NIBBLES & BITS

single issue: $4.00

DESIGNED and PRINTED with the amazing ADAM™ computer (using PowerPAINT, SpeedyWrite, and ShowOFF II).

PUBLIC NOTICE

"Nibbles & Bits" is published monthly by DIGITAL EXPRESS. Individual issues may be purchased for the current month or for a back issue for $4.00; the *premier* issue was July, 1986. Issues were not published for three months: Dec '87, Jan '88, and Feb '88. The standard subscription rate for one year (12 issues) is $24.00 in the USA, its possessions, and Canada; and, the annual rate in foreign countries is $30.00. The standard subscription rate for six months (6 issues) is $15.00 in the USA, its possessions, and Canada; and, the semi-annual rate in foreign countries is $20.00. ALL subscription issues are sent by U.S. mail, FIRST CLASS. Issues are typically mailed during the last three days of the preceding month.

We welcome contributions of original reviews, programs, articles, questions, and comments. Please include your subscription ID number from your mailing label on all written correspondence to us. Thank you. Please include an SASE (Self - Addressed Stamped Envelope) if you want a written reply.
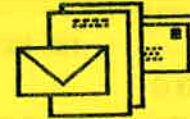
Your subscription ID number is on the first line of your mailing label (affixed to the newsletter). It is a 10 digit code. The first four digits are the month and year of the final issue in your current subscription. Following the ID number is a brief message. If this is your final issue, the message will read "FINAL ISSUE!!!". If this is your penultimate issue (next to last), the message will read "TIME TO RENEW". Otherwise, the message will apprise you of the exact number of issues remaining in your subscription (excluding the current issue). Please verify this information each month.

To insure that you don't miss any issues, please renew early and let us know promptly of any address change. Please include your subscription ID number on the address change notification (you can get an address change kit free from your local US post office).

GENERAL INFORMATION

Most issues include a special offer on software purchases; these are explained as time limited offers. If you receive N&B outside the North American continent (Australia, Isreal, England, and South Africa, for example), we will extend these deadlines to you by 30 days.

If you have products or services of interest to ADAM owners, please let us know. We try to keep our readers apprised of all the latest news concerning the ADAM. Also, we offer free announcements in the BULLETIN BOARD section of the newsletter; please submit these at least 15 days prior to the first day of the issue month. We also offer half page (7" across by 4.5" down) commercial advertising slots for $50.00 per issue (effective April 1, 1988). "Camera ready" artwork must be received at least 30 days prior to the first day of the issue month. Circulation: 2400+.

Product orders are processed within 24 hours of receipt. Where possible, orders are shipped via UPS. Backordered items are shipped at our expense. Order processing may be delayed by legal and traditional holidays.

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N&B NEWS

□□□   Please note our new phone number (displayed on the letterhead). For May we ask that subscribers limit calls to the following times (EST).

Monday: 7pm – 9pm
Wednesday: 7pm – 9pm
Thursday: 7pm – 8pm

□□□   Three more public domain graphics collections are now completed for use with **PowerPAINT**. These are: "N&B pix 19", "PaintMATES 04", and "PaintFORMS 03". The full workspace graphic for "PaintFORMS 03" is the May'88 calendar displayed herein. You could easily modify this giant graphic for any month; the date blocks are large enough for easy schedule insertions.

□□□   If you ordered **Chess Champ** and it hasn't arrived yet (was placed on backorder), please write to let us know.

□□□   "MegaSYSTEM-XR" is still behind schedule. We should already be shipping this massive, *super fast*, utility by the time you get this issue of N&B. "GoDOS" is about 10 days behind schedule. Thanks very much to the many dozens of you who purchased this innovative combination package on backorder status. We'll continue our column on it next month.

□□□   The following three newsletters recently reviewed our *topseller* **PowerPAINT** very favorably. Thank you!!

ADAM'S BYTES (edited by Joseph M Quinn)
ADAM-LINK (edited by Alan Neeley)
U.K. ADAM Journal (edited by Keith Marner)

□□□   DIGITAL EXPRESS has just completed FIVE new commercial packages for ADAM. EACH one is ready to ship -- absolutely no waiting!! These are: GAME (Graphic And Musical Ensemble), **SwiftPRINT** (has hi-res color printing feature for Okimate 20 owners), SEARCHset 01 and SEARCHset 02 (for use with the new, exciting Mr. T-SEARCH word puzzle package), and **SmartTALK** (a feature packed volume for use with an Eve Electronics or OrphanWare speech synthesizer). See the ADAM ACCESS department for more details on these DIGITAL EXPRESS innovations.

□□□   Many thanks to David Carmichael, Terry Fowler, Pat Herrington, Richard Lefko, and Steven Major for their recent graphics contributions.

□□□   This month's DIGITAL EXPRESS special is a **free** 5.25" diskette (not data pack) with any product order that has a subtotal greater than $29.95.

□□□   We have just purchased a dealer's closeout inventory on a full featured cordless phone unit. This wall mount or under-the-counter phone (by TeleQuest) also has a speaker phone, am/fm radio, digital clock, hold feature, and a last number redial. We have a limited quantity for just $69.95 (more than 50% off the retail price). After the 23rd of May please call us, before ordering, to see if we have any left in stock.

NEW PRODUCTS

NEW COMMERCIAL SOFTWARE

Mr. T-SEARCH by Mr. T. Software. Just $12.95 each to N&B subscribers. See our review in this issue.

PHRASE CRAZE by Reedy Software. Just $18.95 on disk or data pack to N&B subscribers -- See our review in this issue; additional "phrase paks" are available from Reedy Software.

GAME by DIGITAL EXPRESS. See the ad in ADAM ACCESS for details. Just $11.95 to N&B subscribers.

SwiftPRINT by DIGITAL EXPRESS. See the ad in ADAM ACCESS for details. Just $14.95 to N&B subscribers.

"SEARCHset01" and "SEARCHset02" by DIGITAL EXPRESS for use with Mr. T.'s new **T-SEARCH** electronic word puzzle game. Additional "word packs" are also available from Mr. T. Software. See our ad in ADAM ACCESS for details. Just $8.95 each to N&B subscribers.

SmartTALK by DIGITAL EXPRESS for use with a compatible speech synthesizer. See the ad in ADAM ACCESS for details. Just $19.95 each to N&B subscribers for this impressive volume.

PD SOFTWARE

N&B pix 019
PaintMATES 04
PaintFORMS 03
Astrology (by Ruth Mather -- great graphics)
PrintPatch (dot matrix print patches for several Strategic Software packages; compiled by E&T SOFTWARE)

COLECO PRODUCTS

"ADAMlink modem" just $29.95
"Smart Letters & Forms" just $10 on data pack
"Richard Scarry Electronic Word Book" just $10 on data pack
"Super Zaxxon" just $9.95 on data pack
"Super Action Controllers" with Baseball cart just $39
"Roller Controller" with Slither cart just $29
"Expansion Module #2" with Turbo just $39

ASSORTED ITEMS

"floppy disk mailers" just 49 cents each
"Versa-Paks™" $1.50 each--hold five 5.25" disks
"Teak wood rolltop disk storage unit" just $17.95 -- holds 70 5.25" disks
"Printer power supply" just $14.95 each
"TV/computer switch box" just $3.25 each
"RED or BLUE Panasonic ribbons" just $5.95 each
"Black Okimate 10/20 ribbons" just $4.95 each
"Color Okimate 20 ribbons" just $5.95 each

ADAM NEWS

□□□ One of the advantages that monthly newsletters have over bi-monthly's and, in particular, magazines is the short lead time. The articles and news for most magazines are written six to twelve weeks before the issues are mailed. Our normal lead time is about two weeks (for news). Usually news won't change in that short a time interval. Last month, though, two news items changed before the issue was mailed.

One of these was the IHSR XRAM units. They are now compatible with software written for OrphanWare's "MX" cards. The IHSR devices are available from the manufacturer and M.W. Ruth Company. These are a little less expensive than the OrphanWare cards and have a six month warranty. The OrphanWare cards now have a THREE YEAR warranty. OrphanWare also has low cost "kits" available with more limited warranties.

The other item was the status of SpeedyWrite by White Software. It is now available in two versions. Version 2.0 has several more features including access to a ramdisk. Even "1.0" has over 100 WP functions -- almost overwhelming power at just $29.95. Both versions can now be used with dot matrix printers or the ADAM printer. Except for graphics and the simple SmartKEY interface, SpeedyWrite makes Coleco's SmartWriter look like an amateur PD effort. We will have a complete review and add it to our product list next month.

□□□ Reedy Software has just released PHRASE CRAZE. See our review contained herein; we have also added this fine entertainment package to our product list. It's just $18.95 to N&B subscribers (on DDP or disk). *Phrase Paks* (hundreds of phrases/rounds each) are also available directly from Reedy Software. PHRASE CRAZE will also let you know when all the phrases on it or a *Pak* have been used. They're also working on a volume entitled *Grandma'a Recipies*. We'll have more info on this next month.

□□□ OrphanWare has earned quite a reputation for their hardware innovations for ADAM. A couple of their latest breakthroughs have been the 320K and 720K upgrades for Coleco's 160K disk drive. Now they also offer both of these in very low cost kit form.

□□□ Mr. T. Software has just released another excellent game package for ADAM. "Mr. T-SEARCH" creates "word search" puzzles in five sizes which can be printed or played onscreen. We've added this fine product to our product list; it's just $12.95 each to N&B subscribers. See our review in this issue.

□□□ Founded by one of ADAM's more renowned PD writers, a new ADAM firm, **Gee Jay Enter-prises**, plans to release new games of *Super Game* quality beginning this Fall. They'll be written in fast machine code and make extensive use of the graphics routines in OS7 (the game operating system).

□□□ Walter's Software has updated their MediaAID to work with both 320K and 720K disk drives. And it is now accessible from both SmartBASIC 1.0 and 2.0. They have also just released a new package entitled "PrBOOT". This program will allow you to quickly change between SmartWriter, SB 1.0, SB 2.0, AdamCALC, and others. You can store up to six of these type machine code programs on your Walter's ramdisk.

□□□ "ADAM Family News" is a new bimonthly ADAM publication; their premeir issue was December 1987. Issues are 16-18 pages each; membership is available from the Calgary ADAM'S Family for $20 annually. Each issue covers a variety of topics along with original programs, *eg*, a terminal program for the ADAMlink modem, a LOGO paint program and a sound effects program.

□□□ As original subscribers to the HIGHLIGHTS newsletter are aware, M.A.D. Enterprises has taken over AUG 1986. M.A.D. has just started publishing *VideoGaming and Computer News*. The premier issue (March/April) was a whopping 52 pages. With a primary consideration on ADAM, the periodical also covers general computer news, and the Sega and Nintendo game systems. Except for glossy pages, this informative bimonthly could easily be mistaken for a magazine. See the Bulletin Board for subscription details.

□□□ ADAMzap Software (creators of MicroTalk) has two new volumes out. "Paintings V2.0" is a set of 12 hi-res pictures for use with PowerPAINT or ShowOFF I. "WordLIST v2.0" is for use with Strategic Software's ProofREADER. It contains 16000 words in four dictionary files.

□□□ ADAMZONE Publishing Company, associated with ADAMzap, will start a bimonthly ADAM newsletter in the very near future. For a free gift, details on "NetworkADAM NewsINFO", and one free issue, send an SASE to the address in this month's Bulletin Board.

□□□ Rob Friedman, one of the ADAM sysops on CIS, is interested in starting a users group in the Long Island area (NY). See the BB for his address.

□□□ Dean Roades has recently started a local AUG in Indiana, the 463 AUG. Readers in the "463xx" zip code area should write to him at the address in the BB.

□□□ *Computer Shopper* has long been a source of good buys with their many pages of advertising. Most issues of this giant monthly are well over 400 pages with featured articles on virtually every computer. NOW they're even going to start an ADAM column!!! The column should debut in their June issue (within the Classic Computers department); the first one will be very brief. The author will be Paul Pappas, editor of *The Paper Peripheral* published by the Triangle AUG. Congratulations Paul!!

□□□ D.L. Decker Enterprises, which has developed numerous educational programs for ADAM, plans to publish a newsletter in the near future. It will be available on disk or tape with many programs and discounts on their big selection of ADAM products.

□□□ Bob Warren, of the St. Louis AUG, has just started a new ADAM BBS entitled "GATE RBBS". The number is (314) 358-2711.

□□□ The Puget Sound ADAM NewsNet (PSAN) BBS, UP AND ADAM, is open 24 hours a day, 7 days a week. The number (206) 859-2018.

MAY 1988
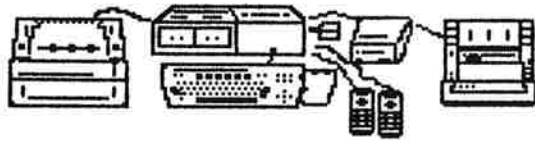
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
MOTHER'S DAY 8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	MEM-ORIAL DAY 30	31				

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ADAM™

OVER THE PHONE LINES
by David E. Carmichael
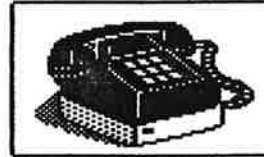
FCC UPDATE

According to the *ASSOCIATED PRESS NEWS SERVICE* and the *WALL STREET JOURNAL*, the FCC has decided to scrap plans to increase telephone rates for computer users.

The FCC plan would have charged computer communication network users as much as $5.50 per hour (plus network service charges).

PLink $4.25+$5.50=$9.75
GEnie $5.00+$5.50=$10.50
CIS $6.25+$5.50=$11.75

At present, computer information networks are exempt from these charges. Passage of the bill would have been a financial setback for just about all information service companies.

It is assumed that the pressure imposed by Congress and the approximately 10,000 letters (If you wrote your congressman and/or the FCC, give yourself a pat on the back!!) recieved opposing the planned access charges, played a significant role in its defeat!

Rep. Edward J. Markey, D-MASS chairman of the House Energy And Commerce Telecommunication Subcommittee, is quoted "... that in light of the commission's apparent reversal on the proposal he would delay indefinitely introduction of a bill preventing the FCC from imposing the access charges." He also stated, "... his panel will monitor the commission's actions to ensure that these onerous charges do not re-emerge in a new form!"

It was repoted that the commission found vertually no support for the access charge proposal -- even the Reagan administration, which typically backs the FCC, opposed the access charges, due to the impact it would have on public access to computerized information services.

It is also reported that the main reason the FCC dropped the planned access charges was that they were considering a plan that would give local phone companies the right to give information services equal access to their networks, as they now give long-distance companies. These plans would change the way information services are provided to the local network users.

A letter explaining the agency's decision is expected to be made public soon.

COMPUTER TELECOMMUNICATION STANDARDS

Lets talk about DUPLEXes. You know the place your friend Joe lives on the other side of town. But wait a minute; that's not the type of DUPLEX I mean to be talking about! So what am I doing talking about Joe? When we speak of computer telecommunications it is like Joe's place where you have two family dwellings on the same plot of land. In computer TC, DUPLEX means that you have TWO computer tone signals being transmitted over the same SINGLE PHONE LINE. This is known as FULL DUPLEX; while using FULL DUPLEX both computers are able to send and recieve computer data simultaneously. When you are sending at HALF DUPLEX, as needed when doing an "ADAM to ADAM" call using ADAMlink software, the two computers take turns sending and then recieving the information that is being exchanged.

LETTERS TO THE EDITOR

N6B

The following questions and comments have been culled from recently received mail. The reader's input is a reasonable facsimile of the actual correspondence. For the benefit of all readers my reply, where applicable, is generally more detailed than any written reply. Unless the reader requests differently, street addresses are omitted.

GETTING STARTED IN Z80

In many issues of N&B, you describe some machine code routines. How can I get started in Z80 programming?

Steve Pitman
Cincinnati, OH

REPLY: It's best (for most people) to have an EOS/Z80 assembler to get started. But, to my knowledge, there isn't a full-featured assembler available. As such, the next easiest alternative is to encode programs and routines in BASIC via DATA statements (in fact, I prefer this to using commercial assemblers).

I would recommend that you get all three of our "ez reference guides", the 2 Hacker's Guides to ADAM by Ben Hinkle, and the Hacker's Helper by Mel Ostler. Among these assorted collections there is a VAST wealth of info on programming Z80 on ADAM. For general information on Z80 programming, you might try "Programming the Z80" by Rodnay Zaks and "8080/Z80 Assembly Language" by Alan R. Miller. The keys to learning Z80 are study and experimentation. Don't give up; just when you think nothing makes sense, concepts start coming together to form a concrete understanding of the system.

When you first get started, the process is very slow and tedius. Experiment with Z80 data transfer first; this is very similar to using PEEK and POKE from BASIC. Next I would recommend using some of the EOS routines. Setup registers and CALL the routine. Once you've mastered using existing routines, you're ready to move on to your creative efforts.

TIME SAVING TIP

I have put together a package that has saved me many hours of setup time. I regularly use 'MultiWrite', 'EZcopy', and 'EZfileXFER'. In the past, I would load the Walter's ramdisk then transfer the files I needed. It took 15 to 20 minutes. Now with RAMDSK 1.0, a HELLO program (EZkeys, BRUN fix) and UNPACK, pulling the reset will install the ramdisk, load EZkeys, and UNPACK (my most used programs) automatically. I modified UNPACK to look for 'nut' on drive one so that I don't have to touch any keys. It now only takes about 4.5 minutes; while I get my papers ready, ADAM is doing all the work. Thanks to Walter's Software and DIGITAL EXPRESS for the practical, time-saving programs.

Dean Roades
Munster, IN

SPARE PARTS FOR ADAM

Do you have a lot of friends who need an ADAM or a disk drive (or two)? American Design Components (ADC) has a good supply of complete ADAMs and tested drives in excellent cosmetic and mechanical condition -- no books or printer, but several pages on how to set it up. All you need is a cover for the power supply.

A few weeks ago we drove down to ADC's showroom (about 60 miles), the showroom was being redone. We were told we could go into the warehouse to view their products. I was in ADAM paradise. I saw at least 150 ADAM disk drives waiting to be tested. At least 50 ADAMs were wrapped in plastic in boxes; data drives and ADAM parts were everywhere. I asked Ron, ADC's salesman, about the ADAM disk drives that were on shelves and in crates. He said that they were *waiting* to be tested. I remarked "and they say the supply is drying up". He replied with the usual "we only have about 100 left".

We purchased an ADAM & assorted other ADAM items, for my sister. These items were in another room (I wish now that I had tagged along). All the items were very well wrapped in shipping bags which would assure that they arrive undamaged.

With over 150 disk drives waiting to be tested, just imagine how many were wrapped and waiting to be shipped. I stood in that warehouse asking myself "why did Coleco manufacture all this and then do what they did". I would like to see Coleco's file on just how many ADAM computers, hardware and software, were actually manufactured. Then when someone says who is ADAM, you could tell them there are "xxx" number of them world wide.

Lori J. Freeby
Belvidere, NJ

ADAM ABUSE

by Richard Lefko

It's been a long day. The outside vendors aren't going to deliver those parts on time, production schedules are running late, "Quality" won't pass the circuit boards because they are shaped like Canada geese (they're supposed to look like Xmas trees), and everyone is pointing at someone else! Sound familiar?

I drive home in rush hour traffic and get cut off by an old Chevy van with a surfboard on the roof driven by someone with orange and blue spiked hair who "gestures" to me in an unappreciated manner.

I walk in the front door, a beaten man; my wife greets me with a cheerful smile and she gives me a big hug and a kiss. Sensing my demeanor, she suggests I go spend some time with ADAM to relax and unwind. I nod weakly and head off to the den.

I figure an action arcade type game will take my mind off of work and act as a great stress reliever. So I take out my Super Sub-Roc disk, load it in the drive and pull the reset. The light goes on; as I sink back in my chair waiting for the game to load my mind wanders off. I figure I'll consider all space borne alien vehicles outside vendors to be destroyed, and all the submarines will be Quality people (hopefully suffering the same fate). Time passes and as I stop daydreaming I begin to realize that I'm STILL waiting for the program to load from the disk! The drive is running, the light is on but nothing is happening! Then the realization strikes me, something is wrong! So I open up the door, pull out the Sub-Roc disk, and load another. Terror grips my heart as nothing happens, again! After several attempts to read and write to that drive in BASIC and SmartWriter, I realize that my drive won't do ANYTHING! So I load Sub-Roc into disk drive two and pull the reset and, with some trepidation, wait for something to happen! A short while later, with a sigh of relief, I am greeted by the entrance screen. As I begin to analyze the situation little beads of sweat form on my forehead; I deduce that the problem isn't in the CPU or the printer, which I could take to Honeywell, but in the disk drive itself -- the peripheral that NO ONE repairs! (Or so I thought.)

As total frustration mounts, I suddenly have the overwhelming urge to rip out one of my desk drawers and begin beating the offending disk drive into submission! I fight off the urge remembering a story I read in a local newspaper about a law firm secretary who lost control of her senses and physically attacked her computer work station. Some 30 co-workers cheered enthusiastically as she demolished the terminal with a small hammer which she had evidently smuggled into the office hidden in a coffee cake. I recall the article ending something like "the suspect was taken to County General for psychiatric testing, while the victim was taken to a Dempsey Dumpster".

Not wishing to abuse my ADAM and have the same fate befall me, I called CompuServe and eventually found out that there IS someone out there who repairs disk drives. Specifically, the OrphanWare Service Center which is manned by a very nice fellow named Thom Andree. The address is: 5641 Leibold Drive, Huber Heights, Ohio 45424. After contacting him, Mr. Andree suggested I ship my drive via the U.S. Post Office, with the drive door shut, instead of UPS. (They have a tendency to toss things.)

So a few days later I unplugged my drive and shipped it out, blissful in the fact that I restrained myself from destroying it. Less than two weeks later I was unpacking the box it was returned in; as it turned out, all it needed was a tune-up!

So remember, if you find yourself giving your ADAM an innocent nudge or bump as you walk by, or find yourself spilling coffee on the keyboard (several times a day), or extinguishing cigarettes in the disk drives, especially if you don't smoke, then you are an ADAM ABUSER and should immediatly seek professional help!

Now, was it the vendors who were going to be the space borne aliens ...

COMPUSERVE
AND ADAM
by: Rob Friedman
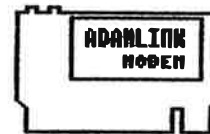
CompuServe is a national telecommunications network for any, and all, computer users. For ADAM users, it's a national meeting place and a central source of public domain software, both basic and CP/M. We are located in the Computer Club forum, one of the oldest forums on CompuServe. The ADAM is in sections 9 and 10, and has Data Libraries 9 & 10. Section 9, Adamania, is for basic and Logo files (and anything else that can be downloaded via ADAMlink2). Section 10 is the ADAM CP/M section; these files usually require a CP/M modem program such as Madam7, MEX114, or IMP.

As a meeting place, there are ongoing discussions in the message bases and in the weekly Sunday night (9:00 EST) COnference where we exchange ideas, tell about new items for ADAM users, and just make friends. Both Tim Nunes and I are there almost every night and we are available Sunday night in the CO. Also, in our Data Libraries we have a wealth of PD software, including the latest PD CP/M files (also available in the CPM Forum). We have amassed an impressive amount of software including no less than six CP/M programming languages (Ebasic, Eprolog, TinyPascal, Forth, Pilot, and Cobol) and we have the ONLY place on CompuServe that the CP/M user (not just ADAMites) can download the original adventure game known as the "Colassel Cave". Our BASIC section combined with our CP/M section constitute the largest Data Libraries in the Forum for ANY one computer. The Computer Club forum can be reached on CompuServe at any "!" prompt by typing "GO CLUB". We look forward to seeing you there.

But CompuServe isn't soley a club for ADAM users. If you have other interests (which I hope we all do), you can find them on CompuServe. As I mentioned, ADAM users can also access the CP/M Forum (GO CPMSIG) and use almost any program on there. (If your friends with their C-128's tell you that "They have a section there too.", well, they are right; but ADAM runs CP/M much better than the C-128.)

Irv Hoff, the writer of most of the PD CP/M modem programs, is a sysop on CPMSIG, and is a frequent visitor in the ADAM section in Computer Club. If you have an interest in other things such as science fiction, MIDI software, religion, health, home business, or countless others, you will probably find a section for you on CompuServe. There are also the online multi-player games like Mega Wars, YGI (You Guessed It), and Island of Kesmai. You can also talk to people all over the U.S. and Canada, and (lately) around the world, on the CompuServe CB (where I'm a frequent visitor). Or, as in the film War Games, you can book flights with the OAG (Official Airline Guide -- Electronic Edition). If you're doing research and you need information there is also IQuest, an immense database that can send a printed copy to you or send a file via modem for numerous topics and previously published sources (Who knows?? maybe the paper you write will also end up in IQuest). Also there is the electronic mall, where you can purchase almost anything from your ADAM. Your home banking and financial needs can also be helped on CompuServe. It is the largest online information service in the world with over 380,000 members.

To join CompuServe, you need (1) a modem, (2) a terminal program, and (3) a CompuServe starter kit (available from most computer stores and major bookstores). The hourly charge is $6.00 at 300 baud and $12.50 at 1200 baud. There are no longer any prime time and non-prime time rates. I hope to see you there -- Rob Friedman (Sysop Adam CP/M).

As a service, both Tim and I have been distributing the PD Modem programs, AdamLink2, Madam7, and MEX. Our procedure has been a very reasonable one. We ask you to send a formatted CP/M disk (or DDP) or 2 or 3 depending on what you want (ADAMlink2 doesn't require a CP/M format), and also to send return postage, no fee other than that. We'll send you a copy of the program so that you can access the all the Data Libraries. You can find us online.

Rob Friedman   ---User I.D.> 73267,742

Tim Nunes   ------User I.D.> 73307,215

Also, Big John Lingrel of OrphanWare is our hardware and technical assistance person online. Along with John, some of our figures are Tony Morehan of T-Dos fame, John Moore of Madam7 fame, Pat Herrington who runs the MOAUG, and numerous others. So, come join the crowd.

By the way, we've just added two other telecom programs. One is specifically for CompuServe, but it is currently for external 1200 baud modems only. The other is the new ADAMlink3 (which is technically ADAMlink2 patched by Tom Clary with an Xmodem downloading option).

The CP/M program is called CSexec (CompuServe EXECutive). CSexec uses a scripting program (very easily made by the program itself) to run the control of connecting, and it uses only CIS Type B protocol. It uses 512 blocks which can make it slightly faster than IMP (which on CIS uses 128 blocks). IMP does have the capacity for 1K blocks, but CIS doesn't allow for this.

The other program , ADAMlink3, allows the non-CPM user to download (EOS) binary files, which until now was risky at best. This program makes things a lot easier. Please bear in mind that if you download a CP/M file with ADAMlink3, you still need CP/M to run it along with a CP/M formatted medium.
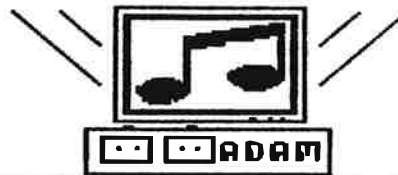
ADAMlink3 is available from OrphanWare for about $20. CSexec is PD and it is available on CompuServe in DL 10 of Computer Club.

19TH CENTURY CLIPPER SHIP

MORE ON SmartTUNES
by Solomon Swift

This article continues where we left off last month in discussing the PD version of our SmartTUNES driver. The greatest benefit of using SmartTUNES is that you can create complex, three voice, tunes by entering notes as the normal corresponding letters of the alphabet, *eg*, "A" for an "A note" and "B" for a "B note". The song on the next page plays a short portion of "When The Saints Go Marching In". Be sure to load the machine language SmartTUNES routine LISTed in the 11/87 issue of N&B first.

Each voice may be turned off individually (RESTed) during the course of a song. "X" turns off the first voice, "Y" turns off the second voice, and "Z" turns off the third voice. These notations are used to supplant the usual note AND octave -- there is no octave specification. A duration (same as with the actual notes) should be specified at the end of the "note string". For example, to turn off all three voices (as with a rest), the sequence "XYZ8" could be used (the "8" indicating a rest the duration of one quarter note). It is also useful to insert a rest with the duration of one 32nd note (XYZ1) between consecutive identical notes. This is because the sound chip does NOT independently turn off a sound. Consider this example: C4C5C68, XYZ1, C4C5C616. If you didn't include the very brief rest, you'd only hear one very long harmonized "C" note. An alternative to this method would be to change ONE voice slightly; for example, C4C5C68, C4C5Z16.

Although the SmartTUNES routine is setup to handle three voices, you can use just one or two voices. For example, a one voice tune would look like this: C4YZ8, E4YZ4, D4YZ8. A two voice tune would look like this: C4C5Z8, E4E5Z4, D4D5Z8. You should turn voices off in sequence, ie, don't turn off the first and second voices and play the third voice. Instead, play the first and turn off the other two.

The SmartTUNES routine is used in similar fashion to a BASIC shape table. In essence, you create a song table. You can specify your own address in RAM to store this table. Our song program uses address 29000 as the starting byte address. To set your own address pointer, POKE the low order integer byte into address 27794 and POKE the high order integer byte into address 27795. POKE the volume (1 - 15) into address 27793. POKE the tempo into address 27792. The best ranges for the tempo are about 225 to 250. The higher the tempo value, the faster the song is played with respect to individual note durations. POKE the octave offset (1, 2, or 3) into address 27946 -- "2" is normal. To use the offset function, your song should not play any notes in the third or eighth octaves.

It will take a little getting used to, but you'll probably find that SmartTUNES provides the easiest and most user friendly access to playing songs available on the ADAM computer. And, you can use the songs in YOUR OWN programs (Z80 or SmartBASIC). We hope that you enjoy this DIGITAL EXPRESS innovation and find it useful.

Since the routine is donated in the public domain, you can even use it in commercial projects. All we ask is that you give credit in REMark statements or in the documentation of your software -- private, public domain, or copyrighted.

```
 100 LOMEM :32000: be = 29000
 110 PRINT " one moment please ...": PRINT
1000 REM "When the Saints Go Marching In"
1002 REM (modified from a SmartLOGO program by Steven Orr
1004 REM listed in the April '88 issue of UKAS Journal)
1010 REM must load SmartTUNES player routine first
1020 DATA C4C5Z8,E4C5Z8,F4C5Z8,G4C5Z12
1030 DATA C4C5Z8,E4C5Z8,F4C5Z8,G4C5Z12
1040 DATA C4C5Z8,E4C5Z8,F4C5Z8,G4C5Z16
1050 DATA E4C5Z16,C4C5Z16,E4C5Z16,D4G5Z20,XYZ4
1060 DATA E4G5Z8,E4G4Z8,D4G5Z8
1070 DATA C4C5Z16,C4G5Z8,E4C5Z16
1080 DATA G4C5Z16,G4F5Z8,F4F5Z20,XYZ4
1090 DATA E4F5Z8,F4F5Z8,G4C5Z20,E4C5Z20
1100 DATA C4C5Z20,D4G5Z20,C4C5Z24
2599 DATA W
2900 READ nt$: IF nt$ = "W" THEN  GOSUB 3000: GOTO 4000
2910 GOSUB 3000: GOTO 2900
3000 FOR x = 1 TO LEN(nt$): ak = ASC(MID$(nt$, x, 1))
3010 IF ak > 64 THEN  POKE be, ak: GOTO 3100
3015 pk = PEEK(be-1): IF pk = 88 OR pk = 89 OR pk = 90 GOTO 3030
3020 IF PEEK(be-1) > 64 GOTO 3200
3030 IF x = LEN(nt$) GOTO 3200
3040 a1 = VAL(MID$(nt$, x, 1)): a2 = VAL(RIGHT$(nt$, 1))
3050 POKE be, a1*10+a2: x = x+1: GOTO 3100
3100 be = be+1: NEXT x: RETURN
3200 POKE be, VAL(MID$(nt$, x, 1)): GOTO 3100
4000 tempo = 230: volume = 15: pointer = 29000: offset = 2
4010 POKE 27946, offset: REM (39,109)
4020 POKE 27792, tempo: REM (144,108)
4030 POKE 27793, volume: REM (145,108)
4040 POKE 27795, pointer/256: REM (147,108)
4050 POKE 27794, pointer-PEEK(27795)*256: REM (146,108)
4100 IF PEEK(27800) <> 229 GOTO 4200
4110 IF PEEK(28000) <> 195 GOTO 4200
4120 IF PEEK(28110) <> 108 GOTO 4200
4130 GOTO 5000
4200 PRINT: PRINT " ERROR!!!  SmartTUNES"
4210 PRINT " routine not detected.": END
5000 CALL 27800: END
```
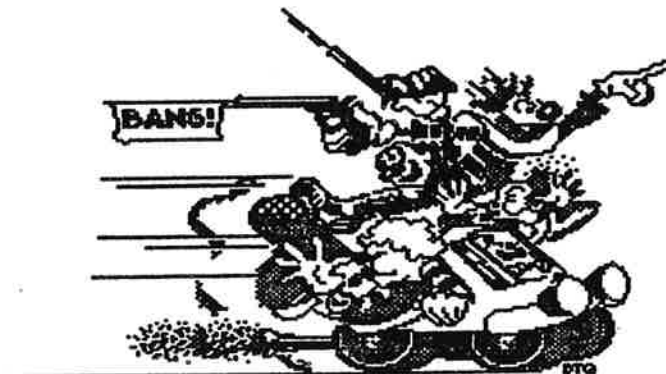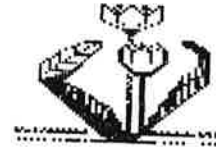
ADAM TALKS

## by: Luke Whitman

Hi. Let's go to work.

This article is about the ADAM Speech Synthesizer (it appears the that Eve Electronics SS-CC is now out of production). But, OrphanWare is currently in the process of developing a similar unit which will be called **Talker** (it should be available in a few weeks). **Talker** will be compatible with programs written for the SS-CC unit; but, the OrphanWare speech unit will be sold separately from the clock unit.

A speech synthesizer is a welcome addition for ADAM users. Long live the thinkers and developers for the expansion capabilities for Adam! As the T&D'ers continue to ply their talents, ADAM continues to actually increase in true worth. Without a doubt if Coleco had foreseen the potential that has been unleashed by such people, the company (now in grave financial difficulty) would never have abandoned their prodigy -- ADAM.

The speech synthesizer has the potential to become a "must" for all serious programmers. This unit can be a dynamic tool, but there are a few tricks to master for coherent speech delivery (basic word structure can be developed fairly easily, but coherent speech is another matter). With the right time interval spacing, which is not mentioned in the manual, the SS-CC can deliver speech that is pleasant to the ear. Before this can be done, though, you must create a vocabulary of many word sounds.

The instruction manual only gets you started on the word sounds and you must diagnose true sound patterns. The sound patterns listed in the manual are not readily discernable to the ear. I created a reasonably pleasant list of several hundred words. Once this was done I tried to link them together to form sentences. This proved to be just a matter of experimenting with the *pause* "allophonics".

On the next page some of the basics of time interval word structuring are listed. In this column, for some time to come, we will explore this system with the basic sounds of each letter of the alphabet. And later we'll explore the details of arrangement of the "allophonics" into sentence structure for the same type of palatibility to the ear.
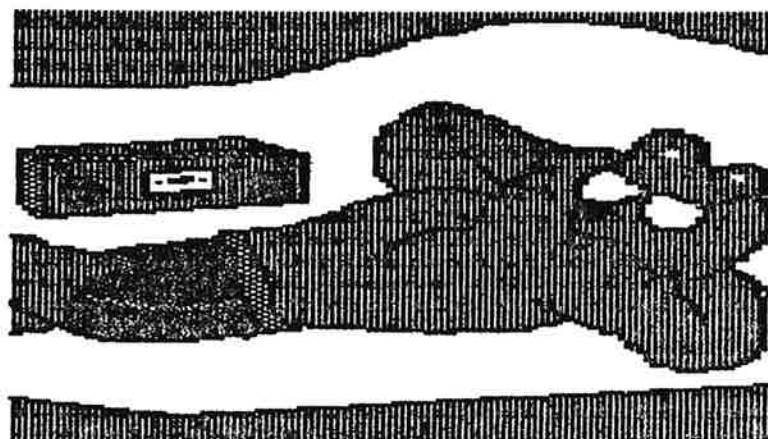
```
ABLE            4,20,0,63,62,4
ACHE            4,20,0,41,4
AGE             4,20,0,34,34,4
AID             4,20,0,21,4
APRON           4,20,0,9,0,52,15,11,4
ABNORMAL        3,26,26,63,1,11,58,16,62,4
ABRACADABRA     3,26,26,63,1,52,30,8,8,26,2,33,33,26,63,1,52,26,4
ABRUPT          4,26,26,63,1,52,30,3,9,9,2,13,4
ACCEPT          4,26,26,1,41,41,55,55,7,7,9,9,1,13,13,4
ADAM            4,26,26,1,33,33,1,12,12,16,4
ABATE           3,30,2,63,20,0,13,4
ABET            3,30,2,63,7,7,13,4
ABIDE           3,30,2,63,6,33,1,4
ABOUT           3,30,2,63,32,13,13,4
ALONG           3,30,2,45,24,11,61,4
AUDIO           3,23,0,33,12,53,4
AUGUST          3,23,0,61,30,0,55,55,13,4
AUTHOR          3,23,0,54,7,58,4
AUTOMOBILE      3,23,0,17,53,16,53,63,12,62,4
AUTUMN          3,23,0,17,30,16,4
AARDVARK        3,59,33,0,35,59,8,4
ARCADE          3,59,1,42,0,20,33,4
ARGUE           3,59,61,25,31,0,4
ARMOR           3,59,16,52,4
ARMY            3,59,16,19,4
ARROW           3,26,0,47,52,52,53,4
ARIES           3,26,12,47,19,55,1,4
ARISTOCRACY     3,26,12,47,12,55,0,13,24,8,0,52,55,55,55,0,19,4
AROMATIC        3,26,12,47,53,16,26,13,12,8,4
ARROGANT        3,26,12,47,30,0,61,61,30,0,11,13,4
AXE             3,26,26,42,42,55,55,0,4
AXLE            3,26,26,42,42,55,55,0,45,62,4
AXIS            3,26,26,42,42,55,55,12,12,12,0,55,55,55,4
AXIOM           3,26,26,42,42,12,12,30,16,4
AXIOMATIC       3,26,26,42,42,12,12,53,16,26,26,13,12,12,4
```

```
  10 REM SPEECH SYNTHESIZER DEMONSTRATION
 100 DATA 62,129,211,75,219,74,203,71,40,250,62,00,211,72
 110 DATA 246,128,211,73,175,211,73,201
 120 FOR x = 1 TO 22: READ mc: POKE x, mc: NEXT
 500 REM MY NAME IS ADAM.
 510 DATA 12,41,6,2,56,0,7,1,12,12,16,2
 520 DATA 12,12,12,0,43,1,2,26,33,12,2,16,4
 550 REM WHAT IS YOUR NAME?
 560 DATA 48,26,13,2,12,12,12,0,43,3
 570 DATA 49,58,2,56,0,7,1,12,12,16,3
 600 REM THANK YOU.
 610 DATA 54,26,12,11,41,3,49,49,0,31,2,3
 700 REM I LIKE TO WORK.
 710 DATA 41,6,2,45,6,41,2
 720 DATA 17,17,0,31,1,2,46,51,41,3
 800 REM PLEASE PUT ME TO WORK.
 810 DATA 9,45,19,43,2,9,0,30,13,2
 820 DATA 16,1,19,2,17,17,0,31,1,2
 830 DATA 46,51,41,-1
1000 READ ph: IF ph = -1 GOTO 1020
1010 POKE 12, ph: CALL 1: GOTO 1000
1020 END
```


I tell ya I'm normal!

PROGRAM EXPLANATIONS

WE ♥ ADAM

by Solomon Swift

EZ SHAPE CONVERTER

The program LISTed on page 12 of the April issue allows you to convert the current font set (system or FontPOWER) into a hi-res shape table. The shape table can be used in the HGR and HGR2 modes providing a simple method of adding text to games and other graphics oriented programs.

For best results you should select 33 (or 32) as the beginning ASCII value and 127 as the ending value. Depending on the particular typeface, the file created will be 2K or 3K. If you designed a typeface shape table from scratch, it would probably use less memory, though.

The biggest benefit of "EZ SHAPE CONVERTER" is that it is automated. All you do is enter the first and last ASCII values. It converts by reading each byte of the bit image table converting the bit values to shape table vectors. It reads to the right on the top bit, goes down one move, and then reads the data going to the left. It continues reading bit values until all eight bytes of the character are read. (The "dr%" variable is used to denote direction -- "0" is right, "1" is left. "NOT" toggles the direction). A few shortcut detectors are included to conserve memory for a row that has all bits off and for consecutive bytes with all bits off.

When you use the shape table to print characters, be sure to offset the shape number. For example, if your first shape is 33, the "!" will be shape "1", and so on. Next month we'll include a short routine that demonstrates how to use the hi-res characters.

ezHGRfind

This simple program, LISTed on page 13 of last month's issue, performs a FULL HGR SCRN function. Just enter the vertical and horizontal coordinates into the vt% and ht% variables. Upon completion fr% will contain the foreground color, bk% will contain the background color, and bt% will indicate the bit's status, ie, "0" is for "off" and "1" is for "on".

Used as a subroutine, this programming trick could add powerful capabilities to hi-res color printing programs. It could also be used in a game to determine whether or not a particular object has been hit.

MultiPIX

Before Mr. Adolph's experimentation with ADAM's multicolor mode (medium res graphics), the concept was virtually unexplored on ADAM. His innovative program includes drawing options along with SAVE and LOAD options. Input is accepted via the game controller plugged into the front port.

MutliColor is very similar to hi-res mode (graphics mode two). And, it appears to overcome ADAM's color bleed problem. The trick is that the 4x4 pixel blocks alternate in the foreground and background.

SmartBASIC 2.0 40 Column Text

The two programs on the next page, by Ruth Mather, create the 40 column text capability in the PD interpreter, SB 2.0. With these two you can switch between TEXT (32col) and TEXT2 (40col). Her programs are based on our similar program for SB 1.0 LISTed in the 12/86 issue (which was based on Ben Hinkle's program in Hacker's Guide vol 2).

PowerPAINT fix

Even after the release of PaintAIDE another minor bug was discovered with PowerPAINT. The bug is that sometimes the left margin is offset when printing a normal screen stretched to 8" in width. Just enter this program to correct your BACKUP of PowerPAINT.

NMI Tune Generator

Have you ever wanted to be able to play music in the background while programs load or other operations are in progress? The program LISTed on page 18 shows you how!!

SmartBASIC only uses the video chip's NMI (non-maskable interrupt) for FLASHing (by constantly switching between two almost identical screen tables). The NMI, however, is much more versatile than that simple application. We just tagged a tune driver onto the end of Coleco's routine (which starts at address 102, decimal). We even added another patch that allows you to use it in HGR and HGR2 modes. This can add a very impressive touch to your games.

Addresses 159 and 209 control the duration of the notes. Addresses 185 and 186 contain the integer pointers to the simple song table.

Our table occupies address 10 thru 101. But you could put a table anywhere in RAM. You could even switch between tables for multiple background tunes. Only the first two voices are used; this leaves the thrid voice and the noise generator free for normal game response sounds. The song table is created in byte pairs, ie, the first is for the tone, the other designates the duration.

```
 10 REM SmartBASIC 2.0 STDMEM TEXT/TEXT2 commands
 12 REM donated into the public domain by Ruth Mather
100 LOMEM :28000
7000 REM text=32 col: text2=40 col
7005 DATA 18398,18422,18589,18598,18625,18173,18224,18286,18350,18362,18376
7010 FOR x = 1 TO 11: READ adr: POKE adr, 80: POKE adr+1, 105: NEXT
7015 DATA 1,23,7,205,32,253,24,14
7016 FOR i = 0 TO 7: READ d: POKE 17239+i, d: NEXT
7020 POKE 17291, 192: POKE 17302, 192
7030 DATA 41,197,229,41,41,193,58,112,66,183,40,1,9,193,201
7040 FOR x = 0 TO 14: READ ml: POKE x+27001, ml: NEXT
7050 DATA 245,229,62,30,50,171,67,62,224,50,187,67,62,32,50,0,71
7060 DATA 62,41,50,28,72,33,41,41,34,29,72,225,241,195,183,45
7070 FOR x = 0 TO 32: READ ml: POKE x+27016, ml: NEXT
7080 DATA 245,229,62,39,50,171,67,62,240,50,187,67,62,40,50,0,71
7090 DATA 62,205,50,28,72,33,121,105,34,29,72,225,241,195,183,45
7100 FOR x = 0 TO 32: READ ml: POKE x+27049, ml: NEXT
7110 POKE 7238+2*41, 136: POKE 7239+2*41, 105
7120 DATA 53,204,3,5,84,69,88,84,50
7125 FOR x = 0 TO 8: READ ml: POKE x+696, ml: NEXT
7130 POKE 7238+2*53, 169: POKE 7239+2*53, 105
```
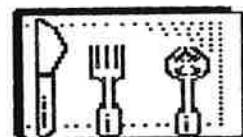
```
 10 REM SmartBASIC 2.0 EXTMEM TEXT/TEXT2 commands
 12 REM donated into the public domain by Ruth Mather
100 LOMEM :27100
7000 REM text=32 col: text2=40 col
7005 DATA 18398,18422,18589,18598,18625,18173,18224,18286,18350,18362,18376
7010 FOR x = 1 TO 11: READ adr: POKE adr, 80: POKE adr+1, 105: NEXT
7015 DATA 1,23,7,205,32,253,24,14
7016 FOR i = 0 TO 7: READ d: POKE 17239+i, d: NEXT
7020 POKE 17291, 192: POKE 17302, 192
7030 DATA 41,197,229,41,41,193,58,112,66,183,40,1,9,193,201
7040 FOR x = 0 TO 14: READ ml: POKE x+27001, ml: NEXT
7050 DATA 245,229,62,30,50,171,67,62,224,50,187,67,62,32,50,0,71
7060 DATA 62,41,50,28,72,33,41,41,34,29,72,225,241,195,182,47
7070 FOR x = 0 TO 32: READ ml: POKE x+27016, ml: NEXT
7080 DATA 245,229,62,39,50,171,67,62,240,50,187,67,62,40,50,0,71
7090 DATA 62,205,50,28,72,33,121,105,34,29,72,225,241,195,182,47
7100 FOR x = 0 TO 32: READ ml: POKE x+27049, ml: NEXT
7110 POKE 7600+2*41, 136: POKE 7601+2*41, 105
7120 DATA 53,204,3,5,84,69,88,84,50
7125 FOR x = 0 TO 8: READ ml: POKE x+696, ml: NEXT
7130 POKE 7600+2*53, 169: POKE 7601+2*53, 105
```

```
 10 REM a public domain donation by DIGITAL EXPRESS
 11 REM presented in Nibbles & Bits April, 1988
 12 REM bug discovered by Bob Tarnowski of Mr.T. SOFTWARE
100 LOMEM :29000
110 DATA 62,4,1,0,0,17,81,0,33,0,100,205,243,252,50,255,107,201
120 FOR x = 27601 TO 27618: READ mc: POKE x, mc: NEXT
130 dv$(1) = "TAPE ONE": dv$(2) = "DISK ONE"
200 TEXT: PRINT: PRINT " This program corrects the"
210 PRINT " bug with PowerPAINT for print-";
220 PRINT " ing a single screen at 8 inch"
230 PRINT " width.  Use ONLY on a BACKUP!": VTAB 16
300 PRINT " Which drive for PowerPAINT?": PRINT
310 PRINT " 1 = tape one": PRINT " 2 = disk one"
320 GET k$: k% = VAL(k$): IF k% < 1 OR k% > 2 GOTO 350
330 dv% = 2^(4-k%): GOTO 400
350 TEXT: PRINT " end of program.": END
400 HOME: PRINT " insert your PowerPAINT"
410 PRINT " BACKUP into "; dv$(k%); " and"
420 PRINT " press <RETURN> ..."
430 GET go$: IF go$ <> CHR$(13) GOTO 350
500 HOME: PRINT " verifying ..."
510 POKE 27602, dv%: CALL 27601
520 IF PEEK(27647) = 128 GOTO 530
525 PRINT " read error on block 81.": END
530 IF PEEK(27733) <> 214 GOTO 540
535 PRINT " PowerPAINT already patched.": END
540 IF PEEK(27730) = 175 AND PEEK(27735) = 64 GOTO 550
545 PRINT " PowerPAINT not detected.": END
550 IF PEEK(27733) <> 4 GOTO 545
555 HOME: PRINT " correcting ..."
560 POKE 27733, 214: POKE 27613, 246: CALL 27601
670 IF PEEK(27647) = 0 GOTO 700
680 PRINT " write error on block 81.": END
700 HOME: PRINT " The bug is fixed!!!": END
```

```
10 REM "NMI tune generator" by DIGITAL EXPRESS
12 REM a freeware contibution; may not be sold commercially
14 REM may be copied and traded freely
16 REM presented in Nibbles & Bits May 1988
18 REM Do NOT remove these first five REMark statements
20 REM It is NOT compatible with Intel-BEST 3.3.
30 REM You MUST turn NMI tune OFF when going to HGR from TEXT!
100 POKE 17215, 192: TEXT: CALL 64851: POKE 16149, 255: POKE 16150, 255
105 PRINT " This program demonstates how"
110 PRINT " to play a simple background"
120 PRINT " tune while other operations"
130 PRINT " are in progress.": PRINT: PRINT
140 PRINT " To start:"
150 PRINT " POKE 171,0": PRINT
160 PRINT " To stop:"
170 PRINT " POKE 171,201:CALL 64851"
3000 DATA 10,0,1,205,120,255,241,237,69,0
3010 DATA 22,1,24,1,26,1,28,1,26,1,28,1,24,2
3020 DATA 20,2,16,2,14,2,16,2,18,1,20,1,22,1
3030 DATA 20,2,16,2,19,2,16,2,18,1,16,1,13,1,16,2,13,1
3040 DATA 11,2,13,1,11,2,15,1,13,2,15,1
3050 DATA 13,2,17,1,15,2,17,1,15,2,17,1
3060 DATA 18,2,20,1,18,1,16,1,14,1,13,1,12,1,11,1,15,2,19,2
3090 DATA 0,0,-1
3100 st = 0
3110 READ mc: IF mc = -1 GOTO 3130
3115 IF st > 101 THEN  PRINT "too much data end.": END
3120 POKE st, mc: st = st+1: GOTO 3110
3130 REM okay
4000 DATA 245,197,229,213,42,0,0,126,254,0,32,8,33,10,0,34,0,0,24,243
4004 DATA 58,2,0,61,50,2,0,183,32,48
4006 DATA 42,0,0,35,70,17,0,8,25,16,253,124,50,2,0,42,0,0,126
4010 DATA 245,62,128,211,224,241,245,211,224,62,147,211,224
4020 DATA 62,163,211,224,241,211,224,62,179,211,224
4040 DATA 35,35,34,0,0,209,225,193,241,201
4100 FOR x = 172 TO 254: READ mc: POKE x, mc: NEXT
4110 tt = 0: FOR x = 172 TO 254: tt = tt+PEEK(x): NEXT
4120 IF tt = 8556 GOTO 4140
4130 PRINT " incorrect data total!": END
4140 PRINT: PRINT " routine okay ..."
4200 REM set flash timer
4210 POKE 159, 8
4300 DATA 245,58,112,66,183,40,5,197,205,35,253,193,241,205,171,0,201
4310 FOR x = 65400 TO 65416: READ mc: POKE x, mc: NEXT
4500 POKE 120, 195: POKE 121, 3: POKE 122, 0
4510 PRINT: PRINT " press any key to begin ...": GET key$
4520 POKE 171, 0: POKE 17215, 224: POKE 25592, 224: POKE 25403, 224
4530 TEXT: PRINT " It works in TEXT and HGR!!!": END
```

DISK DRIVE REPAIR
by Jim Guenzel
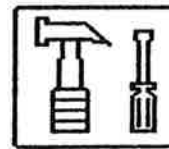
SYMPTOM: Drive does not spin when new disk is placed in drive, ie, drive does not recognize disk removal / replacement.

PROBLEM: D.C. volts on receiver diode is too high (12v DC) and change in volts from "disk out" (<.8v DC) to "disk in" (>.5v change) does not trigger circuit.

SOLUTION: A 5K potentiometer is placed across the green (+ volts DC) and black (ground) wires to the lower diode and adjusted so that "disk out" volts is less than .8v DC and the change with "disk in" is greater than .5v DC.

NOTE: A 3K or 5K resistor would work just as well; but, I like the adjustability of a potentiometer. Repair should be attempted ONLY when ALL power is off and should be done by an adult with knowledge of electrical repair.

BACK OF DRIVE

LEFT SIDE

black

TEST POINT

5 K pot

red— —blk —green —blk

emitter led

reciever led
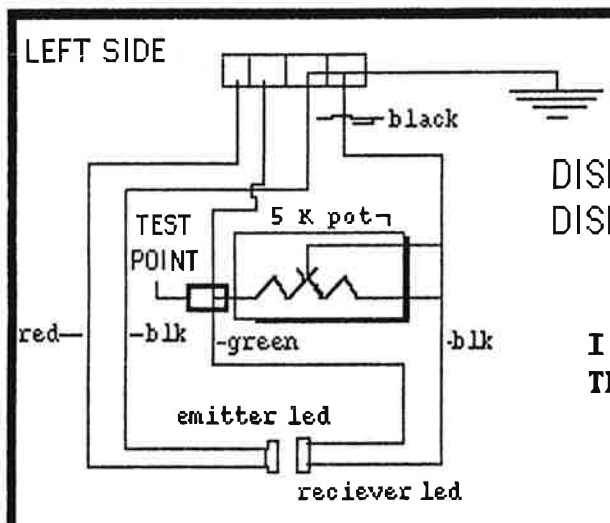
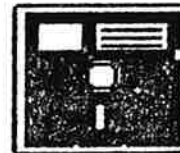DISK OUT-- < .8 V. DC AT TEST POINT
DISK IN -- > .5 V. DC **CHANGE** WILL TRIGGER
                    THE CIRCUIT.

I set the voltage at about 0.5 at the TEST POINT and it works just fine.

PRODUCT REVIEWS

PRODUCT:	PHRASE CRAZE
MANUFACTURER:	Reedy Software
MEDIA TYPE:	disk/DDP
GRAPHICS/SOUND/DESIGN:	97;99;99
INSTRUCTIONS:	93
USEFULNESS vs. PRICE:	97
RECOMMENDATION:	highly recommended
PRICE:	19.95
RATED BY:	Luke Whitman

If you like the "Wheel of Fortune" game show on TV, chances are in your favor for liking Reedy Software's new PHRASE CRAZE. The graphics are colorful and pleasant to look at while you play this game which operates similar to a roulette wheel, but with the same similar risks that Pat and Vanna present -- dollar values, a wild card, lose a turn, and (the dreaded) bankrupt are indicated on the wheel's wedges. The screen shows the letter board, the wheel, the alphabet elimination bar, and each player's score (for the round and the game).

At the onset you are given a choice of two or three players. Once I mastered the playing of PHRASE CRAZE I thoroughly enjoyed the game so much that once just wasn't enough. And, PHRASE CRAZE is a lot of fun when playing with several people organized as teams.

The graphics are quite good. The sound is very good. The design of the program is outstanding. The instructions could have been made a bit clearer (with the two player version its a little confusing during the first game switching control between the game controllers and the keyboard). But this is a very minor problem when you consider all that you get for your money. I believe that Pat and Vanna would be proud of Reedy for such a fine adaptation of their livelihood. The medium comes with hundreds of phrases plus Reedy has just released the first PHRASE PAK with hundreds more for just $9.95 on tape and $7.95 on disk. Also, PHRASE CRAZE has a "Hall of Fame" for the all-time top five scores.

I enjoy playing PHRASE CRAZE and highly recommend it to all game players.

Phrase Craze!

Puts a Game Show on Your ADAM!

```
PRODUCT:                                          Mr. T-SEARCH
MANUFACTURER:                                  Mr. T. Software
MEDIA TYPE:                                         disk/DDP
GRAPHICS/SOUND/DESIGN:                             98;98;95
INSTRUCTIONS:                                            90
USEFULNESS vs. PRICE:                                    97
RECOMMENDATION:                            highly recommended
PRICE:                                               13.00
RATED BY:                                       Luke Whitman
```

As you can see by the hidden words game below, Mr. T. Software has come up with another good one; we just received this one. It didn't take long for our first playing of the new Mr. T-SEARCH program and Mr. T-SEARCH GAMES 1 program. I was quite favorably impressed with just about everything.

Your first decision is whether to play a game that has previously been created, or create a new game. If you choose to create a new one, you are given the choice of size -- 5 different sizes. The length of time for the creation of a new game depends on three things: (1) the size of the game board, (2) the number of words in the game, and (3) the words themselves. The game below took 19 minutes and 20 seconds. (I know this because there is an on-screen time counter.)

In storing your creation you are given the choice of storing as a Word Puzzle or a Game Puzzle. The "Game" is the same each time played. The other is different each time played. There is an added novelty graphic that, alone, almost makes this program worth the cost. I'll let it remain a surprise for you.

Two things I can think of that might improve the worth of this game are: 1) If you make an error you can't correct it; you must erase what you have and start over — you need a method of error correction and (2) When viewing the word list for solving a puzzle on-screen, there is no option for reversing the search -- this would help also.

There are a few word search puzzle makers in the public domain. But none of these even come close to the quality of this product. The many user features along with the excellent graphics and pleasing music make Mr. T-SEARCH a very good value for the price. I do highly recommend this one, both the base program and the "Games Pak".

COMPWD - Mr. T-SEARCH word search puzzle!

```
V T P B H X X E V I R D K S I D W G X G G Z I O F X
D C D T U E L W N D C K F R J O Y S T I C K D L X Q
K Q X F P M G C O M P U T E R U S E R S G R O U P L
T E B B H B R O M A Z K L D C B X P V L E P U S W K
M H S T N I A P R E W O P R M L L I J N Z M H D E U
T R C X Q X P N J O S R E O M E M O R Y C A R D P S
F E K R X J H M Q N O X D L V S Y N T H E S I Z E R
K K K P A Z I T O C X E S I L I C O N C H I P W E H
W H D G M E C C E A M L R A W D P L B H B I M I J O
G T X B K W S S U O A D A M Q E H T N E U E L U B F
O I K H Z K S T N C A R T R I D G E R E I C R C G C
W B D Z H O X I R T A M T O D D H E I J O M A P O D
R E T I R W T R A M S O F P R I N T E R F A C E D Y
G D O S R O H D J R B V F D G S J H H T A H W Y U R
X N S Y R Y R G M H C I G F N K E Y B O A R D O M B
```

COMPWD - FIND THE FOLLOWING WORDS

ADAM	CARTRIDGE	COMPUTER	CONSOLE
DATADRIVE	DISKDRIVE	DOTMATRIX	DOUBLESIDEDDISK
GRAPHICS	INTERFACE	JOYSTICK	KEYBOARD
MAILORDER	MEMORYCARD	MODEM	MONITOR
MRTSEARCH	POWERPAINT	PRINTER	SILICONCHIP
SMARTWRITER	SYNTHESIZER	USERSGROUP	WORDPROCESSOR

SmartFILER

- a review by Rick Lefko -

I've noticed in recent months that there are quite a few new ADAM owners out there. Taking this into consideration, I thought it might be helpful to review some of the older, original COLECO software that is still available.

SmartFILER, as the name implies, is a filer program which sets up and utilizes a database for information storage and retrieval. SF uses most of ADAM's keyboard, especially the SmartKEYS. SF comes on the Data Pack medium but can easily be copied to disk with any copy utility. After you purchase SF load it and check the revision by holding down the CONTROL KEY and tapping the letter "R". If it is less than 27D there are several user groups who can update it for you. If it is of a lesser revision it can be used with hardly any problems; the newer version is only needed to fix a couple of bugs.

The first thing to do with SF is to create a "form". This form is used to input information to your database, or retrieve it. A form is made up of "fields". Each field is made up of four attributes: the field name, type, length and whether it is "searchable" or not. Let me briefly describe each one of these.

Using my own 100+ video database file as an example, my first field name is "Tape #". The *first* field is always searchable. In other words, I can sort and index all of my tapes by the number I enter into this field; or I can find, say, tape #86 by searching for that number directly. The "type" can be either number or character, (or text, which I'll discuss later). For this field, obviously, it would be number. The "length" I set is 5. This means I can type up to 5 characters or numbers in this field. You can set the amount to whatever you want, as long as all the fields add up to 255. Now this doesn't mean you can only have files that contain up to 255 characters because you can choose "text" for "type" and that field can hold up to two pages of text. SF allows one text field per form and up to four searchable fields (but these can't be any longer than 24 characters each).

The search functions are great! If I need to add something to tape #65, I ask SF to find it, and display it. At that point I can modify, delete, copy, or print it. I have my records printed out and bound in a nice little booklet I keep on the coffee table for easy reference. I also have databases set up for my credit cards, valuables, and I've even setup one for the Lab personnel where I work. My wife and I are working on the companion program, Recipe Filer (not included with SF), to organize her recipes. This program has added features to make and price grocery lists and even to link recipes.

The number of records you can enter depends on the length of your fields, but I have NOT been able to fill one up yet! One of the few limitations to SF is that you can only set up one database per disk or DDP.

SmartFILER at $12.95 (DEI,SDP) is an exceptional value. You can index and search by character, number, or even a partial name. It will display an index and print it, if you like. You can merge and print your records with letters created with SMART LETTERS & FORMS or extract SmartWriter files and integrate them with your records. SF comes with an excellent 38 page manual.

I highly recommend this program for all ADAM owners!

```
PRODUCT:                        VERIBACK 2.0
MANUFACTURER:                   Practical Programs
MEDIA TYPE:                     flippy pack/disk/DDP
GRAPHICS/SOUND/DESIGN:          90;50;90
INSTRUCTIONS:                   90
USEFULNESS vs. PRICE:           99
RECOMMENDATION:                 recommended
PRICE:                          14.95
RATED BY:                       Jim Guenzel
```

VERIBACK 2.0 is a very easy-to-use and feature-packed copy program. One feature sets this program apart from other copy programs: The VERIfy options.

VERIBACK allows you too verify everything about your source media and the target media before, during, and after the backup process. You can verify the source only and thus make sure a copy can be made. You can verify the source first; if there are no problems, then the copy will be made. You can have the program verify the target media by writing a block to the target then reading that block and comparing the read with what was read from the source media. This is a slow process but does allow for a re-write of a bad data block. You can have the program complete the copy and then go back and check each block for readability. And you can choose no verification if you "wish to gamble".

This program also allows you to copy between any combination of DDP's, FLIPPY PACK's or disks through the "Intelligent Backup Option". If you select the "intelligent" option by entering "Y", the program will read the directory of the source drive and tell you how many blocks are being used. Then any files or programs that will not fit on the target media will be listed. The new directory on the target media will be corrected to show only the files or programs that were, in fact, copied from the source. The "intelligent backup" feature can be skipped by selecting "N" (no) at the prompt.

Using VERIBACK is certainly easy. Questions come on the screen one at a time with the default or "best" selection for each option highlighted in reverse video. Pressing <RETURN> selects the default value.

Before any copying starts you are asked to make sure you have the target and source media in the correct drives and then the question, "Are you sure? (y/n)" has to be answered. During reading and writing if a read or write error occurs, the program stops and waits for you to tell it to Abort, Continue or Retry by selecting "A", "C" or "R". If any other program error occurs, the program will stop and display the error number so that you can look it up in the SmartBASIC manual to decide what to do. Pressing the <space bar> returns you to the start of the program.

VERIBACK comes with two versions on your disk or DDP. VERIBACK20 has a 20K copy buffer and VERIBACK2 has an 82K buffer and requires the 64K expander. Both versions are "H" files and you enter "brun (filename)" to run them. The manual is 7 pages long and is very well written.

VERIBACK is not the fastest copy program around. It reads blocks until the buffer is full and then writes them to the target. But VERIBACK will verify source blocks for readability and the target for readability (and a correct copy). VERIBACK also allows you to mix different size media during copies. This means that you have a copy program that will work in all situations and double check everything it does. It may take a little more time, but it works!

ADAM USERS' GROUPS

WASHINGTON

Barbara Duncan
3727 34th Avenue SW
Seattle, WA 98126

Dave Sandahl
USNH, Box 2844
FPO Seattle, WA 98778

Puget Sound ADAM Network
Bob or Valorie Zimmerman
22607 SE 322nd Street
Kent, WA 98042

AUSTRALIA

Bendigo ColecoVision Club
W.R. Oldacres
C1 - 2, Fenton Street
Bendigo, VIC 3550
Australia

ADAM Owner's & User's Group
Frank Ellis
19 Cervantes Street
Macgregor, QLD 4109
Australia

ENGLAND

U.K. ADAM Subscribers
Keith A. Marner
33 Homer Road
Croydon, Surrey
England, CRO 7SB

Germany

AUG of Germany
Friedenstrasse 14
6101 Bickenback
Federal Republic of Germany

BULLETIN BOARD

- new big memory expanders -
In House Service Reps
620 Harmon Cove Towers
Secaucus, NJ 07094

Hacker's Helper
Mel Ostler
7641 Raasaf Boulevard
Las Cruces, NM 88005

PHRASE CRAZE & PHRASE PAKS
Reedy Software
10085 60th Street, SE
Alto, MI 49302

MR. T-SEARCH & Word Paks
Mr. T. SOFTWARE
7316 Northway Drive
Hanover Park, IL 60107

"VideoGaming & Computer News"
Attn: Thomas Sawyer
2226 Patterson Avenue, South
Joplin, MO 64804

RAMdisk Utilities
Walters Software Company
Route 4, Box 289-A
Tutusville, PA 16354

Low Priced Coleco Software
Send SASE to:
Hector Sanchez
3606 Swiss
Corpus Christi, TX 78415

Computer Shopper
12 issues $21.00 (40% savings)
P.O. Box 1419
Titusville, FL 32781-9988
(305) 269-3211

D.L. Decker Enterprises
Route 2, Box 15
Spring Mills, PA 16875-9720

ADAM Family News
6508 34 Street SW
Calgary, Alberta
CANADA T3E 5M2

463 AUG
Dean Roades
8522 Hohman Avenue
Munster, IN 46321

ADAMzap & ADAMZONE
17 Capstan Road
West Milford, NJ 07480-4816

- let's start a local AUG -
Rob Friedman
3814 Ocean Avenue, T-2
East Rockaway, NY 11518
CIS#: 73267,742

Practical Programs
P.O. Box 244
Kalamazoo, MI 49005

PROGRAMMING UTILITY SOFTWARE

☐☐☐ Intel-BEST 3.3   (by DIGITAL EXPRESS) $24.95 (retail) $18.95 (SDP)
* makes over 3 dozen changes to BASIC 1.0; comes with 9 very user friendly MUSIC commands

☐☐☐ Intel-LOAD V1.0   (by DIGITAL EXPRESS) $15.95 (retail) $11.95 (SDP)
* converts BASIC 1.0 programs to load up to 12 times faster; stays in RAM; 2 BSAVE options

☐☐☐ Intel-LOAD V2.0   (by DIGITAL EXPRESS) $15.95 (retail) $11.95 (SDP)
* converts BASIC 2.0 programs to load up to 12 times faster; stays in RAM; 2 BSAVE options; works only in STDMEM

☐☐☐ SmartBEST V1.0   (by DATA DOCTOR) $16.95 (retail) $14.95 (SDP)
* makes several changes to BASIC 1.0; not compatible with Intel-BEST 3.3

☐☐☐ SmartTRIX   (by DATA DOCTOR) $19.95 (retail) $14.95 (SDP)
* a set of 10 excellent programming aides; two very nice sprite programs; 60 page manual; disk & DDP versions not
compatible

☐☐☐ BASICaide (rev 2)   (by Mr. T. SOFTWARE) $11.95 (retail) $9.95 (SDP)
* several BASIC 1.0 enhancements; new CHAIN command; new BIN command to store fast loading programs; macros; fixes;
more

☐☐☐ TurboDISK 1.0   (by DIGITAL EXPRESS) $24.95 (retail) $19.95 (SDP)
* creates ramdisk ability with BASIC 1.0; corrects several BASIC bugs; includes TurboCOPY -- very nice media control
and copy utility; requires 64K expander

☐☐☐ MegaUtil   (by MARATHON COMPUTER) $32.95 (retail) $27.95 (SDP)
* an excellent collection of varied programming aids; includes ByteWriter (block editor), CopyWriter (media backup
utility), PD modules, programming tips, plus more

☐☐☐ TurboDISK 2.0   (by DIGITAL EXPRESS) $15.95 (retail) $11.95 (SDP)
creates a powerful ramdisk ability for BASIC 2.0 and a 64K expander; disables EXTMEM command

☐☐☐ MegaDISK 1.0   (by DIGITAL EXPRESS) $24.95 (retail) $19.95 (SDP)
* creates the ramdisk ability for BASIC 1.0 or your own Z80 programs; works with 64K, 128K, 256K, 512K, and 1M
ORPHANWARE memory expanders; automatically checks size of your XRAM card; does NOT disable NMI interrupt (FLASH,
etc.); comes with 5 PD programs including EZfileXFER; much, much faster than a Coleco disk drive; self-booting or can
be BRUN after BASIC

☐☐☐ XRAMpak I   (by DIGITAL EXPRESS) $19.95 (retail) $14.95 (SDP)
* the perfect companion for MegaDISK 1.0 and your ORPHANWARE memory expansion board (any size); includes XRboot (boot
BASIC 1.0, ADAMcalc, and ADAMlink in about 2 seconds), XRcopy (a VERY powerful copy utility uses ramdisk space ABOVE
your files stored there -- great for multiple copies of PD software), PACK and UNPACK (compacts and decompacts your
favorite utilities into/from one large file for quick system setup), EZfileXFR2 (faster than EZfileXFER, by not
restarting the directory after each transfer)

☐☐☐ AUTOWRITER   (by Mr. T. SOFTWARE) $15.00 (retail) $14.25 (SDP)
* a menu driven utility that writes machine code routines and BASIC subroutines (included) of your choice to a user
designated data pack or disk; file may then be merged with existing programs to add special features; detailed
instruction manual

DOT MATRIX PRINTER SOFTWARE

☐☐☐ FILE PRINTER   (by Terry Fowler) $9.95 (retail) $9.45 (SDP)
* a fine set of BASIC utilities for use with your dot matrix printer; prints SmartWriter compatible files; allows you
to set default printer functions; (price goes UP at the end of November)

☐☐☐ ShowOFF II   (by DIGITAL EXPRESS) $19.95 (retail) $14.95 (SDP)
* machine code print enhancements for SmartWriter (adds 32 print controls and 5 CONTROL functions to SmartBASIC;
requires Centronics parallel interface, a Panasonic KXP-1080 or 1080i printer, and at least a 64K expander

☐☐☐ ShowOFF IIa   (by DIGITAL EXPRESS) $19.95 (retail) $14.95 (SDP)
* very similar to ShowOFF II except that it is compatible with any dot matrix printer that supports Epson FX escape
codes; works with Epson, Star, and printers and the Okimate 20; does NOT include line justification commands or
internal document margin control; requires at least a 64K expander

☐☐☐ Fast & Calc Patch   (by ORPHANWARE) $9.95 (retail) $8.95 (SDP)
* FastPatch 2.0 directs all printer output to your parallel interfaced printer -- can be used with SmartBASIC 1.0,
SmartWriter, and SmartFiler; CalcPatch directs ADAMcalc output to your dot matrix printer; neither patch includes
special printer commands -- works just like the standard ADAM versions

☐☐☐ LinkPatch   (by ORPHANWARE) $9.95 (retail) $8.95 (SDP)
* ADAMlink II telecommunications software with up and down loading of ASCII files; plus directs printer output to your
dot matrix

RECREATION/GAMES SOFTWARE

□□□ MageQuest (rev 2)   (by REEDY SOFTWARE) $16.95 (retail) $14.95 (SDP)
* superb graphic adventure; includes 9 levels of play in the main adventure plus 3 solo adventures; additional solo adventures available from REEDY SOFTWARE

□□□ TriviaPac I   (by Mr. T. SOFTWARE) $17.95 (retail) $14.95 (SDP)
* 1200 questions; 6 categories; one to four players; graphics and sound; hall of fame; many hours of fun

□□□ Kid's TriviaPac   (by Mr. T. SOFTWARE) $17.95 (retail) $14.95 (SDP)
* 1080 questions; 6 categories; one to four players; graphics and sound; hall of fame; many hours of fun

□□□ Strategy Strain   (by DATA DOCTOR) $18.95 (retail) $14.95 (SDP)
* nine intellectually challenging computer classics; graphics and sound; good Star Trek game

□□□ Lab Mouse   (by REEDY SOFTWARE) $13.95 (retail) $11.95 (SDP)
* exciting game that puts you in the role of a laboratory mouse stuck in a maze; all hi-res graphics; 5 skill levels

□□□ Entertainment Pack   (by REEDY SOFTWARE) $16.95 (retail) $14.95 (SDP)
* three challenging computer classics (connect 4, blockade, and slide puzzle); great graphics; fast animated sprites; one or two players

□□□ Stage Fright   (by REEDY SOFTWARE) $16.95 (retail) $14.95 (SDP)
* extensive text adventure in which you play the role of an actor or actress trapped in an abandoned theater; some graphics and sound; easy to play -- challenging to win; game save option; three progressive levels of play

□□□ Diablo   (by IMAGE MICROCORP) $19.95 (retail) $18.95 (SDP)
* a maze-like game in which the play field consists of user movable tracks on which you try to keep a ball in motion; good graphics; requires substantial strategy to play

□□□ Black Gold   (by IMAGE MICROCORP) $19.95 (retail) $18.95 (SDP)
* a board style game for one to four players; compete by digging for oil; good graphics

□□□ Stock Market Game   (by IMAGE MICROCORP) $19.95 (retail) $18.95 (SDP)
* a board style game for 1 to 4 players; see who makes the biggest profit buying and selling stock; a relatively good tool for learning about the stock market; more enjoyable with some stock market understanding

□□□ Centipede   (by AtariSOFT) $12.95 (retail) $11.95 (SDP)
* the still popular arcade game in which you shoot away segments of oncoming centipedes; available in cartridge ONLY; one or two players

□□□ Defender   (by AtariSOFT) $12.95 (retail) $11.95 (SDP)
* the action packed arcade game in which you shoot attacking alien ships and attempt to save inhabitants of the planet below; available on cartridge PLUS disk or data pack (specify which one you want with the cartridge); one or two players

□□□ Beyond Trek   (by Digital Express) $19.95 (retail) $14.95 (SDP)
* pits you against hostile klingons; very good graphics; good sound/music; protect 4 starbases and annihilate the klingons; you command the Enterprise; hall of fame for 10 high scores (for session or all-time); requires at least a 64K expander

□□□ Chess Champ   (by Digital Express) $19.95 (retail) $14.95 (SDP)
* the FIRST graphic chess game for the ADAM; great graphics; easy user interface; skill levels; switch sides; a little slow on higher skill levels; good chess playing companion; documentation includes instructions on playing chess; requires at least a 64K expander

COLECO COPYRIGHTED SOFTWARE

□□□ SmartLOGO   (data pack only) $22.95 (retail) $18.95 (SDP)
* Coleco's version of the popular structured language; good for graphics and sound control; 350+ page manual

□□□ SmartFILER   (data pack only) $16.95 (retail) $12.95 (SDP)
* Coleco's general purpose database program; easy electronic filing system; search features; 38 page manual

□□□ ADAMcalc   (data pack only) $24.95 (retail) $18.95 (SDP)
* advanced electronic spreadsheet; comes with sample templates; 154 page manual

□□□ CP/M 2.2   (data pack only) $32.95 (retail) $25.95 (SDP)
* Coleco's version of the still popular operating system; 1000's of public domain supporting programs; 250+ pages

GUIDES/BOOKS/INSTRUCTIONS

000 Hacker's Guide (vol 1)   (by Peter & Ben Hinkle) $12.95 (retail) $11.95 (SDP)
* The Hinkle's in - depth guide to the technical aspects of exploring ADAM; 60 pages; 18 programs

000 Hacker's Guide (vol 2)   (by Peter & Ben Hinkle) $12.95 (retail) $11.95 (SDP)
* The Hinkle's detailed guide to SmartBASIC V1.0; 110 pages; HELLO program includes several BASIC fixes and enhancements

000 Hacker Software   (by Peter & Ben Hinkle) $5.95 (retail) $3.95 (SDP)
* the programs from volumes one and two (above)

000 ez ref 101   (by DIGITAL EXPRESS) $2.45 (retail) $1.95 (SDP)
* approximately 700 Z80 instructions listed in NUMERICAL sequence; 9 pages; decimal, hex, op code, operands; good for disassembling machine code; holes drilled for easy binder insertion

000 ez ref 102   (by DIGITAL EXPRESS) $2.45 (retail) $1.95 (SDP)
* approximately 700 Z80 instructions listed in ALPHABETICAL sequence; 9 pages; decimal, hex, op code, operands; good for assembling machine code routines; holes drilled for easy binder insertion

000 ez ref 103   (by DIGITAL EXPRESS) $3.95 (retail) $2.95 (SDP)
* study of ADAM's EOS; jump table vectors, routines, setup for CALLs, exit register meanings; plus several assorted tables that have appeared in N&B; 21 pages; holes drilled for easy binder insertion

000 Pinball/HardHat Guide $3.95 (retail) $2.95 (SDP)
* 40 pages of instructions for the popular public domain package; holes drilled for easy binder insertion; includes Pinball reference chart

"NIBBLES & BITS" SOFTWARE

000 N&B binder01   (by DIGITAL EXPRESS) $29.95 (retail) $24.95 (SDP)
* all six issues from 07/86 thru 12/86; sturdy 3-ring binder; includes two DDPs or two disks containing all the programs

000 N&B binder02   (by DIGITAL EXPRESS) $29.95 (retail) $24.95 (SDP)
* all six issues from 01/87 thru 06/87; sturdy 3-ring binder; includes two DDPs or two disks containing all the programs

000 N&B issue programs   (by DIGITAL EXPRESS) $6.95 (retail) $3.95 (SDP)
* set01: all the programs from 07/86 thru 09/86
* set02: all the programs from 10/86 thru 12/86
* set03: all the programs from 01/87 thru 03/87
* set04: all the programs from 04/87 thru 06/87
* set05: all the programs from 07/87 thru 09/87
* set06: all the programs from 10/87, 11/87, & 03/88

GRAPHICS DESIGN SOFTWARE

000 ShowOFF I   (by DIGITAL EXPRESS) $29.95 (retail) $24.95 (SDP)
* graphics design package (enter text, draw polygons, paint, save pictures, etc.); fast color changes; a variety of print options (preset for Epson FX / IBM 5152 printer codes); printing graphics requires Centronics parallel interface for printer

000 CLIPPER   (by DIGITAL EXPRESS) $19.95 (retail) $14.95 (SDP)
* introduces the concept of "clip art" to ADAM; totally machine code program; build clip art collections; put clip art in hi-res pictures; draw and edit clip art; also capture from hi-res pictures; enter text; change colors; includes an 11K ramdisk (does NOT require 64K expander)

000 FontPOWER   (by DIGITAL EXPRESS) $16.95 (retail) $12.95 (SDP)
* utility using Coleco-like graphics for designing your own font sets; comes with 8 font sets including "script", "Roman", "cory", and "bold"; shows you how to use the font sets in high or low resolution graphics; plus three font shape tables for HGR and HGR2 modes; includes demos; fonts can be used in your own BASIC 1.0, BASIC 2.0, and z80 programs

000 SpritePOWER   (by DIGITAL EXPRESS) $19.95 (retail) $14.95 (SDP)
* totally machine code utility using Coleco-like graphics for designing your own sprites; includes 3 sets of sprites; extensive instruction manual; shows you how use sprites in BASIC 1.0, BASIC 2.0, and Z80 programs; includes PUFF; includes 11K ramdisk (does not require 64K expander); very easy to use program

000 PowerPAINT   (by DIGITAL EXPRESS) $44.95 (retail) $34.95 (SDP)
* 80K machine code graphics processor for ADAM; the most extensive graphics design program available; uses Coleco-like graphics; a large variety of file storage and retrieval options (directly loads PaintMASTER, SmartPAINT, GraphixPAINTER, SmartLOGO, and RLE pictures); quick global color changes; move, copy, and erase options; many hardcopy print options (screen, labels, letterheads, and whole picture); screen scroll options; four screen pictures with 64K card (8 screen picture with 256K or 512K expander); uses FontPOWER font sets, CLIPPER clip art, and SpritePOWER sprites; requires at least a 64K memory expander; requires a Centronics parallel interfaced Epson FX or IBM 5152 compatible dot matrix printer for hardcopies; fully compatible with SmartPAINT; you can easily UNDO changes

MISCELLANEOUS SUPPLIES

DDD Coleco/LORAN digital data packs $33.95 (retail--for 10) $4.95 (retail--each)
                                             $29.95 (SDP--for 10) $3.95 (SDP--each)
 # designed and formatted by Loranger Manufacturing; no face label

DDD plain label digital data packs $19.95 (retail--for 10) $3.45 (retail--each)
                                             $17.95 (SDP--for 10) $2.25 (SDP--each)
 # Sony brand formatted by E&T SOFTWARE; no face label

DDD plain lable 5.25" disks for ADAM $6.95 (retail--for 10) $.79 (retail--each)
                                             $4.25 (SDP--for 10) $.49 (SDP--each)
 # double-sided; double density; includes envelope and write protect tabs

DDD printer ribbons for SmartWRITER printer $15.95 (retail--for 3) $5.75 (retail--each)
                                             $14.45 (SDP--for 3) $4.95 (SDP--each)
 # black ink; standard replacement ribbon cartridge

DDD Panasonic printer ribbon $5.45 (retail--each)
                                             $4.95 (SDP--each)
 # black ink; nylon; standard replacement ribbon for 1080, 1080i, 1090, 1091, 1091i, and 1092

DDD standard multipurpose adhesive labels $5.45 (retail--for 1000) $2.95 (retail--for 500)
                                             $3.95 (SDP--for 1000) $2.25 (SDP--for 500)
 # white, pin-feed, 3 $1/_2$" by $^{15}/_{16}$"; fan fold; single column

DDD multipurpose adhesive labels $9.95 (retail--for 1000) $7.95 (retail--for 500)
                                             $8.95 (SDP--for 1000) $6.95 (SDP--for 500)
 # white, pin-feed, 4" by 1 $^7/_{16}$"; fan fold; single column

DDD word processing computer paper $4.25 (retail--for 250 sheets)
                                             $3.45 (SDP--for 250 sheets)
 # white; pin-feed; 9 $1/_2$" by 11"; fan-fold; 20 lb. wt.; clean edge; one part

EDUCATIONAL SOFTWARE

DDD Spanish Vocabularian   (by MARATHON COMPUTER) $18.95 (retail) $16.95 (SDP)
 # a unique program for ADAM; includes electronic dictionary; comes with 1600 words; expandable to 7400 words;
quizzes; printed study sheets; report cards

DDD QuikFax Quest   (by DATA DOCTOR) $18.95 (retail) $14.95 (SDP)
 # three academic quizzes; includes study mode (on - screen and hardcopy); US capitals, world capitals, and
Chemistry elements

HOME/BUSINESS SOFTWARE

DDD SoftPACK I   (by E&T SOFTWARE) $18.95 (retail) $18.45 (SDP)
 # four menu driven home management programs; SoftCHECK, Checkbook Totalizer, CheckBook Reconciler, and
SoftMailer (address filer for labels and envelopes)

DDD Business Pack I   (by E&T SOFTWARE) $18.95 (retail) $18.45 (SDP)
 # two useful programs for creating and printing address files; plus two very good programs for inventory
control and printing

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DDDDD "SDP" stands for Subscriber Discount Price. N&B subscribers get a 5% to 25% discount off
the suggested retail price of items listed.

DDDDD Unless otherwise noted, all software is available on disk or datapack.

DDDDD All DIGITAL EXPRESS storage media (disks and data packs) are warrantied to be free from
defects in materials and workmanship. If the storage medium proves defective, return it to us for
replacement or repair (at our descretion). After 90 days from purchase, a $3.00 return shipping
fee is required.

DDDDD The product prices listed herein may be subject to change after June 1, 1988.

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Public Domain Software Info

Public domain software is offered as a quick, inexpensive means for you to expand your ADAM software library. Note, however, that public domain software is not necessarily of commercial quality. Although, we do attempt to winnow out flawed programs, there is no guarantee of the quality regarding these packages. If, however, the storage medium itself proves defective within 90 days of purchase, we will replace it free of charge.

You may get any of the volumes described below on digital data pack for $5.95 or on disk for $4.95. Subscribers also have an option to get a volume FREE (limit three per calendar month); this option does not apply to volumes in the "Coleco PD library".

Here's how to get one FREE. (1) Contribute an original program for any library. (2) send a signed statement that the program is NOT copyrighted. (3) send the program on DDP (digital data pack) or disk; one DDP or disk for each volume that you want to exchange. And, (5) include a return mailer with sufficient postage or send $2.50 for shipping costs.

SmartBASIC V1.0 LIBRARY

Each of these volumes is self-booting with SmartBASIC stored on the volume. When you pull the reset, a graphic screen will be displayed as BASIC loads. All programs will speed load. Each volume (except the utility volumes) is controlled by a user friendly ramdisk (does NOT require the 64K expander) central menu for easy file selection. Each volume contains over 120K of files.

N&Bgames (volumes 1, 2, & 3): an assortment of text adventures, board games, and animation games.
N&Bgraph (volumes 1 & 2): a variety of graphics displays and music programs.
N&Bmath (volumes 1 & 2): several scientific and financial math programs.
N&Butil (volumes 1 & 2): an assortment of programming utilities.

GRAPHICS FILES LIBRARY

In order to view/use the hi-res picture files in this library you need SmartPAINT (from ShowOFF I), the HGR Picture Manager program (02/87 N&B, page 16), or PowerPAINT.

N&Bpix (volumes 001 thru 019): 13 files each.
Art Gallery (volumes 1 & 2, compiled by REEDY SOFTWARE): 13 files each.
PaintMATES (vol 1 - 4): small art for use with PowerPAINT (fonts, sprites, clip art, & brushes).
PaintFORMS (vol 1 - 3): one full page graphic, 3 letterheads, & 1 label for use with PowerPAINT.
PixManII: switch pictures between RLE, SmartPAINT and PaintMASTER formats; includes SW docs.

Coleco PD LIBRARY

SmartBASIC 2.0: improved interpreter; 49K file; works with or without 64K expander
Pinball/HardHat Mac: latest version with two demo games; 1 to 4 players.
ADAMlink II: supports up and down loading of SW compatible files; includes printed U/D docs.
Jeopardy: just like the game show; great graphics; 1 to 3 players.
Super SubRoc: 90K arcade-type game; super graphics; hall of fame.
Troll's Tale: Easy graphic adventure; supports one player; disk & DDP not compatible.
Video Hustler: graphic billiards game; 1 or 2 players.
Disk Manager: file handling utility; the program that comes with a disk drive.
SmartBASIC 1.0: a replacement for the BASIC that came with your ADAM.

CP/M 2.2 LIBRARY

CP/Mgames (volumes 1 & 2): assorted EBASIC (included) games.
demo carts: requires 64K XRAM card; music samples, system tester, much more.
CP/Mutil01: a variety of utility .COM files for CP/M.

PINBALL GAMES LIBRARY

PBgames (volumes 01 thru 04): 10 pinball games each; self-booting.

MISCELLANEOUS COLLECTIONS LIBRARY

MWplus01: a collection of improvements to MultiWrite (required); by Jim Guenzel.
N&Bcalc01: several paradigm and other files; 148K; by Terry Fowler.
EZpak: self-booting medium; contains EZmenu & EZcopy.
ezFILER: self-booting medium; contains nice BASIC address filer.
SHAPEMAKER: several font shape tables; nice shape design utility; by Guy Cousineau.
N&Blogo01: a variety of SmartLOGO (required) files.
One Minute Formatter: 1 or 2 drives, single or double sided, same time, plus more.
MusicBOX (vol 1 & 2): 10 SmartTUNES songs each, plus instructions, and more.

CLIP ART
from: PaintMATES03
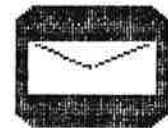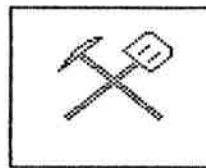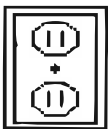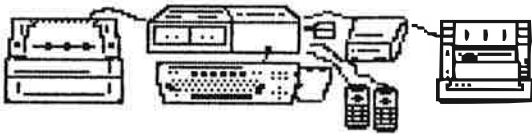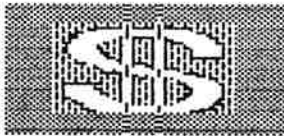
Volume Title: N&Bpix016
(13 hi-res pictures in SmartPAINT format)

SunExp.HRP (a drawing of a solar explorer ship)
Ingrid.HRP (digitized photo of actress Ingrid Bergman)
thanks.HRP ("thanks for parking so close" message)
helper.HRP (a disk label with slots for several file names)
ghost.HRP   (drawing of the "Ghost Busters" logo; by Bryan Payton)
ADAM.HRP   (drawing of an ADAM system; by Bryan Payton)
frames.HRP (frames that allow you to create several clip art pictures)
news.HRP   (drawing a paperboy holding a newspaper)
solar.HRP   (depiction of what happens duing a solar eclipse)
TheCar.HRP (drawing of an automobile)
graph.HRP   (scaled bar graph for inserting percentage values)
scroll.HRP (drawing of a scroll for inserting text)
YouOut.HRP ("while you were out" memo form)

Volume Title: N&Bpix017
(13 hi-res pictures in SmartPAINT format)

DDP.HRP   (large drawing of a data pack by Steve Major)
ElArts.HRP (colorful drawing of the Electronic Arts logo by Steve Major)
Trek.HRP   (drawing of the U.S.S. Enterprise by Steve Major)
disk.HRP   (large drawing of a disk by Steve Major)
house.HRP   (large drawing of a house)
xtree.HRP   (drawing of a Christmas tree)
spiral.HRP (a spiral drawing)
MTV.HRP   (colorful drawing of the MTV logo)
Fred.HRP   (drawing of Fred Flintstone bust)
mother.HRP (mining oriented drawing)
Alice.HRP   (Alice of Wonderland at the small door entrance)
Fonda.HRP   (digitized photo of Jane Fonda)
cake.HRP   (drawing of a birthday cake by Anthony Yulo)

Volume Title: N&Bpix018
(13 hi-res pictures in SmartPAINT format)

Trek.HRP   (colorful drawing of the USS Enterprise by David Carmichael)
bear.HRP   (drawing of a sunbathing bear)
Temple.HRP (digitized photo of Shirley Temple)
Kirk.HRP   (drawing of William Shatner as Captain Kirk)
eye.HRP   (drawing of a large human eye)
chains.HRP (drawing of two men chained to a prison wall)
brdfsh.HRP (drawing of several birds and fish)
egret.HRP   (drawing of an egret in the grass)
rose.HRP   (drawing of a rose by Anthony Yulo)
rabbit.HRP (drawing of a rabbit with scenery by Anthony Yulo)
mice.HRP   (drawing of the two Miami Mice)
twomen.HRP (two men seated back to back under the sun)
xram.HRP   (large drawing of a memory expansion card by Steve Major)

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