIDS / LOG SHEETS / BASE CONVERSION CHARTS / SPRITE GRIDS / SOUND AND BASIC LANGUAGE REFERENCES.			
KEYBOARD OVERLAY (PLASTIC WITH BASIC REFERENCES.)	ROT.....	8.95.....	NA
PC-DOCUMATE (BASIC REFERENCE OVERLAY)	SYS.....	12.95.....	NA
THE PROMPTER (PLASTIC FUNCTION KEY OVERLAYS)	TRN.....	3.95 (PK6 OF 4).....	***

TOTALLY MISCELLANEOUS

PRODUCT NAME	VENDOR CODE	PRICE	RTG.
DATA LOSS INSURANCE	ACU.....	(NA).....	NA
DISK DOUBLER	LIN.....	9.95.....	NA
CUTS A JUST-RIGHT NOTCH IN YOUR DOUBLE SIDED DISKETTES SO YOU CAN FLIP THEM OVER AND USE THE OTHER SIDE.			
SOFTWARE TRADING GROUP	TSE.....	9.95.....	NA
YOU SEND IN A TAPE WITH A PROGRAM YOU WROTE, THEY COPY IT AND ADD 5 PROGRAMS TO YOUR TAPE AND RETURN IT TO YOU.			

★ ★ THE END ★ ★

INDEX TO VENDORS

36C - 36 COMPANY INC.	DEPT. CO	RT. 3 / BOX 28A	GASTON	OR 97119	(503)357-988
AAR - AARDVARK	2352 S. COMMERCE		WALLED LAKE	MI 48088	313-669-3110
ABA - ABACUS SOFTWARE	PO BOX 7211		GRAND RAPIDS	MI 49510	616-241-5510
ABC - A B COMPUTERS	252 BETHLEHEM PIKE		COLMAR	PA 18915	215-822-7727
ACA - ACADEMY SOFTWARE	PO BOX 9403		SAN RAFAEL	CA 94912	415-499-0850
ACC - ACCESS SOFTWARE	925 EAST 900 SOUTH		SALT LAKE CITY	UT 84105	801-532-1134
ACS - A-1 COMPUTER SERVICES	7103 2. CLEARWATER	H-117	KENNEWICK	WA 99336	509-783-4980
ACU - ASSOCIATION OF COMPUTER USERS	PO BOX 9003		BOULDER	CO 80301	
ADA - ADVANCED ARCADEWARE	PO BOX 845		THOMASVILLE	NC 27360	919-431-3231
ADI - ADVENTURES INC.	8718A RICHMOND HIGHWAY		ALEXANDRIA	VA 22309	800 835 2222
ADV - ADVENTURE INTERNATIONAL	BOX 3435	4517 HARFORD ROAD	LONGWOOD	FL 32750	305-862-6917
AHG - AVALON HILL GAME CO.	MICROCOMPUTER GAMES DIVI	DEPT. E	BALTIMORE	MD 21214	301-254-5300
AIR - ARTIFICIAL INTELLIGENCE RESEARCH 6	921 NORTH LA JOLLA AVE.		LOS ANGELES	CA 90046	213 656 7368
ALI - ALIEN GROUP	27 W. 23RD ST.		NEW YORK	NY 10010	
ALP - ALPHACOM	2323 SOUTH BASCOM AVENUE		CAMPBELL	CA 95008	
AMA - AMARAY CORPORATION	2251 GRANT ROAD		LOS ALTOS	CA 94022	415 968 2840
AMD - AMDEK CORP.	2201 LIVELY BLVD.		ELK GROVE VILLAGE	IL 60007	312-364-1180
AME - AMERICAN DATA CABLE INC.	2864 RAY LAWYER DRIVE	#205-352 / PO BOX 22	PLACERVILLE	CA 95667	916-622-3465
AMI - AMIGA CORPORATION	3350 SCOTT BOULEVARD	BUILDING 7	SANTA CLARA	CA 95051	408 748 0222
ANI - ANIMAX COMPUTER	1111 LAS VEGAS BLVD. SOU	SUITE 203	LAS VEGAS	NV 89104	702 384 0746
ARB - ARBUTUS TOTAL SOFT INC.	4202 MERIDIAN	SUITE 214	BELLINGHAM	WA 98226	206-733-0404
ARI - ARIES MARKETING CO.	PO BOX 4196	4200 SHANNON DRIVE	BALTIMORE	MD 21205	
ARK - ARKTRONICS	113 SOUTH FOURTH AVENUE		ANN ARBOR	MI 48104	800 CALL ARK
ART - ARTWORX SOFTWARE CO. INC.	150 N. MAIN ST.		FAIRPORT	NY 14450	800 828 6573
ATA - ATARISOFT	PO BOX 2943		SO. SAN FRANCISCO	CA 94080	408 745 2000
AVC - AVCOR	512 KING STREET EAST		TORONTO	ON M5A-1M1	416 864 9240
B&B - BYTES & BITS	524 EAST CANTERBURY LANE		PHOENIX	AZ 85022	602 942 1475
B&P - BYTES & PIECES	550 W. 68TH STREET		WAUWATOSA	WI 53213	414 257 3562
BAB - BASIC BYTE INC.	PO BOX 924		SOUTHFIELD	MI 48037-0	800-835-2246
BAN - BANED SOFTWARE	113 TENTH ST.		WEST KEANSBURG	NJ 07734	201 495 0900
BAT - BATTERIES INCLUDED	186 QUEEN STREET WEST		TORONTO	ON M5V 1Z1	416-596-1405
BAZ - BAZ ELECTRONICS	PO BOX 4895		FEDERAL WAY	WA 98003	206 874 3029
BCE - BLUE CHIP ELECTRONICS, INC.	7406 EAST BUTHERUS DRIVE		SCOTTSDALE	AZ 85260	602 991 9833
BDB - B. DALTON BOOKSELLER	9340 JAMES AVE. S.		MINNEAPOLIS	MN 55431	
BEH - BEHAVIORAL ENGINEERING	230 MT. HERMON RD.	SUITE 207	SCOTT'S VALLEY	CA 95066	408 438 5649
BES - BOSTON ELECTRONIC SYSTEMS TRAINING	24 MUNROE ST.		NEWTONVILLE	MA 02160	
BIB - BIBLE SOFTWARE	4169 SE DAVIDSON		ALBANY	OR 97321	
BIT - BITCARDS	120 SOUTH UNIVERSITY DRI	SUITE F	PLANTATION	FL 33317	305 473 4741
BIZ - BIZWARE INC.	5014 HWY 29		LILBURN	GA 30247	800 221 7171
BLU - BLUE CHIP SOFTWARE	19537 WELLS DRIVE		TARZANA	CA 91356	
BMT - BYTESIZE MICRO TECHNOLOGY	PO BOX 21123	DEPT. E.	SEATTLE	WA 98111	204 236 BYTE
BOS - BOSTON EDUCATIONAL COMPUTING INC.	78 DARTMOUTH STREET		BOSTON	MA 02116	617-536-5116
BRA - ROBERT J. BRADY CO.			BOWIE	MD 20715	301 262 6300
BRG - B.R. GREEN	410 HUNTLEY DR.		LOS ANGELES	CA 90048	800 824 7888
BRI - BRILEY SOFTWARE	PO BOX 2913		LIVERMORE	CA 94550-0	
BRO - BRODERBUND SOFTWARE	1938 FOURTH STREET		SAN RAFAEL	CA 94901	
BRS - BIBLE RESEARCH SYSTEMS	PO BOX 1389		ROUND ROCK	TX 78680	512 835 7981
BSS - BLUE SKY SOFTWARE	26 SPRINGDALE RD.		CHERRY HILL	NJ 08003	609-424-3337
BUB - BUBBLE BUS	87 HIGH STREET		TONBRIDGE/KENT	EN TN1 1LS	
BYR - BYTE-RYTE	PO BOX 205	STATION CART.	MONTREAL	PQ H4K 2J5	
BYT - BYTEMARK	710 LINCOLNWAY WEST		SOUTH BEND	IN 46616	219 232 4662
CAC - COMPUTER ACCESSORIES	1135 COLUMBUS		BAKERSFIELD	CA 93305	805 872 4488
CAI - COMPUTER ADVANCED IDEAS	1442A WALNUT STREET	SUITE 341	BERKELEY	CA 94709	415 526 9100
CAN - COMPUTER ANTICS INC.	3170 RONIT COURT		YORKTOWN HEIGHTS	NY 10598	
CAR - CARCO INC.	313 MATHEWSON		WICHITA	KS 67214	316-267-6525
CAS - CASTLE SOFTWARE	PO BOX 350		NEW CASTLE	DE 19720	302 429 8565
CBI - CHALK BOARD INC.	3772 PLEASANTDALE ROAD		ATLANTA	GA 30340	800 241 3989
CBM - COMMODORE BUSINESS MACHINES	1200 WILSON DRIVE		WEST CHESTER	PA 19380	215 431 9100
CBS - CBS SOFTWARE	ONE FAWCETT PLACE		GREENWICH	CT 06836	203 622 2503
CBY - CBM SYSTEMS	7277 HAYZENHURST AVE.	SUITE B-5	VAN NUYS	CA 91406	
CCC - COMPUTER CASE COMPANY	5650 INDIAN MOUND COURT		COLUMBUS	OH 43213	614 868 9464
CCI - CLOCKWORK COMPUTERS	4612 HOLLY RIDGE ROAD		ROCKVILLE	MD 20853	301 924 5509
CDC - COMM#DATA COMPUTER HOUSE	320 SUMMIT AVENUE		MILFORD	MI 48042	313-685-0113
CDS - COMMERCIAL DATA SYSTEMS LTD.	730 EASTVIEW AVENUE		REGINA	SK S4N 0A2	306 525 3386
CGR - CGRS MICROTECH	PO BOX 102		LANGHORNE	PA 19047	215-757-0284
CIM - CIMARRON CORP.	DIVISION OF STANDUN CONT	2158 HATHAWAY STREET	SANTA ANA	CA 92705	714-241-5600
CIR - CIRCADIAN SOFTWARE INC.	PO BOX 1208		MELBOURNE	FL 32901	305 723 5717
CIS - CITY SOFTWARE	735 WEST WISCONSIN AVE.		MILWAUKEE	WI 53233	414-291-5125
CMC - CONNECTICUT MICROCOMPUTER	36 DEL MAR DRIVE		BROOKFIELD	CT 06804	203-775-4595
CML - COMAL USER GROUP	5501 GROVELAND TER.		MADISON	WI 53716	608 222 4432
CMY - COMREX INTERNATIONAL INC.	3701 SKYPARK DRIVE		TORRANCE	CA 90505	213 373 0280
CNS - CONSOLINK CORP.	1840 INDUSTRIAL CIRCLE		LONGMONT	CO 80501	800 525 6705
COA - COMPUTER ALLIANCE	21115 DEVONSHIRE ST.	#132C	CHATSWORTH	CA 91311	213-368-4089
COB - COMPUTRON BUSINESS SYSTEMS	1139 SW 11TH AVENUE		PORTLAND	OR 97205	503 224 2220
COC - COMPUTER CENTER	9621 'D' OATES DRIVE		SACRAMENTO	CA 95827	916 366 3609
COM - COMPUTERMAT	BOX 1664	DEPT C	LAKE HAVASU CITY	AZ 86403	602-855-3357
CON - CONTINENTAL SOFTWARE CO.	11223 SOUTH HINDRY AVE.		LOS ANGELES	CA 90045	213-417-3003
COP - COMPUTER PLACE	23914 CRENSHAW BLVD.		TORRANCE	CA 90505	213-325-4754
COU - COUNTERPOINT SOFTWARE INC.	SUITE 140	SHELARD PLAZA NORTH	MINNEAPOLIS	MN 55426	
CPE - COMPUTER PERIPHERALS	1117 VENICE BOULEVARD		LOS ANGELES	CA 90015	213 298 1297

CPI - COMPUTER POWER INT'L	1779 EAST FLORIDA	HEMET	CA 92343	800-258-7862
CPS - CONCORDE PERIPHERAL SYSTEMS INC.	23152 VERDUGO DRIVE	LAGUNA HILLS	CA 92653	714 859 2850
CPU - COMPUTE! PUBLICATIONS INC.	PO BOX 5406	GREENSBORO	NC 27403	919 275 9809
CRE - CREATIVE SOFTWARE	230 EAST CARIBBEAN DRIVE	SUNNYVALE	CA 94806	408-745-1655
CRO - CROSSTECH GRAPHICS	2133 NORTH FREMONT STREET	CHICAGO	IL 60614	312-871-3555
CRQ - CREATIVE EQUIPMENT	6864 WEST FLAGLER STREET	MIAMI	FL 33144	305 261 7866
CSA - COMPUTER SOFTWARE ASSOCIATES	44 DAK STREET	THE SILK MILL	MA 02164	617 527 7510
CSI - COUNTERPOINT SOFTWARE INC.	4005 WEST 65 ST.	MINNEAPOLIS	MN 55435	800 328 1223
CSS - COMPREHENSIVE SOFTWARE SUPPORT	2316 ARTESIA BL.	REDONDO BEACH	CA 90278	213 318 2561
CSV - COMPUSERVE	2180 WILSON ROAD	COLUMBUS	OH 43228	800-848-8199
CTC - COMPUTECH	PG BOX 7000-309	REDONDO BEACH	CA 90277	
CUE - CUESTA SYSTEMS INC.	3440 ROBERTO COURT	SAN LUIS OBISPO	CA 93401	805 541 4160
CUG - COMMODORE 64 USERS GROUP	SUITE 100 / CORPORATE WE	LISLE	IL 60532	312 369 6525
CUR - CURSOR 64	BOX 6905	SANTA BARBARA	CA 93110	805-683-1585
CVG - CYGNUS EXPERT SYSTEMS INC.	PO BOX 385	WATER MILL	NY 11976	
DAB - DAYBREAK SOFTWARE	1951 GRAND AVE.	BALDWIN	NY 11510	800 645 3739
DAS - DATASOFT INC.	9421 WINNETKA AVENUE	CHATSWORTH	CA 91311	213 701 5161
DAT - DATA 20 CORP.	23011 MOULTON PARKWAY	LAGUNA HILLS	CA 92653	714 770 2366
DAY - DAVIDSON & ASSOCIATES	6069 GROVEDAK PLACE # 12	RANCHO PALOS VERDES	CA 90274	213 378 7826
DAY - DAYFROM COMPUTER INC.	3460 S. DIXIE HWY.	DAYTON	OH 45439	513 299 8555
DEE - DOUBLE E ELECTRONICS INC.	12027 PACIFIC STREET	OMAHA	NE 68144	402 334 7870
DEL - GENERAL VIDEOTEX CORP.	377 PUTNAM AVE.	CAMBRIDGE	MA 02139	617-491-3393
DES - DATA EQUIPMENT SUPPLY CORP.	8315 FIRESTONE BLVD.	DOWNEY	CA 90241	213-923-9361
DIA - DIALOGUE INFORMATION SERVICES	3460 HILLVIEW AVE.	PALO ALTO	CA 94304	800 528 6050
DIC - DISPLAY INTERFACE CORP.	525 BOSTON POST ROAD	MILFORD	CT 06460	203 877 7661
DIG - DIGITAL ARTS CORP.	PO BOX 20231	CINCINNATI	OH 45220	513-891-1217
DIL - DILITHIUM SOFTWARE	PO BOX E	BEAVERTON	OR 97075	800 547 1842
DIS - DIGITAL INTERFACE SYSTEMS CO.	PO BOX 8715	PORTLAND	OR 97207	503 230 1130
DLM - DEVELOPMENTAL LEARNING MATERIALS	ONE DLM PARK	ALLEN	TX 75002	800 527 4747
DLX - DELUXE COMPUTER FORMS	530 NORTH WHEELER	ST. PAUL	MN 55164-0	800 228 5666
DMI - DMI SOFTWARE INC.	1866 BACON STREET	SAN DIEGO	CA 92107	619-223-4496
DMO - DATAMAT INC.	9748 COZYCROFT AVE.	CHATSWORTH	CA 91311	213-709-1202
DOC - DOCUTEL/OLIVETTI CORP.	155 WHITE PLAINS RD.	TARRYTOWN	NY 10591	
DON - DON'T ASK COMPUTER SOFTWARE	2265 WESTWOOD BL.	LOS ANGELES	CA 90064	213-477-4514
DOW - DOW JONES NEWS	PO BOX 300	PRINCETON	NJ 08540	800 222 0081
DTB - DATABAR CORPORATION	10202 CROSSTOWN CIRCLE	EDEN PRAIRIE	MN 55344	800 672 2776
DTK - DATA TREK	121 WEST E. ST.	ENCINITAS	CA 92024	619 436 5055
DUS - DUNGENESS SOFTWARE	323 LOTZGESELL ROAD	SEQUIM	WA 98382	
DYM - DYMARC INDUSTRIES INC.	21 GOVERNOR'S CT.	BALTIMORE	MD 21207	800 638 9098
DYN - DYNACOMP INC.	1427 MONROE AVE.	ROCHESTER	NY 14618	716 442 8960
DYT - DYNATECH MICROSOFTWARE INC.	7847 N. CALDWELL AVE.	NILES	IL 60648	800 621 4109
EAI - EDUCATIONAL ACTIVITIES, INC.	PO BOX 392	FREEPORT	NY 11520	516 223 4666
EAS - EASTERN HOUSE	3239 LINDA DR.	WINSTON-SALEM	NC 27106	919-924-2889
ECC - EASTERN COMPUTER CONSULTING ASSOCI	11 DICK DRIVE	WORCESTER	MA 01609	
ECI - EDUCATION CIRCUIT INC.	PO BOX 333	LANDING	NJ 07850	201-398-6185
ECP - EMBASSY COMPUTER PRODUCTS	PO BOX 88	LITTLE NECK	NY 11363	
ECX - ECX COMPUTER COMPANY	2678 NORTH MAIN STREET	WALNUT CREEK	CA 94526	415-944-9277
EDC - EDUCOM, INC.	901 S. 129TH	TACOMA	WA 98444	206 531 8767
EDU - EDUCATIONAL SOFTWARE INC	4565 CHERRYVALE AVE.	SOQUEL	CA 95073	408 476 4901
EHS - EVENT HORIZON SOFTWARE	PO BOX 1327	NEW YORK	NY 10028	212-535-0697
ELC - ELECTRA CONCEPTS	125 WILBUR PLACE	BOHEMIA	NY 11716	
ELE - ELECTRONIC ARTS	2755 CAMPUS DRIVE	SAN MATEO	CA 94403	415 571 7171
ELI - ELECTRONIC LAB INDUSTRIES	100 W. 22ND ST.	BALTIMORE	MD 21218	301 366 8138
EME - EMERALD SOFTWARE	122 BANGOR STREET	LINDENHURST	NY 11757	516-226-5849
ENG - ENGLISH SOFTWARE	PO BOX 3185	REDONDO BEACH	CA 90277	213 372 3440
ENT - EN-TECH SOFTWARE	PO BOX 881	SUN VALLEY	CA 91352	213-764-6833
EPD - ELECTRONIC PROTECTION DEVICES INC.	PO BOX 673	WALTHAM	MA 02254	617-891-6602
EPI - ELCOMP PUBLISHING INC.	53 REDROCK LANE	PAMONA	CA 91766	714 623 8314
EPS - EPSON AMERICA INC.	3415 KASHIWA STREET	TORRANCE	CA 90505	213-539-9140
EPY - EPYX/ AUTOMATED SIMULATIONS INC.	1043 KIEL COURT	SUNNYVALE	CA 94086	
ESI - ELECTRONIC SOFTWARE INC.	PO BOX 765	BLOOMFIELD HILLS	MI 48303	
EST - ESTES ENGINEERING INC.	PO BOX 753	SALINA	KS 67402	913 827 0629
EXA - EXATRON	181 COMMERCIAL ST.	SUNNYVALE	CA 94086	408-737-7111
F/2 - F/22 PRESS	PO BOX 141	LEONIA	NJ 07605	201 568 6250
FAB - FABRONICS	51 QUARRY ST	BROCKPORT	NY 14420	716 637 6371
FAN - FANTASY COMUTERWARE	BOX 451	SIOUX FALLS	SD 57101	605-335-7684
FED - FEDERAL HILL SOFTWARE	825 WILLIAM ST.	BALTIMORE	MD 21230	301 685 6254
FER - FERIN ENTERPRISES	6310 UNDERWOOD AVE. S.W.	CEDAR RAPIDS	IA 52404	
FID - FIDELITY ELECTRONICS LTD.	8800 NW 36TH ST.	MIAMI	FL 33178	305 888 1000
FIN - FINETECH FURNITURE INC.	PO BOX 280	WOODBURY	TN 37190	615 765 5021
FIR - FIRST STAR SOFTWARE INC	22 EAST 41ST STREET	NEW YORK	NY 10017	212 532 4666
FLP - FLIPTRACK LEARNING SYSTEMS	999 MAIN	GLEN ELLYN	IL 60137	
FOV - FOXVILLE COMMUNICATIONS CORP.	7741 E. GRAY ROAD / SUIT	SCOTTSDALE	AZ 85261	602 948 9817
FOX - FOXSOFT (DIVISION OF FOXFIRE SYSTE	PO BOX 507	DEER PARK	TX 77536	713-473-6723
FRE - FRENCH SILK SMOOTHWARE	PO BOX 207	CANNON FALLS	MN 55009	507-263-4821
FRO - FRONTLINE PRODUCTS	1915 W. GLENOAKS BOULEVA	GLENDALE	CA 91201	213 845 8139
FUN - FUNSOFT	28611 CANWOOD ST.	AGOURA	CA 91301	213 991 6540
GAL - GALACTIC SOFTWARE	PO BOX 10516	SAN JOSE	CA 95157	408-247-4434
GAM - GAMESTAR INC.	1302 STATE STREET	SANTA BARBARA	CA 93101	805 963 3487
GAT - GATOS INTERNATIONAL	218 ROSE	SAN FRANCISCO	CA 94102	

GCC - GENESIS COMPUTER CORP.	1444 LINDEN STREET	BETHLEHEM	PA 18018	215-861-0850
GEM - GEMTECH LABORATORIES	731 BUNDABERG LANE	RURAL HALL	NC 27045	
GLO - GLOUCESTER COMPUTER	1 BLACKBURN CENTER	GLOUCESTER	MA 01930	
GMA - GAMMA RESEARCH	6253 HOLLYWOOD BLVD.	LOS ANGELES	CA 90028	213 463 2345
GNT - GENTRY SOFTWARE	9421 WINNETKA AVE.	CHATSWORTH	CA 91311	800 423 5916
GOS - GOSUB INTERNATIONAL INC.	501 E. PAWNEE	WICHITA	KA 67211	316 265 9992
GPM - GP MICROSYSTEMS	72-31 67TH PLACE	GLENDALE	NY 11385	
GRA - GRAPEVINE SOFTWARE INC.	PO BOX 14843	LENEXA	KS 66215	913 888 0501
GSS - GOSUB OF SLIDELL	PO BOX 1781	SLIDELL	LA 70459	504-641-8307
GTC - GENEVA TECHNOLOGIES CORP.	14 COMMERCE DRIVE	CRANFORD	NJ 07016	201 276 1144
GTR - GATOR SOFTWARE	4949 1/2 PARAMOUNT BLVD	LAKEWOOD	CA 90712-2	
H&H - H&H ENTERPRISES	DEPT. 123CK STREET	MILWAUKEE	WI 53209	
HAC - HACKER'S HARDWARE	POB 7933	SAN DIEGO	CA 92107	619 224 2147
HAN - HANDIC SOFTWARE INC.	FELLOWSHIP BUSINESS CENT	MOUNT LAUREL	NJ 08054	609 663 0660
HAS - HAYDEN BOOK COMPANY INC.	50 ESSEX STREET	ROCHELLE PARK	NJ 07662	800 631 0856
HAY - HAYDEN SOFTWARE	600 SUFFOLK STREET	LOWELL	MA 01853	
HBJ - HARCOURT BRACE JOVANDVICH INC.	DEPT. COMPUTER SAT PS-9-	SAN DIEGO	CA 92101	800 543 1918
HES - HUMAN ENGINEERED SOFTWARE	150 NORTH HILL DRIVE	BRISBANE	CA 94005	800 227 6703
HIN - DR. JERRY L. HINTZE	865 EAST 400 NORTH	KAYSVILLE	UT 84037	801 546 0445
HOR - HORIZON SOFTWARE	SUITE 597	ASTORIA	NY 11103	
HOT - HOT DATA		SANTA MONICA	CA	213 393 6405
HTE - HIGH TECH ENTERPRISES	#3 CORPORATE PLAZA	NEWPORT BEACH	CA 92660	
HUT - HUTCHCRAFT ASSOCIATES	1132 DRYDEN ROAD	ITHACA	NY 14850	607-347-4782
HYT - HYTEC SYSTEMS	PO BOX 446	WEST LINN	OR 97068	503-636-6888
ICD - INSTITUTIONAL COMPUTER DVLPMNT. CO	2951 MERRICK RD.	BELLMORE	NY 11710	800 645 4710
IDC - INFO-DESIGNS	6905 TELEGRAPH ROAD	BIRMINGHAM	MI 48010	313-540-4010
III - ION INTERNATIONAL INC.	45 W. 34TH ST.	NEW YORK	NY 10001	
INC - INTEGRATED CONTROLS	1240-L LOGAN AVE.	COSTA MESA	CA 92926	714 641 0181
INF - INFOCOM INC.	55 WHEELER STREET	CAMBRIDGE	MA 02138	617-492-1031
INI - INFINITY SOFTWARE	536 CURIE DR.	SAN JOSE	CA 95123	408 629 6208
INK - INKWELL SYSTEMS	PO BOX 85152 MB290	SAN DIEGO	CA 92138	619 268 8792
INP - INPUT SYSTEMS INC.	25101 SW 194TH AVE.	HOMESTEAD	FL 33031	305 245 3141
INR - INFORUNNER CORPORATION	1621 STANFORD STREET	SANTA MONICA	CA 90404	800 824 3044
INS - INTELLIGENT STATEMENTS				800 334 5470
INT - INTERESTING SOFTWARE	21101 S. HARVARD BLVD.	TORRANCE	CA 90501	213-328-9422
IPF - IPF PUBLICATIONS	146 COUNTRY CLUB LANE	POMONA	NY 10970	914 354 5585
ISI - ISIS HATHOR DIGITAL PRODUCTIONS	6184 VERDURA AVE.	GOLETA	CA 93117	805-964-6335
JAN - JANCE ASSOCIATES INC.	PO BOX 234	EAST TEXAS	PA 18046	215 398 0434
JAS - JASON-RANHEIM	580 PARROTT ST.	SAN JOSE	CA 95112	800 421 7731
JIN - JINI MICRO-SYSTEMS	PO BOX 274	RIVERDALE	NY 10463	212-796-6200
JOU - JOU LABORATORIES	2116 E. ARAPAHO	RICHARDSON	TX 75081	
JUS - JUST ANOTHER SOFTWARE CO.	DEPT. C7	PALO ALTO	CA 94301	
JVB - JVB ELECTRONICS	1601 FULTON AVE.	SACRAMENTO	CA 95825	916 483 0709
KAT - KATTWINKEL KOMPUTING	520 PALM SPRINGS BLVD.	INDIAN HARBOUR BEACH	FL 32937	
KID - KIDWARE	BOX 1664	IDAHO FALLS	ID 83401	
KOA - KOALA TECHNOLOGIES CORP.	4962 EL COMING REAL	LOS ALTOS	CA 94022	800-227-6703
KOL - KOLOB MARKETING INC.	PO BOX 21445	SALT LAKE CITY	UT 84121	
KRE - KRELL SOFTWARE CORP.	1320 STONY BROOK ROAD	STONY BROOK	NY 11790	516-751-5139
KSC - KRAFT SYSTEMS COMPANY	450 W. CALIFORNIA AVE.	VISTA	CA 92083	619-724-7146
L&L - L&L ENGINEERING	PO BOX 5891	KENT	WA 98031	206 631 3383
LAW - LAWCO LTD.	PO BOX 1337	CUPERTINO	CA 95015	408 733 0739
LEG - LEGAL BYTE SOFTWARE	BOX 579	GWYNEDD VALLEY	PA 19437	215 643 7666
LEP - LEADING EDGE PRODUCTS INC.	225 TURNPIKE STREET	CANTON	MA 02021	800 343-6833
LGN - LOGGINS ENTERPRISES	PO BOX 10265	BRADENTON	FL 34282	NO PHONE
LIM - LIMBIC SYSTEMS INC.	1056 ELWELL COURT	PALO ALTO	CA 94303	415 964 8788
LIN - LINK MARKETING	219 1ST. AVE. N.	SEATTLE	WA 98109	800 323 1717
LIT - LITTLE WIZARD MANUFACTURING	PO BOX 152	MILWAUKEE	WI 53201	414 968 2558
LOE - LOGISTIC ENGINEERING ASSOCIATES				619 562 1047
LOG - LOGOS SOFTWARE	3192 LAUREL CANYON RD.	SANTA BARBARA	CA 93105	805-687-0205
LON - LONDON SOFTWARE	374 WILDWOOD AVE.	PIEDMONT	CA 94611	415 893 1090
LPP - LEGEND PERIPHERAL PRODUCTS	14722 OXNARD ST.	VAN NUYS	CA 91401	800 321 4484
LUN - LUNA SOFTWARE	PO BOX 26922	SAN JOSE	CA 95159-6	408-378-7793
LYN - LYNN COMPUTER SERVICE	6831 WEST 157TH STREET	TINLEY PARK	IL 60477	312 429 1915
M&M - M&M SOFTWARE COMPANY	3790 EL CAMINO REAL	PALO ALTO	CA 94306	
MAC - MAGIC CARPET	PO BOX 35115	PHOENIX	AZ 85069	
MAD - MADISON COMPUTER	1825 MONROE	MADISON	WI 53711	608 255 5552
MAG - MAGREEABLE SOFTWARE INC.	5925 MAGNOLIA LANE	PLYMOUTH	MN 55442	612-559-1108
MAN - MANNESMANN TALLY	8301 S. 180TH. ST.	KENT	WA 98032	206 251 5500
MAX - MAXELL CORPORATION OF AMERICA	COMPUTER PRODUCTS DIVISI	MOONACHIE	NJ 07074	201-440-8020
MCA - MICROCOMPUTER ACCESSORIES	1545 PONTIUS AVE.	LOS ANGELES	CA 90025	213 478 7164
MCL - MICOL SYSTEMS	PO BOX 5150	WHITTIER	CA 90607-5	
MCR - MICROCLEAR	PO BOX 9368	RAYTOWN	MO 64133	
MCS - MASTER CONTROL SOFTWARE INC.	PO BOX 26714	SALT LAKE CITY	UT 84126	800 624 5596
MDG - MICRODIGITAL	752 JOHN GLENN BLVD.	WEBSTER	NY 14580	800 833 7384
MED - MICRO-ED INC.	PO BOX 24156	MINNEAPOLIS	MN 55424	612-926-2292
MEG - MEGA SOFTWARE	PO BOX 2398	KLAMATH FALLS	OR 97601	
MEL - MELCOMP	PO BOX 1085	MELBOURNE	FL 32901	
MER - MERRITT SOFTWARE INC.	PO BOX 1504	FAYETTEVILLE	AR 72702	501 442 0914
MES - MELCHER SOFTWARE	PO BOX 213	MIDLAND	MI 48640	517 631 7607
MGR - MICROGRAMS INC.	PO BOX 2146	LOVES PARK	IL 61130	815-965-2464

MIC - MICRO SOLUTIONS INC.	SUITE 909	545 5TH AVE.	NEW YORK	NY 10017	212-222-6687
MID - MIDWEST MICRO INC.	311 W. 72ND ST.		KANSAS CITY	MO 64114	816-333-7200
MIF - MICROCRAFT SYSTEMS INC.	POB 1109		ANN ARBOR	MI 48106	313 996 1297
MIL - MILTON BRADLEY	443 SHAKER RD.		EAST LONGMEADOW	MA 01028	413 525 6411
MIN - MINDWORKS	RTE. 2	BOX 28A	WINTERS	CA 95694	916 795 2322
MIO - MIDNIGHT-OIL	PO BOX 1808		BEAVERTON	OR 97075	
MIP - MICROPERIPHERAL CORP.	2565 152 AVE NE		REDMOND	WA 98052	206 881 7544
MIQ - MICROTECHNIQUES	PO BOX 192		CHESTERFIELD	MO 63017	
MIR - MIRAGE CONCEPTS INC.	2519 W. SHAW #106		FRESNO	CA 93711	209 227 8369
MIS - MIS	250 FERN ROCK WAY		BOULDER CREEK	CA 95006	408-338-9546
MLI - MICROLAB INC.	2699 SKOKIE VALLEY ROAD		HIGHLAND PARK	IL 60035	312 433 7550
MLP - MISSING LINK PRODUCTS	PO BOX 6460		COLORADO SPRINGS	CO 80934	303 473 8909
MMG - MMG MICRO SOFTWARE	PO BOX 131		MARLBORO	NJ 07746	201 431 3472
MOS - MOSAIC	PO BOX 708		OREGON CITY	OR 97045	800-223-3728
MPH - MICROPHYS PROGRAMS	MARKETING DIVISION	1737 WEST 2ND STREET	BROOKLYN	NY 11223	212-375-5151
MPS - MICROPROSE SOFTWARE	1 CARIBOU COURT		PARKTON	MD 21120	301 357 4739
MRC - MICROLOG CORPORATION	18713 MOONEY DRIVE		GAITHERSBURG	MD 20789	301 258 8400
MRS - MICHAEL RILEY SOFTWARE	1032 PINE ST.		PHILADELPHIA	PA 19107	215-923-9663
MSA - MSA	3445 PEACHTREE RD. NE		ATLANTA	GA 30326	
MSD - MICRO SYSTEMS DEVELOPMENT INC.	11105 SHADY TRAIL	SUITE 104	DALLAS	TX 75229	800-527-5285
MSM - MICRO SIMULATIONS	15610 FOX SPRINGS		HOUSTON	TX 77084	
MSP - MICROSPEC	PO BOX 863085		PLANO	TX 75086	214-867-1333
MSS - MICRO SYSTEMS SPECIALTIES	PO BOX 98827		TACOMA	WA 98498	
MTI - MICRON TECHNOLOGY INC.	2805 EAST COLUMBIA ROAD		BOISE	ID 83706	208-383-4000
MTS - MICROTECHNIC SOLUTIONS INC.	PO BOX 2940		NEW HAVEN	CT 06515	203-389-8383
MWD - MICRO-WARE DISTRIBUTING INC.	1342B ROUTE 23		BUTLER	NJ 07405	201-838-9027
MWE - MICRO WORLD ELECTRONIX INC.	3333 SOUTH WADSWORTH BLV	#C105	LAKEWOOD	CO 80227	303-934-1973
MWS - MIDWEST SOFTWARE	BOX 214		FARMINGTON	MI 48024	313-477-0897
MXI - MAXIMUS INC.	6723 WHITTIER AVENUE		MCLEAN	VA 22101	800 368 2152
MYS - MYSTIC SOFTWARE	PO BOX 536		LAKESIDE	CA 92040-0	619-443-9976
N&B - NIBBLES & BITS INC.	PO BOX 2044		ORCUTT	CA 93455	
NAN - NANOS SYSTEMS CORPORATION	PO BOX 24344		SPEEDWAY	IN 46224	317 244 4078
NAP - NATIONAL PROGRAMMING AND SOFTWARE	PO BOX 9204 DEPT C10		RENTON	WA 98055	206 228 1249
NAV - NAVIC SOFTWARE			NORTH PALM BEACH	FL 33408	800 327 2133
NDC - NDC	117 WEST 23RD		INDEPENDENCE	MO 64055	816-254-0400
NEB - NEBS COMPUTER FORMS	12 SOUTH STREET		TOWNSEND	MA 01469	800 225 9550
NEL - NELSON SOFTWARE	2232 OGDEN CT.		ST. PAUL	MN 55119	612 738 1080
NEW - NEWPORT CONTROLS			BISHOP	CA 93514	408 358 3430
NLI - NEW LEAF INC.	120 LYNNHAVEN		BELLEVILLE	IL 62223	
NUF - NUFEKOP	PO BOX 156		SHADY COVE	OR 97539-0	503-878-2113
ODE - ODESTA CORPORATION	3186 DOOLITTLE DRIVE		NORTHBROOK	IL 60062	800 323 5423
OEM - O.E.M. INC.			FORT PIERCE	FL	
OMN - OMNI UNLIMITED	105 S. LOS ROBLES		PASADENA	CA 91101	213-795-6664
ORA - ORANGE MICRO INC.	1400 N. LAKEVIEW AVE.	DEPT 1283	ANAHEIM	CA 92807	714 779 2772
ORI - ORION SOFTWARE	PO BOX 2488		AUBURN	AL 36831	800 821 8088
OSB - OSBORNE/MCGRAW-HILL	2600 TENTH STREET		BERKELY	CA 94710	800 227 2895
OSS - OPTIMIZED SYSTEMS SOFTWARE INC.	10379 LANSDALE AVENUE		CUPERTINO	CA 95014	408-446-3099
OTT - OTTO SYSTEMS	15225 SOCORRO WAY		SAN DIEGO	CA 92129	
FAC - PACIFIC COAST SOFTWARE CORP.	7334 HOLLISTER AVE.		SANTA BARBARA	CA 93117	805 685 8282
PAE - PARSEC RESEARCH	DRAWER 1766-C		FREMONT	CA 94538	415 651 3160
PAL - PALAMINE LTD.	#1 2ND FLR.	2929 COMMERCIAL DR.	VANCOUVER	BC CANADA	604-879-9171
PAN - PANASONIC COMPANY	DIVISION OF MATSUSHITA E	ONE PANASONIC WAY	SEACAUCUS	NJ 07094	201 348 7000
PAR - PARKER BROTHERS INC.			SALEM	MA	617 927 7600
PAS - PALACE SOFTWARE	62-64 KENSINGTON HIGH ST		LONDON	WB / ENGLA	LONDON 937 6
PCT - PC TECHNOLOGY	PO BOX 1018		BALLWIN	MO 63011	314-968-6557
PDI - PROGRAM DESIGN INC.	95 EAST PUTNAM AVENUE		GREENWICH	CT 06830	203 661 8799
PEK - PEEK MAGAZINE	4145 BROOKSIDE BLVD.		CLEVELAND	OH 44135	
PER - PERFORMANCE MICRO PRODUCTS	770 DEDHAM STREET	S-2	CANTON	MA 02021-0	617-828-1209
PES - PERSIMMON PERIPHERALS	RTE 2	BOX 2306A	CLAYTON	GA 30525	
PGI - PROGRAMMER'S INSTITUTE	DIV. OF FUTURE HOUSE - D	PO BOX 3470	CHAPEL HILL	NC 27514	919-967-0861
PHA - PHANTOM SOFTWARE	1116-A 8TH ST.	SUITE 155	MANHATTAN BEACH	CA 90266	213 379 8686
PHP - PRENTICE HALL PUBLISHING	GENERAL BOOK MARKETING	BOX 500	ENGLEWOOD CLIFFS	NJ 07632	201 592 2663
PIC - PICTURE-PERFECT	7321 FOUNTAIN AVE.		LOS ANGELES	CA 90046	
PID - PIONEER SOFTWARE INC.	#217-620 VIEW STREET		VICTORIA	BC V8W 1J6	604 381 3211
PIX - PIXELL SOFTWARE	6595 W. MISSISSIPPI PL.		LAKWOOD	CO 80226	303-922-9197
PLA - PLAYGROUND SOFTWARE	PO BOX 3470	DEPT. C	CHAPEL HILL	NC 27514	800 334 50FT
PMI - PMI	PO BOX 87	# 177	BUCKFIELD	ME 04220	207 336 2500
PMP - PM PRODUCTS	4455 TORRANCE BLVD.	PO BOX 7268	TORRANCE	CA 90503	213 379 9471
PMS - PROFESSIONAL MICRO SERVICE	100 W. 22ND ST.		BALTIMORE	MD 21218	301-366-0010
POR - POWERLINE SOFTWARE	PO BOX 635		NEW HARTFORD	NY 13413	
POW - POWERBYTE SOFTWARE	2 CHIPLEY RUN	FOX VALLEY MALL	WEST BERLIN	NJ 08091	609-346-3063
PPP - PERSONAL PERIPHERAL PRODUCTS	PO BOX 3423		AURORA	IL 60505	312-961-2347
PRA - PRACTICAL APPLICATIONS	BOX 336		EDWARDSBURG	MI 49112	
PRE - PRECISION SOFTWARE LIMITED	PARK HOUSE 4 PARK TERRAC	WORCESTER PARK	SURREY	KT ENGLAND	01-330-7166
PRG - PROGRESSIVE PERIPHERALS & SOFTWARE	2186 SOUTH HOLLY	SUITE 2	DENVER	CO 80222	303 759 5713
PRI - PRINCETON EDUCATIONALG SOFTWARE	195 NASSAU ST.	PO BOX 1317	PRINCETON	NJ 08542	201 683 0044
PRL - PRO-LINE SOFTWARE	755 THE QUEENSWAY EAST	UNIT 8	MISSISSAUGA	ON L4Y 4C5	416 273 6350
PRO - PROFESSIONAL SOFTWARE INC.	51 FREMONT STREET		NEEDHAM	MA 02194	617-444-5224
PRS - PRS	DEPT. C	PO BOX 32	AMARGOSA VALLEY	NV 89020	
PRU - PROGRAMMERS GUILD	PO BOX 220		LACRESCENT	MN 55947	

PSY - PSYCOM SOFTWARE INTERNATIONAL	2118 FOREST LAKE DRIVE		CINCINNATI	OH 45244	513-474-2188
PTE - PTERODACTYL SOFTWARE	200 BOLINAS ROAD	#27 PO BOX 538	FAIRFAX	CA 94930	415-485-0714
PTI - PRECISION TECHNOLOGY INC.	PO BOX 15454		SALT LAKE CITY	UT 84115	801-467-6266
PTM - PACIFIC TRI MICRO	58 PLAZA SQUARE	SUITE J	ORANGE	CA 92666	714 771 4038
PUB - PUBLIC DOMAIN INC.	5025 RANGELINE RD.		W. MILTON	OH 45383	513 339 1725
PYR - PYRAMID SOFTWARE INTERNATIONAL				CA	415 459 1333
PZL - PUZZLE KING, LTD.	PO BOX 1337		CUPERTINO	CA 95015	408 733 0739
QBF - QUICK BROWN FOX	548 BROADWAY		NEW YORK	NY 10012	212-925-8290
QIN - QUALITY INPUT	309 W. BEAUFORT		NORMAL	IL 61761	309 454 1061
QUA - QUALITY COMPUTER	801 S. VICTORIA	SUITE 105	VENTURA	CA 93003	805-656-1330
QUI - QUICKSILVA INC.	426 WEST NAKOMA		SAN ANTONIO	TX 78216	512 492 8054
R&L - R&L PRODUCTS	BOX 26A89		LOS ANGELES	CA 90026	
RAI - RAINBOW COMPUTER CORP.	490 LANCASTER AVE.		FRAZER	PA 19355	215-296-3474
RAK - RAK ELECTRONICS	PO BOX 1585		ORANGE PARK	FL 32073	
RAM - RAMIAK	PERSONAL COMPUTING DIVIS	3133 SOUTH NUCLA STR	AURORA	CO 80013	303-690-3088
RAN - RANDOM ACCESS MARKETING	PO BOX 1561		NEWPORT BEACH	CA 92663	714-640-5119
RAP - RAPIDWRITER	91 LONG HILL RD.		LEVERETT	MA 01054	413-549-3744
RAY - RAYMAC SOFTWARE GROUP	495 BAND ROAD		BOULDER CREEK	CA 95006	408-338-9848
RDC - ROCKWARE DATA CORPORATION	10525 BARRYWOOD DRIVE		DALLAS	TX 75230	1 800 527 41
RDS - READER'S DIGEST	MICROCOMPUTER SOFTWARE D		PLEASANTVILLE	NY 10570	800 431 8800
RED - RED-SHIFT SOFTWARE	PO BOX 45488		SEATTLE	WA 98102	
REH - R. E. HUFFMAN	9607 DOGWOOD LANE		MUNSTER	IN 46321	
REN - RENSOFT SOFTWARE SYSTEMS	PO BOX 170		CORAM	NY 11727	
RES - RESTON SOFTWARE	11480 SUNSET HILLS RD.		RESTON	VA 22090	800 336 0338
RHI - RHIANNON	3717 TITAN DRIVE		RICHMOND	VA 23225	804 272 7770
RLR - RAYMOND L. REYNOLDS	384 HYACINTH ST.		FALL RIVER	MA 02720	
ROM - ROMOX INC.	476 VANDELL WAY		CAMPBELL	CA 95008	
ROT - ROYAL OAK TRADING	PO BOX 143		MOHNTON	PA 19540	
RSL - REES SOFTWARE LABORATORIES	PO BOX 763		CUCAMONGA	CA 91730	714 981 5925
RTC - RICHVALE TELECOMMUNICATIONS	10610 BAYVIEW (BAYVIEW P		RICHMOND HILL	ON L4C 3N8	416-884-4165
S&G - S&G CONSULTING	3349 GLENDALE DR.		BENSALEM	PA 19020	
SAC - SACHS ENTERPRISES	BOX 1182		LAKE ARROWHEAD	CA 92352	NO PHONE
SAK - SAKATA U.S.A. CORP.	651 BONNIE LANE		ELK GROVE VILLAGE	IL 60007	800 323 6647
SAU - SAURA COMPUTER SOFTWARE & CONSULTI	7510 FOXRIDGE WAY		ANCHORAGE	AK 99502	907-272-1373
SAW - SOFT-AWARE	PO BOX 725		GLENDORA	CA 91740	
SCA - SCARBOROUGH SYSTEMS INC.	25 N. BROADWAY		TARRYTOWN	NY 10591	800 882 8222
SCH - SCHOLASTIC INC.	PO BOX 947	EDUCATION PLAZA	HICKSVILLE	NY 11802	
SCI - SCIENTIFIC & EDUCATIONAL SOFTWARE	PO BOX 54		DAYTON	OH 45420	
SCR - SCREENPLAY	DIVISION OF INTELLIGENT	PO BOX 3558	CHAPEL HILL	NC 27514	800 334-5470
SDI - SOFTWARE DESIGN INC.	PO BOX 570		WATERLOO	IA 50704	800 553 0002
SDP - SYDNEY DATA PRODUCTS INC.	#129 444 CAMINO DEL RIO		SAN DIEGO	CA 92108	619-298-5886
SEI - SEI ENTERPRISES INC	17 SERPI RD.		HIGHLAND MILLS	NY 10930	
SEN - SENTIENT SOFTWARE INC.	PO BOX 4929		ASPEN	CO 81612	303 925 9293
SEQ - SEQUENTIAL CIRCUITS, INC.	3051 NORTH FIRST STREET		SAN JOSE	CA 95134	408 946 5240
SEW - SKYLES ELECTRIC WORKS	2316 SOUTH WHISMAN ROAD		MOUNTAIN VIEW	CA 94041	800-227-9998
SEY - SEYAU-KAUN LOKE	1021-H WEST BISHOP		SANTA ANA	CA 92703	
SFL - SOFTLAW	9072 LYNDAL AVE. SO.		MINNEAPOLIS	MN 55420	800 328 2737
SFP - SOFTPEOPLE INC.	631 CLEVELAND AVENUE SO.		SAINT PAUL	MN 55116	800 447 3273
SFS - SOFTSYNC INC.	14 E. 34TH ST.		NEW YORK	NY 10016	212 685 2080
SFT - SOFTRON INC.	2067 BROADWAY	SUITE 27	NEW YORK	NY 10023	212 490 0077
SIE - SIERRA ON-LINE INC.	SIERRA ON-LINE BLDG.		COARSEGOLD	CA 93614	209-683-6858
SIM - SIM COMPUTER PRODUCTS INC.	1100 E. HECTOR ST.		WHITEMARSH	PA 19428	215-825-4250
SIP - SIMPLEWARE	129 WILDBRIAR RD.		ROCHESTER	NY 14623	
SIR - SIRIUS SOFTWARE INC.	10364 ROCKINGHAM DRIVE		SACRAMENTO	CA 95827	916-366-1195
SKY - SKYLIGHT SOFTWARE	22 MILLER ST.		BELFAST	ME 04915	207 338 1410
SMA - SMALL SYSTEMS ENGINEERING	1056 ELWELL COURT		PALO ALTO	CA 94303	415-964-8201
SMI - STAR MICRONICS INC.	1120 EMPIRE CENTRAL PLAC	SUITE 216	DALLAS	TX 75247	214-631-8560
SMN - SIEMENS COMMUNICATION SYSTEMS INC.	OFFICE TERMINALS DIVISIO	240 EAST PALAIS ROAD	ANAHEIM	CA 92805	714 991 9700
SMO - SMOKY MOUNTAIN SOFTWARE	54 WEST MAIN STREET		BREVARD	NC 28712	704 883 2595
SMS - SPELLMASTER SYSTEMS SOFTWARE	6219 THIRTEENTH AVENUE S		GULFPORT	FL 33707	813-347-6733
SMX - SIMPLEXSOFT LTD.	617 N. PROPERTY LANE		MARION	IA 52302	
SNB - SUNBURST EDUCATION	39 WASHINGTON AVE.		PLEASANTVILLE	NY 10570	800 431 1934
SNS - SUNSOFT	BOX 99		ALTURAS	FL 33820	
SNX - SYNTAX SOFTWARE INC.	33 ELMHURST AVE.	SUITE 502	WILLOWDALE	ON M2N 6G8	416-221-8008
SOC - SOUTHERN CASE INC.	PO BOX 28147		RALEIGH	NC 27611	800 334 0551
SOE - SOUND EXPANSIONS	PO BOX 53		HOUSE SPRINGS	MO 63051	314 677 4295
SOF - SOFTLOCK TECHNOLOGY	13031 SAN ANTONIO DRIVE		NORWALK	CA 90650	213 868 7820
SOL - SOLIDUS INTERNATIONAL CORP.	#204 4202 GUIDE MERIDIAN		BELLINGHAM	WA 98226	206-734-3744
SOP - SOPHWARE	19123 HAMLIN STREET	SUITE 4 / DEPT. P5	RESEDA	CA 91335	
SOR - SOURCE TELECOMPUTING	1616 ANDERSON ROAD		MCLEAN	VA 22102	800 336 3330
SOT - SOTA ENTERPRISES INC.	833 GARFIELD AVE	SUITE 101	SOUTH PASADENA	CA 91030	
SOU - SOUTHERN SOLUTIONS	PO BOX P		MCKINNEY	TX 75069	214-542-0278
SOW - SOFTWARE	156 DRAKES LANE		SUMMERTOWN	TN 38483	800 251 8066
SPB - SUPERBYTE	2 CHIPLEY RUN		WEST BERLIN	NJ 08091	609 346 3063
SPH - SOPHISTICATED SOFTWARE OF AMERICA	198 ROSS ROAD		KING OF PRUSSIA	PA 19406	215 265 2277
SPI - SPINNAKER SOFTWARE	215 FIRST STREET		CAMBRIDGE	MA 02142	617-868-4700
SSM - SOFTSMITH INC.	2935 WHIPPLE RD.		UNION CITY	CA 94587	800 341 4000
SSP - STERLING SWIFT PUBLISHING CO.	7901 SOUTH IH-35		AUSTIN	TX 78744	512 282 6840
STA - STAR SOFTWARE	PO BOX 493		MERRICK	NY 11566	516-379-0280
STC - STARTECH INC.	13450 MAXELLA AVE.	BLDG. 6 185 / SUITE	MARINA DEL REY	CA 90291	



STE - STEP INDUSTRIES	PO BOX 52605	HOUSTON	TX 77052
STF - STARFIRE GAMES	DEPT. B1	CHATSWORTH	CA 91311
STG - SOFTWARE TO GO	1948 OAK RIDGE TURNPIKE	OAK RIDGE	TN 37830
STI - STIMUTECH INC.	PO BOX 2575	EAST LANSING	MI 48823
STP - STARPOINT SOFTWARE	STAR ROUTE 10	GAZELLE	CA 96034
STR - STRATEGIC SIMULATIONS INC.	883 STIERLIN ROAD	MOUNTAIN VIEW	CA 94043
SUB - SUBLOGIC CORP.	713 EDGEBROOK DRIVE	CHAMPAIGN	IL 61820
SUD - SUNDIAL SOFTWARE ASSOCIATES	PO BOX 14507	ROCHESTER	NY 14614
SUN - SUNCOM INC.	605 E. ANTHONY TRAIL	NORTHBROOK	IL 60062
SUP - SUPERIOR GRAPHICS EMPORIUM	PO BOX 99715	TACOMA	WA 98499
SUS - SUSIE SOFTWARE	709 WILSHIRE DRIVE	MT PROSPECT	IL 60056
SVI - SPECTRA VIDEO INC.	39 W. 37TH ST.	NEW YORK	NY 10018
SWC - SOFTWARE CONSULTANTS	4455 DRAPER STREET	SALT LAKE CITY	UT 84118
SWP - SOFTWARE PLUS	6201 SUITE C	CITRUS HEIGHTS	CA 95610
SYD - SYDNEY DEVELOPMENT CORP			619 231 1775
SYF - SYSTEM VII FURNITURE	PO BOX 427	LAFAYETTE	OR 97127
SYM - SYMTEC	15933 W. 8-MILE RD.	DETROIT	MI 48235
SYN - SYNAPSE SOFTWARE	5221 CENTRAL AVE.	RICHMOND	CA 94804
SYS - SYSTEMS MANAGEMENT ASSOCIATES	3700 COPUTER DRIVE	RALEIGH	NC 27619
T&F - T&F SOFTWARE COMPANY	10902 RIVERSIDE DRIVE	NORTH HOLLYWOOD	CA 91602
T&M - T&M PRODUCTS	PO BOX 1172	DE SOTO	TX 75115
TAM - TAMARACK SOFTWARE	PO BOX 247	DARBY	MT 59829
TAU - TAURUS COMPUTER PRODUCTS INC.	C/O I.M.S.	BUFFALO	NY 14203
TAY - TAYLORMADE SOFTWARE	PO BOX 5574	LINCOLN	NE 68505
TCN - THE COMPUTER NETWORK	PO BOX 9840	FOUNTAIN VALLEY	CA 92708
TEA - TEACHING TOOLS	BOX 50065	PALO ALTO	CA 94303
TEC - TECH-SKETCH INC.	26 JUST ROAD	FAIRFIELD	NJ 07006
TEL - TELEGAMES SOFTWARE	PO BOX 152	HAMPTON	ON L0B 1J0
TGP - TG/PRODUCTS	1104 SUMMIT AVE.	PLANO	TX 75074
THO - THOR SOFTWARE	47 CHERNUCHA AVE.	MERRICK	NY 11566
TIS - TOTAL INFORMATION SERVICES INC.	BOX 921	LOS ALAMOS	NM 87544
TLS - TELELEARNING SYSTEMS	505 BEACH ST.	SAN FRANCISCO	CA 94133
TMQ - TMQ SOFTWARE INC.	82 FOX HILL DRIVE	BUFFALO GROVE	IL 60090
TMW - TIMEWORKS INC.	405 LAKE COOK ROAD	DEERFIELD	IL 60015
TOT - TOTL SOFTWARE INC.	1555 THIRD AVE.	WALNUT CREEK	CA 94596
TOU - TOUCH TECHNOLOGIES	609 SOUTH ESCONDIDO BLVD	ESCONDIDO	CA 92025
TPU - TORONTO PET USERS GROUP	DEPARTMENT D	TORONTO	ON M5M 4A1
TQL - THE QUANTUM LEAP	4214 ARDEN WAY	SAN DIEGO	CA 92103
TRA - TRANSTAR	BOX C-96975	BELLEVUE	WA 98009
TRC - TRACE	1928 OLD MIDDLEFIELD WAY	MOUNTAIN VIEW	CA 94043
TRI - TRIMICRO	1010 N. BATAVIA	ORANGE	CA 92667
TRN - TRANSIERRA TECHNOLOGY	PO BOX 1028	MADERA	CA 93639
TRO - TRONIX	8295 SOUTH LA CIENEGA BL	INGLEWOOD	CA 90301
TSE - THE SOFTWARE EXCHANGE	PO BOX 150	HOOD RIVER	OR 97031
TSI - TRILOBYTE SERVICES INC.	PO BOX 10043	PORTLAND	OR 97210
TTX - TELETEX COMMUNICATION CORP.	3420 EAST THIRD AVE.	FOSTER CITY	CA 94404
TWZ - THE WIZARDS	PO BOX 7118	THE WOODLANDS	TX 77380
UFS - USER FRIENDLY SYSTEMS, INC.	6135 ROSS ROAD	FAIRFIELD	OH 45014
UHL - U.H.L. RESEARCH ASSOCIATES INC	7926 BERNER ST.	LONG BEACH	CA 90808
ULT - ULTRABYTE	23400 MICHIGAN	DEARBORN	MI 48124
UMB - UMBRELLA SOFTWARE INC.	53 JILL CRESCENT	BRAMALEA	ON L6S 3J1
UMI - UNITED MICROWARE INDUSTRIES	3503-C TEMPLE AVENUE	PAMONA	CA 91768
UNC - UNICORN SOFTWARE	1775 EAST TROPICANA AVE.	LAS VEGAS	NV 89109
UNI - UNITRONICS	2100 LIVINGSTON ST.	OAKLAND	CA 94606
USE - USEFUL SOFTWARE	BOX 54-H	SCARSDALE	NY 10583
VAD - VADEM	3517 RYDER STREET	SANTA CLARA	CA 95051
VAI - VAISALA INC.	2 TOWER OFFICE PARK	WOBBURN	MA 01801
VCP - VIDEO & COMPUTER PLACE INC.	884 NORTH COURT SQUARE	MEDINA	OH 44256
VCT - VICTORY SOFTWARE	7 VALLEY BROOK ROAD	PAOLI	PA 19301
VIC - VIDEOCONCEPTS	7847 N. CALDWELL AVE.	NILES	IL 60648
VIR - VIRGINIA MICRO SYSTEMS	13646 JEFF DAVIS HIGHWAY	WOODBRIDGE	VA 22191
VIS - VISUAL HORIZONS	180 METRO PARK	ROCHESTER PARK	NY 14623
VIV - VIDED VALUE	PO BOX 2900	ROLLING HILLS ESTATE	CA 90274
VOM - VILLAGE OFFICE MACHINES	4721 EUCLID AVENUE	ROLLING MEADOWS	IL 60008
VOT - VOTRAX	CONSUMER PRODUCTS GROUP	TROY	MI 48084
WAV - WAVEFORM CORPORATION	1912 BONITA WAY	BERKELEY	CA 94704
WCI - WAVE COMPUTERS INC.	PO BOX 3883	FEDERAL WAY	WA 98003
WEB - WEBBER SOFTWARE	BOX 9	SOUTHEASTERN	PA 19399
WEO - WESOFT	4512 EXCELSIOR BLVD.	MINNEAPOLIS	MN 55416
WEP - WEPSCO	10 DAVIS DR.	BELMONT	CA 94002
WGI - WAYNE GREEN, INC.	80 PINE ST.	PETERBOROUGH	NH 03458
WIC - WICO	6400 W. GROSS POINT ROAD	NILES	IL 60648
WIZ - WIZARD WARE	PO BOX 1046	BOLINGBROOK	IL 60439
WRI - WRITE ON PROGRAMS	27 BOWDON RD.	GREENLAWN	NY 11740
WRO - WILLIAM ROBBINS	BOX 3745	SAN RAFAEL	CA 94912
XAN - XANA DATA SYSTEMS			213 410 9884
ZAX - ZAXIS	PO BOX 666	SAN CARLOS	CA 94070
ZIR - ZIRCON INTERNATIONAL INC.	475 VANDELL WAY	CAMBELL	CA 95008

INFO 64 partial list of dealers -
ALSO AVAILABLE AT MANY NEWSSTANDS &
B. DALTON BOOKSELLER'S NATIONWIDE.

ALASKA

SOFTSALES INC. FORT SMITH 501 452 2965

ALABAMA

SEQUENTIAL SYSTEMS DECATUR

ARIZONA

SOFTWARE CENTRE INTERNATIONAL MESA 602 831 8866
 COMPUTER HORIZONS PHOENIX
 COPPERSTATE CASH REGISTER PHOENIX
 SOFTWARE SPECTRUM PHOENIX 602 955 7999
 DATA CONCEPTS TEMPE 602 968 2122

CALIFORNIA

GAMEROOM AGOURA 818 707 0142
 JAY-KERN ELECTRONICS BAKERSFIELD
 COMPUTOVISION BELLFLOWER 213 920 7811
 PERSONAL COMPUTERS ETC. CANOGA PARK 213 883 5421
 R&R SOFTWARE CHULA VISTA 619 426 7011
 DATA EQUIPMENT SUPPLY DOWNEY 213 923 9361
 CANDY COMPUTER ELK GROVE 916 685 7247
 THE LEARNING ENVIRONMENT EUREKA 707 443 5213
 COMPUTER STATION FREMONT
 KJ COMPUTERS GRANADA HILLS 213 366 5305
 AMERICAN MICROTEL GRASS
 ALPHA COMPUTER EQUIPMENT CO. LANCASTER 805 942 2626
 CALCO COMPUTERS OCEANSIDE
 ACV DATA SERVICES ORANGE 714 634 1032
 COMPUSOUND ORANGE
 HYDE COMPUTERS PALOS VERDES EST 375 8372
 DUWAYNE INDUSTRIES PLEASANT HILL
 FILCO COMPUTER CENTER SACRAMENTO
 COMPUTER NOOK INC. SAN BERNADINO 714 381 3446
 20/64 SOFTWARE CENTER SAN DIEGO
 COMPUTER OUTLET SAN DIEGO
 GOULD ENTERPRISES SANTA CRUZ 408 476 2086
 HARDING WAY NEWS STOCKTON 209 464 7514
 HT ELECTRONICS SUNNYVALE 408 737 0900
 PACIFICA MICRO PRODUCTS TORRANCE
 SOFTWARE INTERNATIONAL UPLAND
 FANTASYLAND COMPUTERS VALLEJO 707 557 1375
 QUALITY COMPUTER CENTER VENTURA

COLORADO

ON SCREEN GRAND JUNCTION 303 434 3616
 MICRO WORLD COMPUTERS LAKEWOOD
 SOFTWARE CITY WESTMINSTER 303 430 8708

CONNECTICUT

SOFTOWN INC. DANBURY 203 797 8080
 NEW ENGLAND HOBBY SUPPLY MANCHESTER 203 646 0610
 SOFTWARE CITY ORANGE
 MULTI BUSINESS COMPUTER SYSTEMS PORTLAND
 SOFTWARE SOURCE STAMFORD 203 323 3300
 COMPUTER RAMA VERNON 203 872 2667

FLORIDA

COMPU-LEASE COMPUTERS BRADENTON 813 747 5915
 MICROCOMPUTER CENTER CLEARWATER 813 531 2614
 SOFTWARE CENTRUM CORAL GABLES
 FOCUS SCIENTIFIC FORT LAUDERDALE 305 462 1010
 SUNSHINE SOFTWARE FT. LAUDERDALE 305 979 4885
 FLORIDA BOOK STORE/ COMPUTER CTR GAINESVILLE

INFO 64 DEALERS CONT'D

FLORIDA cont'd

COMPUTER SPECIALTIES INC.	MELBOURNE		
SOFTWARE STATION	MIAMI		
MICRO DATA SYSTEMS	ORLANDO		
ORLANDO ELECTRONICS CO.	ORLANDO	305 855 1010	
NEW ERA COMPUTERS	ORMOND BEACH	904 673 3475	
SOFTWARE CITY	SARASOTA		
COMPUTER CORNER	ST. PETERSBURG	813 541 1185	
SOFTWARE CITY	TAMPA	813 961 8081	

IOWA

SOFTWARE CITY	DAVENPORT	319 386 2345	
SKYWALK SYSTEMS	DES MOINES	515 282 1956	
IOWA BOOK & SUPPLY	IOWA CITY		

IDAHO

FRIENDLY COMPUTERS	COEUR D'ALENE	208 667 4513	
CONSUMER ELECTRONICS	MCCALL	208 634 8161	

ILLINOIS

DIGITAL WORLD	ADDISON	312 628 9222	
THE SOFTWARE SHOP	ALGONQUIN		
MICRO-PACE	CHAMPAIGN	217 356 1883	
R/D COMPUTER SALES & SERVICE	PERU		
FACE MICRO SOFTWARE CENTER	WOOD DALE	312 595 3860	

INDIANA

THE COMPUTER STATEMENT	ELKHART	219 875 6933	
IMPAIR	INDIANAPOLIS	317 353 9947	
LUCKY	JEFFERSONVILLE	812 288 7465	
RMS VIDEO & COMPUTERS	ROCKVILLE	317 569 3222	

KANSAS

GOSUB INTERNATIONAL	WICHITA		
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KENTUCKY

ALL BUSINESS COMPUTERS	LEXINGTON		
SOFTWARE CITY	LOUISVILLE	502 893 3838	
THE SOFTWARE SOURCE	LOUISVILLE		
REALITY WORLD COMMUNICATIONS	VERSAILLES	606 873 9193	

LOUISIANA

SOFTWARE SOLUTIONS	BATON ROUGE		
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MAINE

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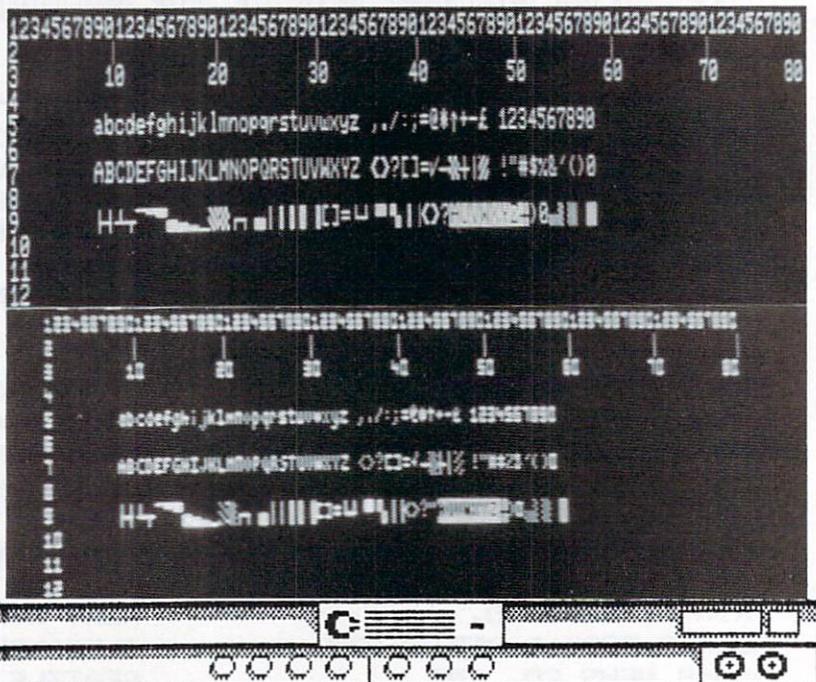
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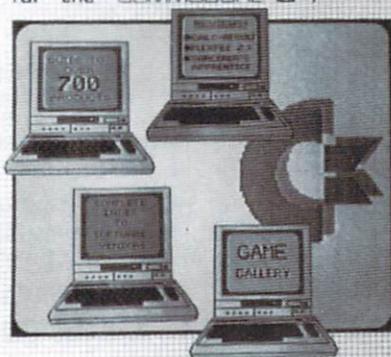
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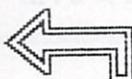
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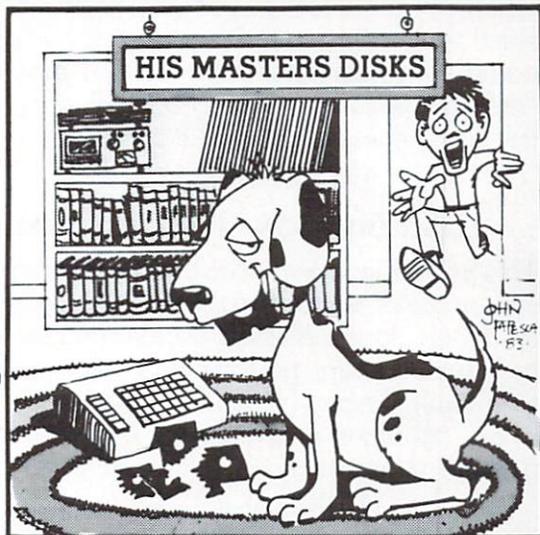
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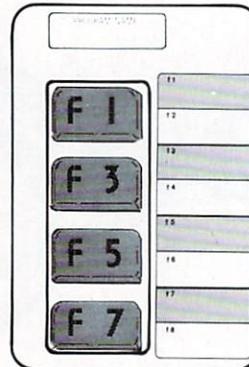
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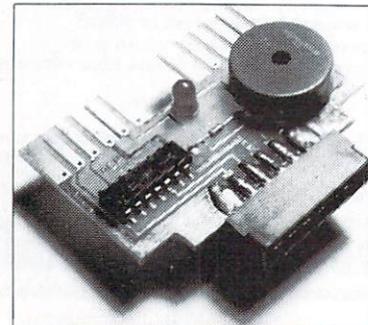
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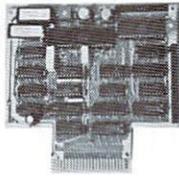
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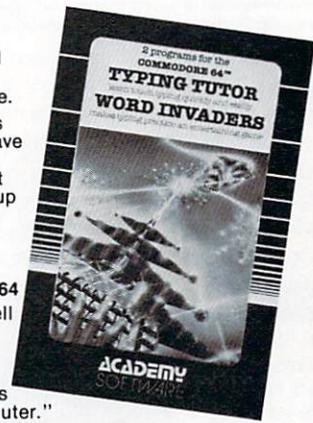
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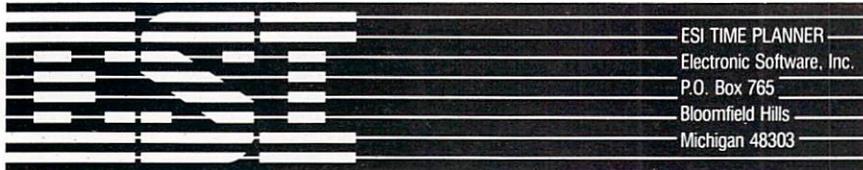
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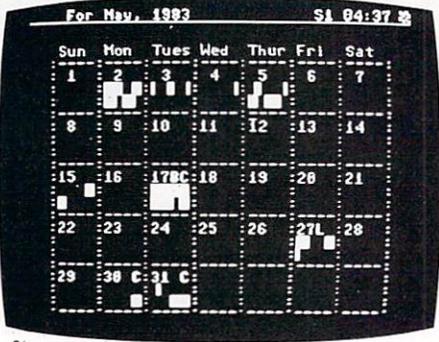
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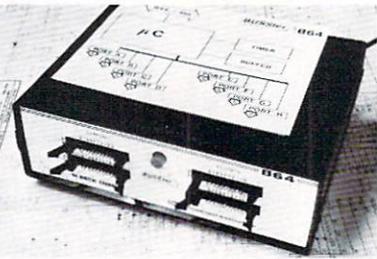


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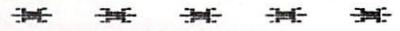


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