



MOAUG EDITOR RANKS 2nd UGLIEST IN THE WORLD! -SEE INSIDE

JUNE, 1990

Dear Fellow ADAMite,

JUST IN TIME! June 1 marked the beginning of hurricane season, so you will be interested to know that Joe Quinn of the Gulf Coast AUG has completed his long-awaited hurricane tracking program, and has sent us a copy for our public domain library. Upon booting, the program displays a colored map onscreen. When you enter the correct data, a "hurricane" sprite appears and moves across the screen, following the path described by the coordinates. The copy I received shows a map of the gulf coast, and has a sample hurricane included (FREDRICK) so you can see how it works.

Joe had intended to make an upgraded version for commercial sale, which showed the entire east coast. The fancier version has other enhancements, too. Data entry is simpler, in that instead of converting to data statements, you would simply enter the coordinates supplied by the Weather Bureau. Joe finished the improvements, but decided against selling it. When we receive the upgrade, we can put it in our library, too. Meanwhile, I know you will be impressed with the copy we have right now.

I plan to have Hurricane Tracker available for copying at June meeting. I'll also try to get a copy to someone else, just in case I am unable to attend. (Things are still quite hectic around here, but Bob is doing great... thanks to those who expressed concern.)

ADAMCON 02 is shaping up nicely. Reports from the front lines have been sparse of late, but Monte Neece says that advance registrations already outstrip the figures from the same point in last year's convention preparations. If you need information or a registration form, write or call Monte at the address on this page (right column.) Or, contact Richard Clew of the Metro Toronto AUG. Richard's address is listed within, under the heading "NEW CONTEST".

Check out Richard's article about the attractions of Toronto. If I weren't already convinced that I wanted to attend ADAMCON, the possibility of meeting Spider Robinson would sway me. (Anybody else read Spider's TIME PRESSURE?)

Also in this issue: Part one of a new series on programming, by our own President Terry; guest appearances by Barry Wilson and Chris Braymen; lots of stuff on the subject of graphics; and the usual great contributions by all your favorite MOAUG Columnists. Something, I hope, for everyone.

Don't forget, we nominate officers at the June meeting.

FLASH! The same day as the meeting, Tony Patterson will probably arrive in Orlando with his family for a few days' vacation. If he does, he has said he'll call. Those who'd like to meet Tony, or who met him last October and would like to chat with him again, may have the opportunity. I will keep the officers posted as I learn more details.

SUNDAY, JUNE 10th 1:45 P.M.
(Address on Back Cover)

See you Sunday?
✓ Pat

ADAM LIVES!!

President:

JOHN TERRY
4901 Camberlane Dr.
Orlando, FL 32812-1608
Phone (407) 380-1400

Vice President:

MONTE NEECE
1048 Winter Springs Blvd
Winter Springs, FL 32708
Phone: (407) 699-6887

Secretary:

FRANCES BELL
10484 Montpelier Circle
Orlando, FL 32821
Phone: (407) 352-0724

Treasurer:

FRANCIS TERRY
Same Address as John Terry
(see Above)

Public Domain Librarian:

JOHN PRESCOTT
4215 Crossen Dr.
Orlando, FL 32822
Phone: (407) 282-4107

C/PM Public Domain volumes are available from CP/M Librarian Jerome Hess. See address at the end of his column each month.

MIDI MUSINGS by Chris Braymen

As a student in music school, I looked upon the proliferation of synthesizers in music with a very wary eye. Were these electronic noise makers going to help or harm music? Well, I suppose the answer to that question is in the ear of the beholder but one thing is for sure: the power to create music has never been in the hands of so many people before. The source of this power is MIDI.

What is MIDI? The term MIDI stands for "Musical Instrument Digital Interface." It is a communication standard developed by manufacturers of electronic musical instruments that ensures the compatibility of these instruments regardless of make or country of origin. In other words, it allows your synthesizer to "talk" with other synthesizers. By equipping your personal computer with a MIDI interface, your computer can "talk" with your synthesizer and vice versa!

Communication between your computer and synthesizer opens up a world of musical possibilities. Using a program called a "Sequencer" we can play some music on our keyboard and record the performance on our computer! Then we can play the performance back, letting the computer "play" the synthesizer. Perhaps you want to hear your creation played by strings instead of a piano? Or maybe it should be in a higher key, or at a faster tempo, or maybe you want to correct that clunker note you hit in the middle? Since the information about your performance is stored in the computer's memory, you can easily change any of the performance data! Of course you can also save your songs to disk and recall them at another time.

Some of you are saying, "Gee, that sounds great but I can't play piano." Well, there are a multitude of options for your nonetheless. Most sequencers have a "step entry" mode that allows you to input your music directly into the computer one note at a time. Also, your MIDI instrument does not necessarily need to be the piano keyboard type. There are MIDI guitars, MIDI saxophones, MIDI drums and MIDI trumpets. One company is even building an instrument that watches your hands and generates MIDI data according to their motion! (Does anyone remember the Theramin?) Even if you never want to enter or record your own music you are still in luck. The folks who developed MIDI have also developed a standard file format for MIDI songs. This means that if your sequencer reads standard MIDI files, you can use standard MIDI files created by any other sequencer program regardless of whether it was running on a Macintosh, PC, ST, Amiga, or an ADAM! There are hundreds of such songs available in the MIDI forum on Compuserve, on MIDI BBS's across the country, and probably on the other major information networks as well.

"Do I look like I have money falling out of my pockets?" There are several MIDI keyboards that are close to \$100 cheap. I have a CASIO MT-240 and I get a remarkably good sound out of it. The MT-540 adds some more features and a few more dollars. Both Yamaha and Kawai put out good sounding, inexpensive MIDI synthesizers as well. You can, of course, spend the national debt if you want to. Samplers, rack mounted "brain modules" (synthesizers without keyboards that you play exclusively through MIDI), and weighted action keys are some of the items you'll pay dearly for. But really, the entrance fee is not all that bad! And the sound!!! Well, just wait until you hear it.

RIGHT: THE AUTHOR WOWS 'EM AT ADAMCON 01 WITH THE FIRST-EVER PUBLIC DEMONSTRATION OF A MIDI INTERFACE FOR THE ADAM... LAS PALMAS INN, ORLANDO, FLORIDA

HISTORY IN THE MAKING!



Chris Braymen is a long-time ADAM addict and musician. He is currently employed as a Composer and MIDI expert in the computer game industry. Chris lives in Oakhurst, California with his computer widow, Elizabeth, and two static-bearing cats.

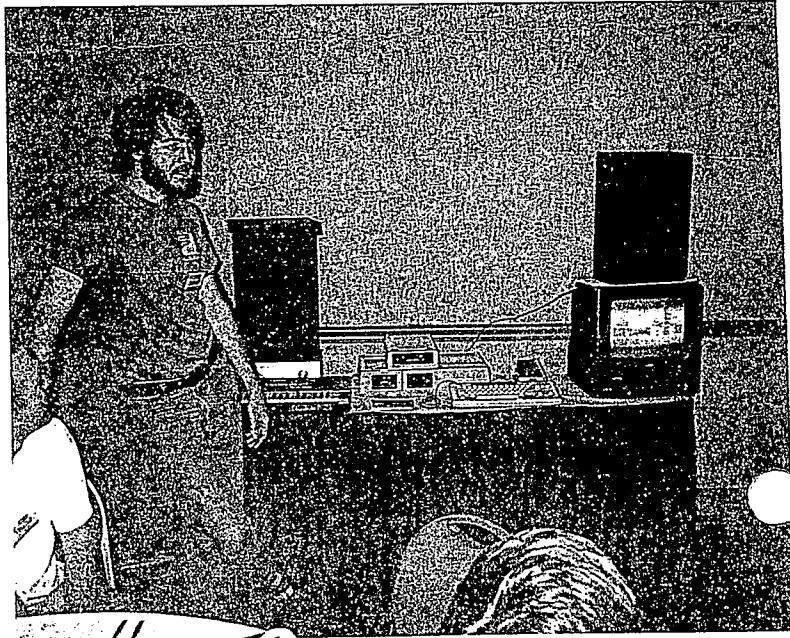
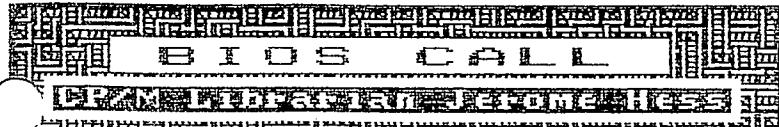


PHOTO CREDITS: THANKS TO DEAN ROADES & BARRY WILSON



Gee, it seems like it's been... oh, I don't know... a YEAR since I started this column. And in that year, we've discussed a lot of things, maybe even learned a thing or two. Now it's about time that we wrap up the STARTER PAK CP/M disk so that we can all move on, to STARTER PAK II - THE BIOS RETURNS!

In the last year a lot of things have happened. I've moved (twice), gotten married, and come into a lot of computer equipment. I hope to reflect these expansions in the future.

A few issues ago I asked your advice on what you'd like to see in this space other than my miscellaneous typing. The response has been underwhelming, to say the least. Actually, I've only received one response from a gentleman who would like some information on programming and patching in the CP/M environment. This is a very good idea, but I think that there is a large majority of the ADAM community that needs to get comfortable with CP/M before they try to write the next TETRIS in it.

We've certainly come a long way in the past year. Looking through the list of programs on the STARTER PAK, it seems as though there are only a few files that we haven't covered. I think it's safe to say that we can get these out of the way in time to have a new Starter Pak out by the end of June.

First on the "untouched" list is ABP25.COM and its companion DDC file. Earlier, I explained that this file was a very useful file in that it allowed you to reassign different parameters in the BIOS and BDDOS of ADAM's CP/M. That simply means that these files will show you how to change some of the default settings for the ADAM CP/M system. For example, the programmers at COLECO never dreamed that some brash young entrepreneurs would be bold enough to double the capacity of the ADAM 5 1/4" disk drive, much less want to quadruple it by hooking up a 720k 3.5" drive! But those rascals up north weren't content with what they had, so certain changes had to be made. ABP will also let you change the output rates of your RS232C ports (if any) as well as allow you to redirect input and output from where they were originally intended off into another area entirely. Sound complicated? It is. Which is why I included the documentation on this one.

Next we have FTEST.COM. Some good news, and some bad news. First the good news: this is a Full unit Tester for ADAM. Now the bad news: it will run only from a disk drive. I'm not sure why, and I didn't realize it until the STARTER PAKs had already gone out. I imagine that those of you with only data drives have probably already figured out that this one won't work for you. But if you DO have a disk drive and you haven't tried it, you ought to. FTEST will test all the major components of your computer and tell you a few things you might not have known. It's controlled from joystick #1.

RAM.COM is the original ramdisk protector!! If you've got a hardware ram disk (not a memcom ramdisk), then all you need to do is run RAM at any point after you boot CP/M, and it will save all the data on the ramdisk in the case of a soft reboot. Now there's not a lot of hope for your data after you've turned the computer off and on, but if a file locks up ADAM, then RAM will ensure that your data remains intact after a software reset.

Now we come to something that EVERYONE can use, and that's GAMESA.COM, the original CP/M GAMESAver. Here's how it works: Turn ADAM off. Pop in your favorite game cartridge, boot CP/M, then type GAMESA <return>.

The response should be something on the order of "type SAVE 065 filename". What that means is that if you're trying to save TURBO, you type "SAVE 065 TURBO.COM". What this will do is save 65 units of what's in memory to your disk or datapack (whatever source you used in booting GAMESA.) Coincidentally GAMESA loads the contents of the game into the first 65 units of memory, so that what you're getting is your cartridge games saved onto a fast-loading, portable CP/M medium. Now, due to concerns about copyright infringement, I am NOT going to go into detail about the advantages of having such PORTABLE software; but this is a great way to put a lot of games in one place!

A word of caution: You must reboot ADAM each time you want to save a new game. If you don't, then you will just keep recopying the same game that's in memory. (I should know; I've got six different copies of CARNIVAL saved under six different names!!!)

Well, gee. This appears to be all of it for STARTER PAK I <Sniff>. For those of you who have stuck with me for the last 12 months, I hope we all know a little more about CP/M, or at least are a little more comfortable with it (don't go run hide under a table when we see that AD> prompt)!

For those of you who are just starting with me, that's okay too! Because I have been told that some brave soul is going to collate and distribute the previous BIOS CALLS, and I'll be starting PAK II next month. By the way, if you haven't got PAK I yet, that's okay, too. I'll still send you one in return for a SYSGENed disk or datapack and a SASM (Self-Addressed, Stamped Mailer)! There's also another option... I have secured for MDAUG some file space on the Midas Touch bulletin board, and have developed a method of distributing the PAKs in that manner, too! So, if you have a modem, you can call (407) 648-1133 and grab the files yourself. Next time you're on Midas Touch, check into the file section marked T)ypically ADAM files and take a peek. (Also, check out the National ADAM Echo while you're there!)

As always, thanks to Dale Malone, the very cooperative sysop of Midas Touch, for his willingness to help out ADAM owners. Next month, I'll give you a short refresher on how to use those files on the BBS, and also introduce you to PAK IIJEROME'S REVENGE!

Questions? Comments?

Jerome Hess

P.O. Box 678283

Orlando, FL 32867

Remember, for the best response time, enclose an SASE!

EDITOR'S NOTE: Although Jerome's CP/M columns are written for MDAUG, and appear here first, they are distributed on Barry Wilson's A.N.N. disks the following month. I have also compiled a disk of all the previous BIOS CALL columns, which I have distributed to VISA and to Jerome himself. Anyone who wishes to have all the columns in one place may contact Jerome or David Cobley of VISA (the latter is a better bet for Canadians, due to postage.) Or, you can get a copy directly from me. In any case, be sure to send a disk or datapack & a return mailer with sufficient postage.

~ PJH

Check Out Midas Touch BBS: (407) 648-1133

DEC 1990

NOV 1990

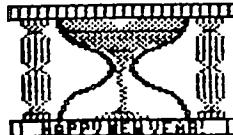
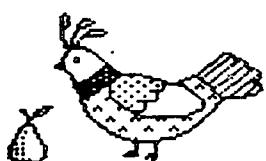
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JAN 1991

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16	17 SHIP CHRISTMAS PACKAGES	18 MAIL ALL GREETINGS CARDS	19	20 LAST DAY TO SHOP FOR CHRISTMAS	21 FIRST DAY OF WINTER	22
23	24	25 	26 CARMEN'S BIRTHDAY	27	28	29
30	31 NEW YEAR'S EVE					



THIS CALENDAR WAS EASILY CREATED WITH
PERSONAL CALENDAR UTILITY BY PHOENIX 2000



This month: "HOW ABOUT A DATE?"

PowerPAINT by Digital Express (now PHOENIX 2000) is far and away my favorite piece of ADAM software, but have you ever tried to design a full-page calendar with it? Just lining all the lines up and going back and forth from a real calendar to put the days in the right spaces takes considerable time, not to mention trying to position clip art clips where you want them.

Well, not any more! PHOENIX 2000 to the rescue with its newest addition to the ADAM software library, Personal Calendar Utility (PCU)!

PCU is a vast collection of calendar generating programs. It comes on two 160k disks or 2 datapacks. One is called the PCU "system" disk, and the other is the PCU "utility" disk. (Those who have double-sided drives can get a single 320k disk instead; this option costs \$5 extra.)

For ease of use, PCU allows you to perform almost all input using either the keyboard OR the game controllers.

The utility disk is self-booting. After loading, it asks you to insert the systems disk. If you have a 256k or larger memory expander, PCU will ask if you'd like to copy to it and run the entire program from it.

The main menu options are: calendar calculations, graphic calendar functions, online calendar functions, system configuration, year-at-a-glance calendar, and media control functions.

Each menu function has several sub-menus that make using PCU a whiz. In fact, if you own PowerPAINT, then using PCU will be very simple because it is so similar. I was able to whip up calendars very quickly and as most of you know, I'm NO computer whiz!! You can save your creations in either PCU format or PowerPAINT format for use with that program.

The best thing about PCU is this: the program figures out how all the days should be numbered! All you do is tell it the month and the year and before you know it, a calendar with all the dates and days appears onscreen, ready for your custom modifications.

You can modify a calendar by adding clips, notes, and/or borders. There are several options concerning borders, and you can even design your own! There are also several font sets available for you to use when typing in the calendar header or notes. As you can see in the sample calendar on the facing page, there are also different sizes as well! Also on the sample, notice the mini-calendars at the top, showing the previous month and the next month? These can be automatically stamped on the calendar with just a keystroke!

There are many other calendar related options available that let you scroll through months and years, or choose to print out an entire "year-at-a-glance".

PCU supports dot matrix printers as well as the ADAM printer, but as always the ADAM printer is limited to text only printing. The print option for DMPs offers 1-9 settings, 1 being draft and 9 almost a laser print quality (but be forewarned that it does take awhile to print at the #9 setting.)

Another option to take note of is this: you can erase the calendar and use the workspace to generate bulletins or do regular page layouts!

As usual with PHOENIX 2000 software, I could go on and on describing the various options available to you. Personal Calendar Utility is another software package from the multi-talented Sol Swift that you simply MUST own.

Grafix Software's Paint Palette

reviewed by P. J. Herrington

POP QUIZ: On an ADAM, the number of colors you can use in your graphics (if you don't count "transparent") is limited to 15. True or False?

Whatever your answer, you pass, because this is a trick question. The answer is: True AND False. It's true that ADAM can display only 15 colors. However, it can display each of these colors in both foreground and background. So we can get around the color limitations by drawing a tight pattern in foreground color, and leaving enough space to 'see through' to a different background color.

For example: we can design a foreground pattern in dark yellow, turning every even-numbered pixel "on" and every odd-numbered pixel "off", so that we have a dark yellow grid. Then we fill in the background with light yellow.

If every even-numbered pixel appears dark yellow on our screen, and every odd-numbered pixel appears light yellow, the result will be a a block of color that appears as a sort of muted medium yellow.

A little simple arithmetic shows us that there are 225 possible combinations that can be derived from one background color and one foreground color ($15 \times 15 = 225$.) That's a lot of colors!

Joe Quinn of Grafix Software has used this principle in 'PAINT PALETTE'. Joe's palettes consist of 4 full-size pictures for use with PowerPAINT. Each picture contains dozens of 32×32 pixel squares of color, each representing one of the many possible combinations, for a grand total of 236 variations. The idea is to load each "palette" picture into a separate screen, leaving screen # 1 vacant for your workspace. Then, it's a simple matter to use the MOVE/COPY functions in PowerPAINT to position the various colors wherever you like onscreen.

But, wait a minute! Where did the extra colors come from? Good question. Frankly, I'm confused on this point. Palette is based on an early public domain program by Sol Swift that purports to show 256 different colors. My best guess is that he included "transparent" as one of the colors. In any case, some of the displayed colors are so much alike as to be virtual duplicates.

Furthermore, all "paint" programs I know of reserve one color for a "control" color. PowerPAINT, for example, reserves white. You can't use white in your drawings (you don't miss it, because grey is pretty close.) Thus, when you are working with a paint program, you have only 14 colors from which to choose.

That narrows it down: $14 \times 14 = 196$ colors. Then, we can toss out 14 combinations because the background and foreground colors are identical, and will appear solid onscreen. That leaves 182 possible combinations.

Math isn't my strongest suit, so correct me if I'm wrong. But it seems to me that half those combinations will be duplicates of the other half. That is, one combination will have a cyan foreground and a black background, and another will have a black foreground and a cyan background. Using the alternating pattern we described above, those two combinations would appear identical to the eye.

Well, as far as I can figure, that leaves us with 91 color combinations that are truly unique. Still, that's a far cry from fifteen.

Now, there are several ways that you can draw all these color combinations without buying 'PAINT PALETTE'. But Joe has already done the work... all the colors are there on your screen, ready to go. All you do is capture your choices using MOVE/COPY and place them wherever you wish. A major advantage is that the various displays allow you to compare all the alternatives, sort of like those sheets of paint chips you can pick up from the hardware store. Also, Joe has included on the disk an interesting demonstration picture showing some of the visual effects possible with the palettes.

I don't want to give the impression that the colors appear solid. Some do, but most look textured. These textural effects add interest to your drawings (they make fabulous plaids, for example.) Joe points out that they work best to shade large areas. Actually, they are easy to use any place you are using straight edges. Because of their necessarily square shape, it does take some practice to use them in contoured drawings.

I liked Joe's disk, and I spent several pleasant hours drawing a couple of PowerPAINT files with it. But I really didn't think I could recommend it to you for the asking price of \$13.95. So I made a rare long distance call, and told Joe exactly that. And guess what? We came to an agreement. I sent Joe the pictures I drew, so he can include them on the 'PAINT PALETTE' disk, giving you a little extra for your dollar. In return, Joe has decided to drop the price to only \$9.95. BUT, if you mention this review when you order, you can get the disk for only \$8.95. Note: you do NOT need to belong to MDAUG or any other group to take advantage of this special price; you need only mention the article. For your convenience, I have printed a coupon on this page, but you don't actually need the coupon. Just say, "PJ sent me!" 

[SPECIAL PRICE ORDER FORM]

To: Grafix Software
c/o Joe Quinn
3685 Timber Drive
Mobile, AL 36695

I enclose \$8.95 (no extra shipping charges required) for PAINT PALETTE.

I prefer: DISK DATAPACK

NAME _____

Street or PO Box _____

City, State, ZIP _____

FUNDAMENTALS OF COMPUTER PROGRAMMING

Chapter One
by John Y. Terry President, Metro Orlando ADAM Users' Group

A computer program consists of the logical steps required to perform a specific function on a computer in a form understood by the computer. A computer programmer is the individual who writes the program that was defined above.

A programming language consists of the Instruction Set, Syntax, and Rules required for a programmer to communicate an idea or group of ideas to the computer.

There are both "high level" and "low level" programming languages. Assembler languages are "low level" languages and generally generate one line of object code for each instruction generated by the Assembler language. BASIC and COBOL are two examples of "high level" programming languages. One instruction line in a "high level" language normally generates multiple object code instruction lines of program.

With the above definitions in mind, this manual will attempt to show "Programmers" some how's and why's of programming.

Generally, the techniques used in this manual can be used by any programmer, using any programming language, for any computer. These techniques have been presented in very simple form for understanding by unskilled people and it is hoped that experienced programmers can also benefit by reading and using this manual.

Almost everyone that has a personal computer and access to a programming language, such as BASIC, has attempted some programming.

The novice learns quickly that a program can get out of hand and unmanageable. When this occurs, the individual must either give up or "tough-it-out" until the program has been written, tested, and used. "Toughing-it-out" is the hard way and it is hoped that this manual will take some of the hard work and lack of understanding out of programming.

All programs are made up of the following elements:

1. Housekeeping
2. Input
3. Data Manipulation
4. Subroutines
5. Output

The above program elements were listed in a sequential order that the computer, programmer, and the end user can understand.

There first must be input before there can be output or data manipulation. There must be output or the input and the data manipulation have been wasted. There must be data manipulation of some sort or there can be no output.

When writing a program, the programmer does not generally follow the sequence as listed above. Except for very simple programs, the above sequence would be impossible for the programmer to follow. Although the same steps are gone through, the sequence or order must be changed as follows:

1. Output
2. Input
3. Data manipulation
4. Subroutines
5. Housekeeping

There are good and specific reasons for following the above order when writing a program. If the output is unknown, input is impossible to determine. Without input, no data manipulation can occur, etc.

The following chapters will be presented in the order listed above with the how's and why's.

Prior to any programming, the first step is to define the problem. Without problem definition, no meaningful programming can be accomplished.

Once the decision has been made as to what needs to be done, it is then possible to program a solution to that need. Again DEFINE THE PROBLEM!

Chapter 7 discusses Flowcharting which can be very useful in both problem definition and laying out the steps necessary to solve the problem using a computer program.

TO BE CONTINUED NEXT MONTH

"HAPPY CLIPS" VOLUME 18

— REVIEW by P.J. Herrington

"HAPPY CLIPS" Volume 10 is the latest in a series of clip art volumes designed by Gerlach Family Software for use with PowerPAINT. It is decidedly among my favorites so far.



For one thing, almost all the pictures are original art drawn specifically for the ADAM. Only one picture... the pirate... appears to be an IBM conversion. Such conversions are usually attractive but they appear short and squishy on our screen. Original art usually looks better proportioned. Every other clip on this volume is well-proportioned.

It's not too difficult to tell that Ricki Gerlach is a military man. One of my favorite pictures on this volume is the eagle patch. (It takes four clips to assemble the patch, but it's very simple to do.) This is an excellent choice for a computer graphic, because the slight fuzziness that is inevitable with pixel drawing actually enhances the picture. It strongly resembles the slight fuzziness of the embroidery on a real patch. As nicely as it prints, it looks even better on the screen, because Ricki has taken full advantage of color. The onscreen version is truly striking.

The other clips do not use much color, but the parrot (three clips) would be an excellent choice for anyone who would like to experiment with color to find out just what will work and what won't. The parrot looks as though his tail wasn't lined up exactly, but I like him a lot. And you are free to change a pixel or two, aligning it to your own taste.

One of the main considerations in choosing volumes of commercial clip art is: "How often will I use this art, and for what purpose?" Sometimes, pretty pictures just don't quite fit in with what you are trying to do in your own productions. Depending on your personal style, you may find some of these clips very handy. When I saw the signs of the zodiac, I immediately thought of Solomon Swift's new calendar utility (see Rich Lefko's review in this issue.) The astrological clips could really spice up a calendar. So could the Santa sleigh. For that matter, you could probably find appropriate uses for the hummingbird and other animals. First day of spring? Easter bunny?

On my copy, the clip representing the LEO sign would not display. It scarcely matters, though, because there is a fine-looking lion in a separate file which will do nicely.

Because I received a demo copy, I'm not really sure what the pricing is on this volume. "Happy Clips" are usually reasonable, though.

Gerlach Family Software

Post Office Box 175

Fort Campbell KY

42223-0175

By 'FIRST Aid' for COLOR BLEEDING by Pat Herrington

Face it. Very few of us have color printers. So why would anyone want to go to all the trouble of designing color graphics? ... maybe JUST BECAUSE WE CAN.

It's a challenge to get around the limitations of the computer and turn out full-color screens. You don't have to be able to print the graphics to enjoy the thrill of creativity. In fact, I enjoyed drawing color graphics long before I had a dot matrix printer at all. I couldn't even print my creations in black and white! But I could have someone else print them (usually, the job fell to Rich Lefko) and I could pass them on to other ADAMites; and, I could use them as opening screens on self-booting media, using a wonderful little PD program by Sol Swift called "BOOTPIC". And, though I am certainly not a programmer, even I can load pictures into a BASIC program using any of several PD loader utilities. If you are one of the adventurous folk who program in BASIC, you can add zest to your work with your own colorful graphics.

If you are simply a hobbyist, you will probably find that drawing color pictures is satisfying for its own sake. Since I got my dot matrix printer, I often draw pictures using only the default foreground color. (After all, it will print out only black and white hardcopy, anyway.) But sometimes I still enjoy playing with color... just because it's THERE.

I was using PowerPAINT, by Digital Express, for at least a year a half before I broke down and got a dot matrix printer. You can use PowerPAINT only if you have at least a 64k memory expander, but there are other (less elaborate) paint programs available that do not require expanded memory. The principles of drawing with color are pretty much the same whatever paint program you use, or even if you are experimenting directly from BASIC. No matter how elaborate the program, we are limited to one background color and one foreground color for each 8 pixels. If we try to place the colors closer together, we experience what is known as "color bleeding"; that is, the last color we placed on the screen will replace any former color which happens to fall within the same 8-pixel area.

Background color and foreground color do not have identical limitations. For example, we cannot do detailed, pixel-by-pixel drawing in background color. Background colors can be as little as one pixel in height, but they will always be 8 pixels wide. The results on our screen always appear, not necessarily square, but squared-off. Curves and diagonals are impossible in background color. When we draw "low resolution" graphics, the squarish effect is due to the limitations of background color.

We can use foreground color to draw any shape we can imagine. However, we are even more limited as to color placement. We can use only one color in any 8-pixel square. In other words, the color must be the same both horizontally AND vertically, as opposed to just horizontally in background color. If that's still not clear, imagine this: An 8-pixel square drawn with background colors may be eight different colors, stacked atop one another in horizontal lines, each of which is 8 pixels wide. (This looks kind of pretty, actually.) But there can be no blank spaces; every line must be SOME color, even if the color is black.

Foreground color, on the other hand, does not have to be solid. We can "turn on" just one pixel if we wish; or we can turn some off and some on in any pattern we desire. We can even make a checkerboard pattern in which every other pixel is turned on. (This is what Joe Quinn has done with his "Paint Palette" disk.) Wherever the pixels are turned on, we will be able to see the foreground color. Wherever they are turned off, we will "see through" to the background color. (This works just as if we had erased chalk on a chalkboard; wherever we erased, we would see the color of the chalkboard itself.) So we can get far more detail in foreground color, BUT we can use only one foreground color for the entire square, as opposed to 8 background colors.

"Turning on" and "turning off" pixels is not as complicated as it may sound. When we are using a user-friendly paint program, we generally turn on pixels by drawing with the joystick or the arrow keys, and turn them off by using the "erase" mode. It really requires no programming knowledge.

Obviously, as long as we stick to one color for foreground and one color for background, we have no problem whatsoever. But if we want to use several different colors, we have to be more creative. We can simply see to it that we keep each foreground color separate. But that's not always easy to do. So, for more flexibility, we can work back and forth between foreground and background color.

Let's say that we want to draw a landscape in which the sky is cyan, and the trees are different shades of green. We would probably start out by drawing the background color in cyan, and then we'd outline the trees in dark green. As we fill in the trees, we decide that we want some areas of the tree to appear light green. Try as we may, we can't get the lines to flow; we end up with squares of dark green and squares of light green, which is not the effect we want. What now?

Well, let's go back to our background color, and replace part of the background behind the trees with light green. Then we can use dark green for ALL the foreground. To get light green lines, we simply erase bits of the foreground! For more color variation, we might choose to alternate light green, medium green, and black in the background, and let it show through in certain places by erasing the dark green foreground. Depending how much erasing we do, we may also be able to use more foreground colors.

As we become more adept at this, we can sometimes visualize our picture ahead of time. Then we can save steps by roughing in the blocks of background color at the start.

I grant you that this takes some practice. It's worth it, though, if you enjoy meeting a challenge. Creating "rule-defying" color graphics can be just as satisfying as conquering an arcade game... only easier. And in any case, I promise you that it's easier to DO it than to EXPLAIN it!

(For a good example of manipulating foreground and background colors, check out the Christmas tree on the POWERTOOLS package by Eyezod graphics. Check out the doc files, too!)

ENQUIRING MINDS WANT TO KNOW:
IF WE GET BORED AT ADAMCON (!)
—WHAT IS THERE

So you're going to ADAMCON '02 in Toronto come August. Fine, but what about the spouse and munchkins? While you are soaking up ADAM lore for three days, what about the rest of the family?

Quite possibly the best solution, if the budget permits, is to take the option of the three extra days at reduced rates so you can all at least scratch the surface of the city's attractions.

ADAMCON 02 is set in the traditional vacation season to allow you a leisurely trip to and from the convention itself. Maybe you'll drive and come in by Niagara Falls, or take the family sparrow-snoop to the birdwatching parks at Presqu'-ile to the east, or Long Point and Point Pelee to the west. Maybe you'll stop for the beaches from Prince Edward County to Wasaga to Grand Bend, or choose attractions from the Pickering nuclear generating station - usually the world's most efficient with the unique Candu reactors, it offers tours - to the Canadian Automotive Museum, to the African Lion Safari, to just loafing around the dozens of varied provincial parks and hundreds of conservation areas.

But those decisions can be made from a road map and information from Ontario Tourism. So this will concentrate on things to do in what the rest of the country calls T.O. or, if they work for an airline, YYZ.

In Toronto in August, the big attraction is the Canadian National Exhibition, an overgrown state fair type of event whose permanent buildings spread over a huge park on Toronto's lakeshore. If you want an idea of the size, a fraction of the grounds are used for the Molson Indy race in July - watch the telecast. Effectively part of the grounds is Ontario Place, with its water wonderland for the kids, great Imax cinema, live theatre performances every evening, lagoons, colourful marina, and more. Berthed there is the battle-scarred World War II Tribal class destroyer, H.M.C.S. Haida, which also participated with allied forces in the Korean War. Haida is open for detailed, low-pressure tours of inspection. With the Exhibition fireworks to close the evening, one day isn't enough just for "The Ex".

Is there a "techie" in your computer household? Consider a stroll around downtown Toronto. Take a tour of the fabulous new Skydome, home of the Toronto Blue Jays. Take in "Tour of the Universe", rated by Omni magazine as one of the top ten ride-type shows on the continent. It's at the base of the CN Tower, the tallest freestanding structure in the world. From the observation lounge at the top, you can see deep beyond Buffalo on a clear day. If there's still time, the McLaughlin Planetarium is a quick half-dozen subway stops away.

The Ontario Science Centre, with its breathtaking architecture and superb ravine parkland setting, will take any serious adult a full day. It's crammed floor after floor with hands-on, you-try-it quite spectacular demonstrations of basic scientific principles, and some not so basic. If your legs feel ready to drop off, or the kids' do, there's a restaurant and cinema as well. How good is it? During the school year, the school buses with U.S. plates waiting outside tend to outnumber the Ontario ones, even though it seems every Ontario teacher is conniving to take the class there.

Your significant other is a history buff? Try touring downtown, east of Yonge St. Not just antique row on Queen East: the whole

TO DO IN TORONTO

by Richard Cle, MTAG

St. Lawrence Centre and Market complex, Toronto's First (1834) Post Office (where, incidentally MTAG gets its mail), the magnificent churches, and the Mackenzie house, home of the leader of the 1837 Rebellion. Or go about two and a half miles northwest from the hotel to Black Creek Pioneer Village, where an historic mill forms the centrepiece to a collection of historic houses, inns, shops, and outbuildings collected from all over southern Ontario to form an early-Victorian town.

The munchkins didn't get enough rides on the Midway at the Ex and Ontario Place? Take them on the hotel shuttle bus out to Canada's Wonderland, a very decisive cut above your run of the mill theme park. Or spend a cool day on the Toronto Islands with their attractive amusement area, quiet lagoons featuring a lifetime supply of ducks and Canada geese, open green spaces with playgrounds, gardens, a petting zoo, and the refreshing ferry trip home at the end with its ultimate view of the city skyline. They'll love The Old Spaghetti Factory or Organ Grinder pizza place for dinner when you get ashore.

Perhaps you're paired with a culture vulture. No problem. Toronto is home to both the Canadian Opera Company and National Ballet of Canada. The Toronto Symphony Orchestra now performs in the visually and acoustically stunning Roy Thompson Hall. Two magnificent huge theatres from the glory days of vaudeville, the Pantages and Elgin/ Winter Garden, have been lovingly restored at enormous cost and are now housing lavish stage productions. You could stay a month, visit a different "little theatre" every night, and still not exhaust the supply. The newly expanded Art Gallery of Ontario houses probably the world's top collection of Henry Moore's sculptures, in addition to its special showings and strong collection of pictorial art. It serves as focal point for a galaxy of private galleries. And anyone with any interest in Inuit art who does not run just north of the city to the McMichael Collection of Canadian Art in Kleinburg will miss a lifetime experience.

All of this is backed up by a collection of museums, from the mighty Royal Ontario Museum, rated to have the best Chinese collection outside China, the mineral gallery only obtainable in a place as resource-rich as Ontario, the fabulous bat cave centring a fine natural history section, and a general collection as well selected as it is displayed, to the specialty places like the incredible ceramics museum across the road and the latest, devoted to fabrics and their history.

Perhaps she [???? --- ed.] just wants to go shopping. Where? The high-priced, high-class turf is Yonge-Bloor-Bay and the adjacent boutiques of Yorkville. More normal mortals can try the 300-odd shops in the great gallery of the Eaton Centre, then cross via Simpson's newly redone flagship store into the five miles of underground plazas, all interconnected, that underpin the financial district. For open-air colour, visit the Chinese - Caribbean - Jewish - Southeast Asian melange of the Kensington market, then drift south a block to the bargain stores of the garment district. Yorkdale, once the largest enclosed plaza in the world and a short bus ride from the convention hotel, has recently expanded yet again and may yet regain the title. The city abounds

(continued, next page) →

DOING TORONTO (continued)

with small shopping enclaves catering to almost any interest. For the science fiction and fantasy fans, not only is Bakka bookstore one of the best for the genre on the continent, but the Toronto Public Libraries harbour a special branch - the Spaced-Out Library rated as the best publicly accessible science fiction research collection in the world. Often noted authors, from Judith Merrill to Spider Robinson to Guy Gavriel Kay, are found visiting or even working there.

Nightlife? Toronto has always been the jazz centre for anyone north of the Mason-Dixon line. You can find a restaurant where you can spend \$200 a couple if you want to, and feel you got your money's worth. Brew-pubs offer their own distinctive beers, brewed on the premises. Entertainment? Choose the kind you like and it's there. Even if you just stay home and watch the tube, in Toronto you can get stations of eight different networks plus four or five feisty independents off the air - don't ask what cable delivers.

But perhaps the hectic pace isn't for you. How about the Metro Toronto Zoo? It may boast a monorail and the world's largest McDonald's, but even they are easily lost in the spectacular, 700-acre Rouge River valley setting. Or go birdwatching. The Leslie Street spit, being built far out into Lake Ontario to form a new outer harbour for Toronto, is home to the world's largest colony of ring-billed gulls, but around convention time is a popular resting place for summer warblers assembling for migration. So is High Park, in the city's west end, where Grenadier Pond also draws its share of overfed waterfowl. Toronto is networked with ravines and major river valleys, most of which have been preserved as parks, generally interconnected and all easily accessible. And there's the usual assortment of formal gardens and quiet walking streets as well.

There's the 98-room folly of Casa Loma, a castle complete with underground and secret passageways, and adjacent Spadina House, a mid-Victorian patrician's home, both awaiting your inspection. The broad campus of the University of Toronto shares downtown space with the provincial Parliament buildings in Queen's Park. Fast or slow paced, high or low key, the list of things to do in Toronto is almost endless. For instance, we haven't even mentioned Harbourfront yet, with its restaurants, boutiques, flea markets, special entertainment events, waterside promenades and more.

You can find out about all these things easily. Most hotels distribute *Where - Toronto*, one of the network of *Where* magazines familiar to American hotel guests in all major cities. *Toronto Life* magazine, on any newsstand, carries more extensive listings. The Metro Toronto Convention and Visitors Association, Queens Quay Terminal, Box 126, Toronto M5J 1A7 has an information phone locally and a toll-free line from southern Ontario, New York, Pennsylvania, Michigan and Ohio (800) 387-2999 daily from 9:30 a.m. to 5 p.m. Eastern, and will mail information on request. The Ontario Ministry of Tourism and Recreation answers at 800-462-8404 from New York State and 800-828-8585 from the rest of the lower Canadians call 800-268-3735; all numbers of course toll-free.

Don't worry about getting around Toronto. The reasons for choosing the convention hotel included superb accessibility. It's by the junction of the main east-west and north-south superhighways, one exit before the junction with the airport expressway. A frequent-service main bus line at the door connects

with both arms of the U-shaped north-south subway route to downtown. In Toronto, transit is cheap, safe, fast, efficient, and fanatically clean. Even in off-peak hours it will deliver you to any downtown destination faster than your car and nearer to it than any parking you can find. Torontonians only use their cars in the city for three reasons - destinations in the suburbs, it's Sunday, or an irresistible bargain on a case of anvils (cash and carry only). A one-day, unlimited use pass is \$5.00 for multi-stop excursions - on Sunday the pass covers the whole family. You can save by not renting a car and miss only the hassles.

Of course for those with time to burn, ADAMCON 02 can be just the centrepiece of a memorable vacation tour. Ontario is bigger than any U.S. state except Alaska, having a common border with New York, Pennsylvania, Ohio, Michigan and Minnesota. Its southernmost point is below the northern border of California in latitude; its saltwater shoreline is Hudson's Bay. Side trips can take you from fast-paced major cities to lakes that have yet to feel the keel of a canoe. Whatever you and yours want in a vacation, Toronto and Ontario can deliver. Come and see.

~Richard Clee

THE WRITE STUFF

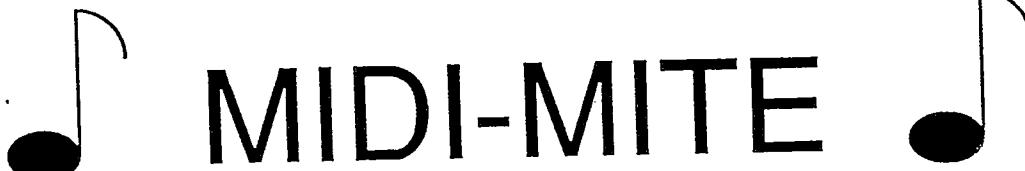
Sometimes I use a keyboard,
Sometimes I use a mouse;
Sometimes I use just any pen
That's lying 'round the house.
But best I like a pencil
(I've used one all my life)
Sharpened to perfection
With a sanding block and knife;
Number two or softer,
Velvety black lead....
And if the words
Don't flow out right
I draw a sketch instead!

My pencil doesn't limit me
To lines of black and white,
But lets me shade in tones of grey
And sometimes that's just right.
And sometimes while I'm drawing
If I'm lucky, I will find
That I've dislodged the logjam
That was blocking up my mind
And suddenly I've got the words
To say what I want said.
The path from brain to disk
Is often paved with pencil lead.

Oh, yes, I love computers,
And fancy inks and pens...
But the humble little Pencil
May be one of my best friends.

bonafide systems

is proud to present



MIDI-MITE

A MUSICAL INSTRUMENT DIGITAL INTERFACE
FOR THE COLECO ADAM™

THE HARDWARE

MIDI-MITE is a device that allows your ADAM to communicate with MIDI compatible synthesizers. It has one MIDI IN, one MIDI THRU and two MIDI OUT jacks. Included are two MIDI cables for connection to your synthesizers and a ribbon cable for connection to the ADAM side port.

THE SOFTWARE

VT PLAYER allows you to play songs created with FutureVision's VideoTunes through your synthesizer. Some of its features are:

- * ADAM or MIDI - hear songs played either through standard ADAM sound or through MIDI
- * No "3-note barrier" - only your synthesizer limits the number of notes you can hear at a time
- * List Play - create a list of songs the ADAM can load and play in sequence
- * Repeat Play - ADAM loads and plays one song or an entire list repeatedly
- * Select MIDI channels - play music through any combination of 16 MIDI channels
- * Select patch - you can select a different synthesizer sound for each channel

MINI RECORDER lets you record and play back whatever you are able to play on your synthesizer. Although no editing is possible, it reads and writes standard MIDI files (format 0) and therefore can play back multi-track files created by another sequencer.*

Both of these programs are easy to use, self-booting, EOS machine language programs, have colorful screens, and are Smart-Key driven.

Available *Now!* through your favorite ADAM dealer or directly from Bonafide Systems at 48882 Royal Oaks Dr., Oakhurst, CA. 93644 (209) 658-8530. Suggested retail price: \$75.00.

*Look for our full featured, 8-track sequencer program later this summer!

BARRY WILSON STRIKES AGAIN!

As all local ADAMites know, lightning certainly DOES strike twice. This month we are favored (?) with a double whammy from the fevered brain of ADAMdon's most prolific humorist/leader/rabblerouser. Barry (sometimes writing as Harry, though don't say you heard it here!) is a writer for St. Louis AUG, and the mastermind behind ADAM News Network (ANN) disks, to which we owe the Richard Clee article in this issue. He also sponsors the monthly ANN contests. Winner of last month's Ugly Sysop/Editor contest was Jeff Jodoin of ANAUG. (I came in a poor second. You're not trying, folks. I'm SURE I have Jeff beat.)

***** NEW CONTEST *****

The June ANN Contest is as follows: All you have to do is send a letter to MTAG president Richard Clee, outlining your idea for how to make ADAMCON 02 a success. Top two ideas win prizes (\$20 worth of software each) donated by Walters Software and ADAM Software Support. Entries must be postmarked by June 30. Send to:

Richard Clee
21 Rondale Blvd.
Toronto ONT M6A 1H6
CANADA AIR MAIL

Don't forget that postage to Canada is 30 cents per ounce.

COPY PROTECTION MADE E-Z

by Barry Wilson

You are all aware, there has been a continual battle between software pirate and software producer. The software producers are now going increasingly to copy protection.

Well, I have by chance stumbled onto the FINAL ULTIMATE COPY PROTECTION.

AND SURPRISINGLY IT HAS ALWAYS BEEN HERE, it is nothing new but no one has thought of it as copy protection.

The ULTIMATE COPY PROTECTION IS CP/M. Which must stand for (C)OPY (P)ROTECTED (M)EDIA!

What do I mean? Well, anyone who has gotten a CP/M program which has been crunched, squeezed, libraried, archived, sterilized, pasteurized and homogenized will know what I mean!!!

You have the file, it is there. But can you use it ?????? To use it you must now get many many other programs (probably each one of which also has been crunched, libraried, etc.) to use it.

ONLY after you have uncrunched the file can you then unsqueeze it, which allows you to delibray it, and then un- (or is it de-) archive it, etc. etc. etc.

To me this is the ultimate in copy protection. I know of a few pirates who DIED before they had completed the procedures necessary to get a file into a form from which they could actually use it.

Actually I liked this article so well, I was going to crunch squeeze it, library it, archive it, pasteurize it, homogenize it, and finally upload it with xyzmodem protocol. But I couldn't delibray my crunched version of the unsqueezed archive file called CP/M Made Easy.

Oh well, I guess I'll have to pay retail and buy the program if I really want it. Besides, the 6 months' time I save will be well worth the retail price.

DEBBIE'S DESICATED DISK DIET CENTER and DRIVING SCHOOL

by Barry Wilson

Having problems reaching the keyboard? Does your big stomach get in the way?

Out of breath from lifting a data tape ??

Ashamed to go to your AUG meeting, because you can't get through the meeting room door ??

Well then listen to the following from one of our success stories....

"Three reasons I maintained a 103 lb. weight loss with Debbie's Desicated Disk Diet....support, support, support.

"I've tried to lose weight in the past but I never got too far -- I always gained it back. Then I went to Debbie's Desicated Disk Diet Center & Driving School. Debbie is the only one that taught me how to get the weight off and keep it off. Debbie uses only the highest quality generic double sided double density desicated disks in preparing her complete selection of desicated disk diet foods.

"Around up disks are high in fiber, give you bulk and a sense of being full. Further their bland taste is such that you are not tempted to overeat with them.

"You can carry a few in your pockets for snacks between meals.

"Debbie practically held my hand and guided me through the program. So losing and maintaining my weight for 7 months now was not a problem." (Signed) A.Satisfied Customer.

Remember Debbie's Desicated Disk Diet includes a variety of delicious meals and snacks made from generic desicated disks, both 5 1/4 (meal size) and 3 1/2 (snack size) disks. There are stewed disks, crashed disks, disks with rice, mashed disks, CP/M disks, EDG disks, disk chips, boiled disks, broiled disks, oiled disks, and many other interesting forms of disks.

One of our secrets is only using disks with bad blocks. As you know bad blocks are merely empty non-functional blocks and therefore have no calorie content.

Another good feature is that if you are not hungry you can always use the disks in word processing.

DON'T WAIT CALL TODAY

Debbie succeeds where other diets fail you.

Moderate light exercise is also required to lose the full amount and get the full benefit from the program. Lift your CPU over your head 100 times per hour for 4 to 5 hours per day.†

[*Important, disconnect all cords 1st.]

We are not claiming that the reason you no longer see Big John is that he faded away to nothing from Debbie's Desicated Disk Diet. But we are also not denying that rumor.

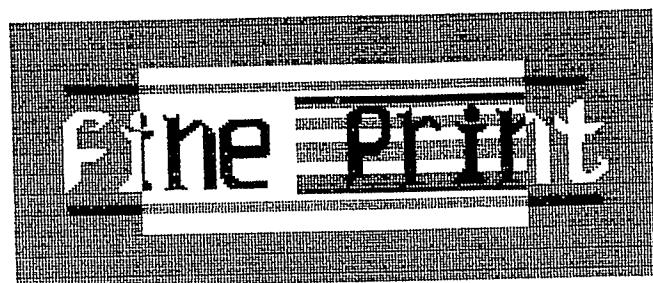
Lose all the weight you can and eat all the disks you want for only EIGHTY-NINE DOLLARS!†

[*Program price does NOT include the costs of Debbie's Desicated Dietetic Disks. Offer cannot be combined with other offers. One discount per person. Good at participating Desicated Disk Diet Centers only.]

GUARANTEED TO WORK, *

[*Or you can receive the equivalent in driving instructions].

CALL 1-800-2BE-THIN NOW.



TURNING YOUR GRAPHICS INTO HARDCOPY

by Pat Herrington

All RIGHT!!! You have been fiddling around with color graphics, and after trying this and that, you are finally satisfied with the way your picture looks on the screen. If you don't have a color printer, you know you can't get colored hardcopy, but you would still like to print your picture and send a copy to poor, deprived Cousin Louie, who has no ADAM. So you hit the PRINT key and go to the kitchen for a cup of coffee.

But when you come back, you find, to your dismay, that the picture on the paper doesn't look like what you thought you drew. The flowers are square, and there are funny lines in the sun. Has your printer gone haywire, or has your software developed a glitch?

Neither. Both are doing exactly what they were told to do... print the foreground, and ignore the background. But since you have been working back and forth, using background color to enhance the foreground, you no longer know which is which. The computer remembers, though!

To figure out in advance how your printed copy will appear on paper, you need to be able to see which is foreground and which is background. If you are using PowerPAINT, this is simple. Using the MOVE/COPY key, you place a copy of your picture in some other cell. Then you use GLOBAL COLOR to separate the colors. Graphic artist Tony Patterson suggests that you change all the background to white (actually grey) and all the foreground to black. That will show you EXACTLY what the printout will look like.

It IS important to make global changes on a backup picture, because there is no way of reversing global color switch once you return to the main menu (though you can hit UNDO to reverse them, if you don't go back to the main menu first.)

If you've been doing a lot of experimenting on your picture, and/or adding sprites, using reverse fonts, and so forth, you may be quite surprised at what you see on the screen. Often, there is no real way to fix up the color picture so that it looks good both on the screen and on paper. So, it can be helpful to keep TWO versions of your picture... the full-color version that looks so handsome onscreen (which you'll use for such purposes as a boot-up picture in BASIC, or to amaze your fellow ADAMites) and a less colorful version which will make better hardcopy for Louie.

And yet... there is still another alternative. You can also choose to use the Digital Express program called SwiftPRINT, and select the "black and white shading" option to print your full-color picture. (See April, '90 MDAUG newsletter for a full report on SwiftPRINT.) This will convert ALL the colors, whether foreground or background, to different shades of grey. It works best when you use an old, faded ribbon, and use colors with a lot of contrast. (Light yellow, for example, is so close to white that those two colors will appear the same on paper.)

There is also a CP/M program called, I think, GREYPRINT, which does pretty much the same thing. Ron Collins sent me a picture he did using this program, and it appears to work quite well. I'm not sure whether or not this is a public domain program (SwiftPRINT is a commercial offering.) I even understand from Joe Quinn that there are some dot matrix printers that will do shading without any additional software. I haven't yet seen any examples of this, so I'm not sure if the effects are identical.

To illustrate what we've been talking about, I've printed various versions of some pictures I drew using Joe Quinn's 'Paint Palette' (see review in this issue.) As you continue this article, refer to the page titled "Check the Figures".

Figure 1A is a regular printout of a drawing I call "atGRANDMAS". The quilt is made up of dozens of different color squares, but this doesn't show up at all in hardcopy, because each color is one of the palette colors. Since the squares consist of alternating foreground and background color, and only foreground color prints, they all run together on the page. The few squares which look solid are the ones I drew in foreground only (they show up as black) and the two just beneath the bear's paws, which look solid white because I used background only. The sheet also appears solid white. I drew black wrinkle lines, but they don't print because I used background black.

Figure 2A is called "HOWDY!" The plaid shirt was done with the palette colors, and it looks just like the quilt when printed. The buttons and pockets are black in the original picture, but since the black is a background color, they appear white on the page. In fact, the man is totally surrounded by black background, but you can't tell. You also can't tell that he's a friendly-looking sort of guy. He looks like a cross between Darth Vader and a Picasso nightmare! That's because I want four-color head, so I worked back and forth between foreground color to make it pretty on the screen.

Well, the whole reason I printed these pictures was to show examples of Paint Palette colors. Obviously, it didn't work. So I decided to use SwiftPRINT to print the same pictures. The results are Figures 2A and 2B.

Better. Figure 2A at least shows that the quilt is multi-colored. (Where two squares appear identical, it is because both foreground and background were similar in tone.) But, we've lost the bear! He was dark red (looks brown on my screen.) The color was just too close to the black background, and he disappeared in hard copy. Other colors were also too similar. You can't tell that the second child has black hair and a dark blue nightcap. But it was the bear that bothered me, so I copied him to another cell and did a global color change on him. Figure 3A shows how he looks after I changed him to dark yellow, giving him enough contrast to show up against both the black background and the white sheet. The only other changes I made were to the initials "JH" (lower right corner.)

Figure 2B is exactly the same as 1B, except I used SwiftPRINT. Now we can tell that the shirt is plaid. And the guy looks a little bit friendlier... at least we found his teeth! But his "brown" hair is too close to the black background. And the dark green "HOWDY!" disappeared altogether. So, I changed most of the background to white before printing Figure 3B.

We still can't see ALL the detail in Figure 3B. For example, the buttons and pockets, which were clear in the original printout, just blend right in with the plaid shirt. And you still can't see how many different colors comprise the plaid. Even the skin tone is dark enough that most of the facial features are lost (we could fix this, if we wanted to, by going a little lighter on the skin color.) Still, the finished product shows enough variation to serve the original purpose: it demonstrates the use of Paint Palette.

So, as you see, you DO have choices in printing color graphics... and they are not all strictly black-and-white!

"CHECK the FIGURES"

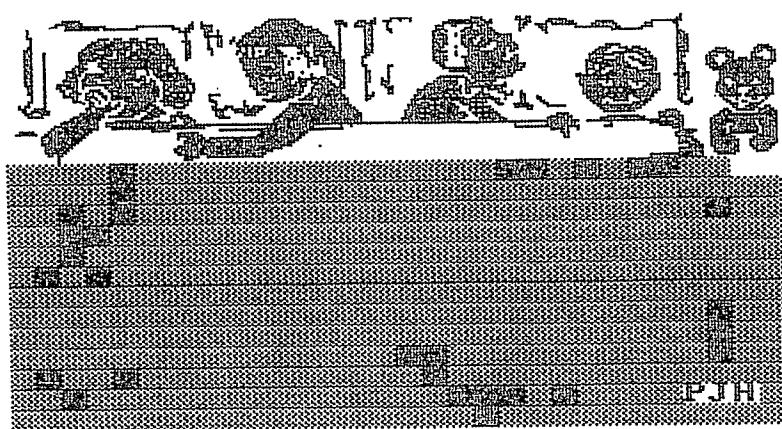


FIGURE 1A

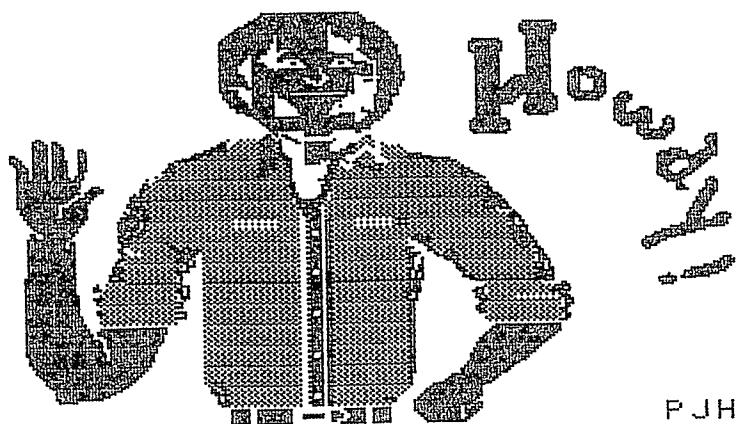


FIGURE 1B

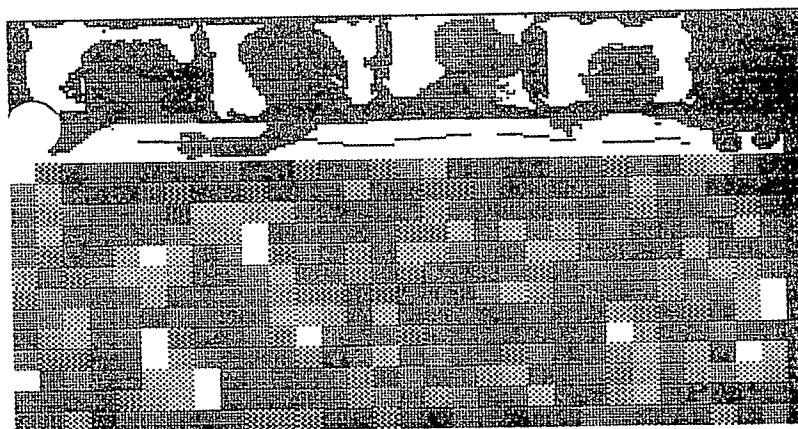


FIGURE 2A

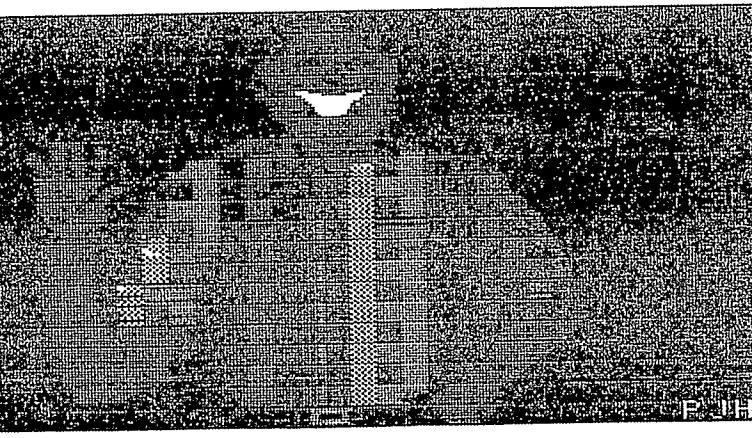


FIGURE 2B

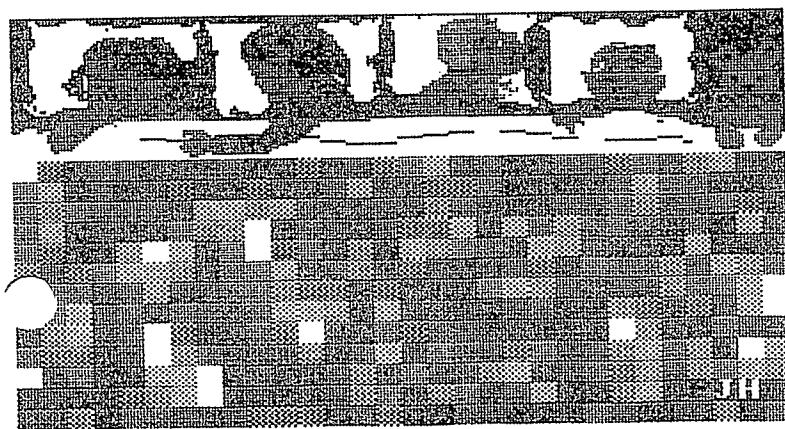


FIGURE 3A

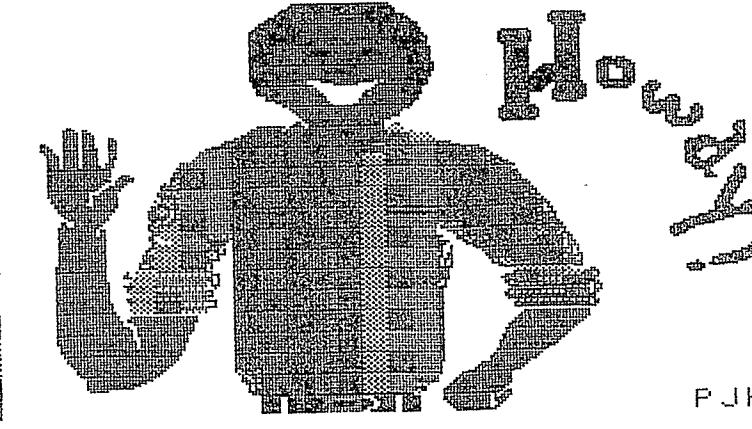


FIGURE 3B

RANDOM ACCESS

the HARRIS FILE

by JOHN HARRIS

This is an update of an article by Pat Herrington which originally appeared in the Metro Orlando ADAM Users' Group newsletter several years ago under the title "BASIC For New Users: ddp HELP".

TO RUN PREPARED SOFTWARE:

First of all, if the tape does not spin at all, or if you get an I/O error in BASIC, the tape probably is not inserted properly. Remove it and reinsert it. If this does not work, remove tape and rewind it (gently) and reinsert. If this doesn't work, the tape is probably bad but this is rare.

If you get a tape that just spins and spins incessantly, you can stop it by pulling the CARTRIDGE RESET on the drive console.

If you have two tape drives, make a habit of loading from the first drive until you know what's on the tape; some programs look for the drive and only load properly from this drive.

The only way to tell if a tape is self-booting is by putting it in and pulling the reset switch. (This is called 'booting'.) If there is BASIC language built into the tape, you will see a blank screen with a cursor; the cursor will begin to flash when it's ready.

At this point, if the cursor doesn't flash, there is a HELLO program on the tape. (Any file named HELLO will run immediately when the tape is booted.) Usually a HELLO file is a catalog or menu program, or changes screen colors, or gives instructions, or something like that.

If there is no HELLO program, the first thing you want to do is catalog the tape and find out what's on it. You will type the word CATALOG and push return. (For commands like this, ADAM doesn't care whether you type in caps or lower case.) This is called ENTERing because you have to push return. When you come across instructions that tell you to enter something, you know you have to use <RETURN>. If instructions say, for example, "press any key," you shouldn't have to push <RETURN> afterward.

The catalog will show you what programs are on your tape. You will notice that the filenames have letters and numbers beside them. The numbers will tell you how large the programs are, i.e., how many blocks they take up. (Some excellent programs take up only a block or two.) There are 256 blocks on a tape and 160 on a standard single-sided disk.

The letters tell you what type of file each one is. BASIC files are designated by a capital 'A' (or a lower case 'a' for backup).

If there is an asterisk (*) beside the filename, the file is locked, and you can't delete it without unlocking it. This is a protection feature so you don't accidentally lose an important file.

If the file is designated 'H' (or 'h'), it is not an ordinary BASIC file. It may be a BASIC file which has been "binary saved" for faster loading. Such files use different commands. They use BRUN instead of RUN, and they cannot be read from the word processor. They can be LISTed, though, and they can be saved. When you save such a file, use a different filename. The saved version will be in standard BASIC.

On the other hand, an H file may be a documentation file, meant to be read from the word processor. Look at your H files and see if any of them contain the following words: Doc, document, instruct, read, readme, readme1st, hip, or help, or something similar. (Doc files written by Digital Express are indicated by the letters 'WP' for 'Word Processor'.)

If a file reads something like "SpriteDOC" or "LABEL_HLP", it is a documentation file designed to help you get started with one of the programs. Exit to the word processor and read these files.

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To do this, take the tape out and reset the computer. Put the tape back in and press <STORE/GET> to choose the file you want to read. Most of the time, if the file is more than a few lines, you'll want to print it out to study at leisure.

If a tape is not self-booting, when you pull the reset switch, the tape will just spin around, then default to the word processor. When this happens, remove the tape and put in a BASIC tape. After BASIC has loaded, you can then remove the BASIC tape and insert the program tape. Do NOT pull RESET at this point! Just type in the word CATALOG and press the <RETURN> key.

If you have two tape drives, you can put BASIC in the first and the other tape in the second, but when you CATALOG, you must enter <CATALOG, d2> or ADAM will automatically catalog whatever is in drive one.

So far, we have been discussing BASIC tapes. If the tape happens to be in LOGO, you can't run programs from BASIC, but you can still probably read them from the word processor. Ditto for many files written to Coleco programs such as SmartFiler and ADAMCalc.

However, if the files are in binary or CP/M, or some other unreadable form, the word processor will say, "Cannot access this file." That could also mean the tape is damaged or the program is larger than ADAM's memory, but usually it means there are files on the tape that you could access by, for example, loading CP/M first. But back to BASIC:

Maybe you didn't find any documentation files. Sometimes the documentation is internal—that is, the program itself contains REM (Remark or Reminder) statements which clarify certain segments of the program. You can learn a lot about many public domain programs by simply LISTing the program and studying the REM statements. This can be an extremely helpful source of information, but it is often overlooked, even by experienced ADAM owners.

So, with your catalog on the screen, choose a file labelled 'A' and enter "LOAD" followed by the file name. Then press <RETURN>. (Be sure to type the filename exactly as it appears in the catalog, including caps, lower case, and/or punctuation. You do NOT have to type in the letter 'A', or any of the other characters appearing beside the filename.)

The tape will spin and the cursor will stop blinking while the program loads. When the cursor blinks again, the program is in memory. Now type RUN and it will begin.

You can read or print out most BASIC programs from the word processor. You can also LIST the program itself from BASIC, and read it onscreen. You can print the listing from BASIC, too.

To print out a LISTing of the actual program on your tape:

1. Make sure the program is in memory (LOADed).
2. Put a sheet of paper in the printer.
3. Type in: PR#1.
4. Type in: LIST.
5. When you want to stop, hold down the CONTROL key and press the S key.
6. When you've changed paper, press any key to continue.
7. When you are through printing, enter PR#0 to turn off the printer.

You can control the speed of LISTing by entering in a speed number between 0 and 255. Example: SPEED=100.

To exit a program, if it gives you no option, you can hit ESCAPE or CONTROL C. If that doesn't work, you will have to use the reset switch and start over.

When you try to run a program and you get a message saying "File type mismatch," try using BRUN (with H files). If you still get the same message, or a message like "Illegal OS command", enter RUN once more.

If a program asks you to choose a number and then doesn't respond to your keypunch, check your shift lock to make sure it's not set for all caps.

Also check to make sure you are not pressing letters instead of numerals. The numerals one and zero are NOT interchangeable with I, O, and lower case L.

While you are learning to manipulate files in BASIC, be sure you are using the same version of BASIC that originally came with your ADAM. If you need a new copy, you can get one from any User Group; specify "Plain Vanilla" (version 1.0). Since this article was originally written in 1985, many other "flavors" of BASIC have been developed to fix bugs and add enhancements. You will surely enjoy experimenting with all those other BASIC versions, but you'll want to stick with the original at least until you are comfortable with the commands for manipulating files.

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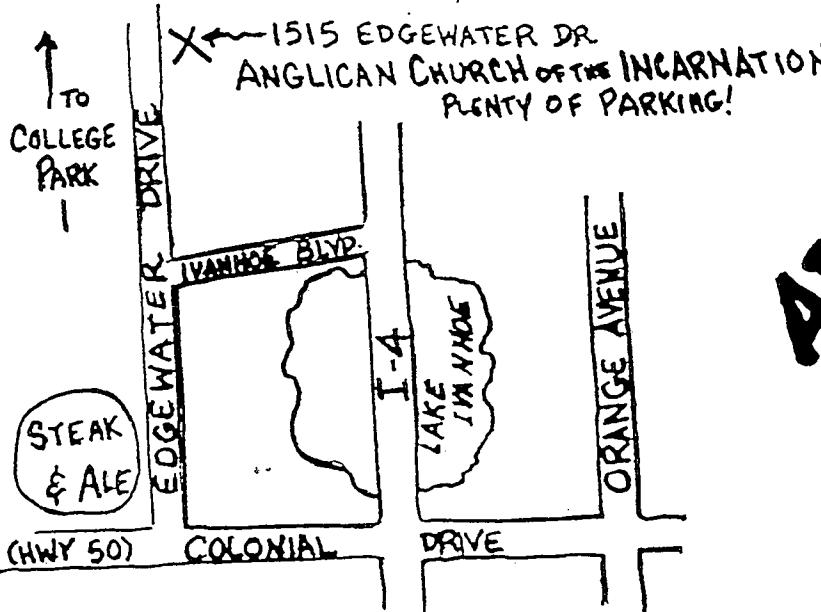
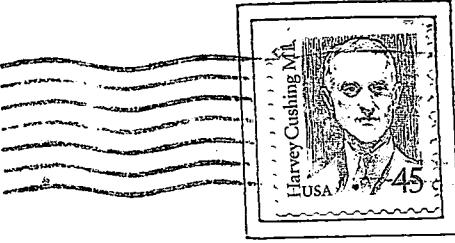
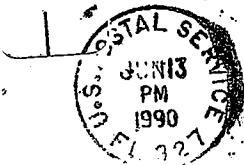
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Editor: Patricia Herrington
1003 Oak Lane
Apopka, FL 32703



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