

Morrow Owners' Review

a national newsletter for users of Morrow's Micro Decision computers
P.O. BOX 5487, BERKELEY, CA 94705 (415) 654-3798

Editorial

by Sypko Andreae

WELCOME to our first issue!

We know you have all been waiting for this, the MORROW OWNERS' REVIEW, your own "user-driven" national newsletter. Let me explain first how this came about.

Most of you have seen the end-user newsletter mailed by Morrow to all known users in January. The questionnaire alone got a 25% response rate, which is exceptionally high as those things go. Nearly all responders said that what they most wanted was a national newsletter. Many of them even submitted articles for the next issue!

At the same time there were many people among the users, and even within Morrow, who felt the original idea could be much improved upon. A truly "user-driven" newsletter, they thought, would not only gain more credibility with users but would also convey the kind of spirit and liveliness that make many of the local users' group newsletters so attractive.

Soon the people at Morrow started to negotiate with some members of the Bay Area Micro Decision Users' Association (BAMDUA) about getting our cooperation on a national publication. BAMDUA serves 600 users in and around the San Francisco



"Any Users' Groups out here?"

Bay Area. Morrow asked whether BAMDUA's newsletter could be published nationally. BAMDUA felt that it preferred to maintain its local Bay Area flavor. But some of us offered to set up a national newsletter if Morrow would support such functions as printing and mailing while leaving us, the users, full editorial control. Morrow agreed.

Then it became clear that yours truly was going to wind up being publisher and editor and in need of an editorial board. A few well chosen long distance calls did the job. You will notice the names of your provisional editorial board in the box on one of these pages. Next we contacted all known Morrow users' groups and all the people we heard were thinking about starting one. We got a flood of enthusiastic response and enough copy submissions to fill over 75 pages. We concluded this was really going to work.

There were still two big problems left: How to support this newsletter financially and how to reach all the people that own or use Morrow Micro Decisions but are not on any mailing list.

A wonderfully enthusiastic team of Morrow people spontaneously formed itself and came to our aid. We planned a strategy for advertising and pondered whether to charge subscription fees or not. The most important thing, we concluded, was to reach as many people as possible. That is why the MORROW OWNERS' REVIEW will be free to all Morrow owners and users, at least for the time being.

Your provisional editorial board considers it important to develop a healthy independence from Morrow. This will give us credibility among ourselves as users and will enable us to become user-controlled in the full sense of the word. It will also mean that we will have to foot most of the bills. Because advertising revenue will not be enough to cover this, we may have to charge subscription fees at some future date. These fees will also help us expand the editorial content of this newsletter and publish more frequently than every other month as we are doing now.

But we need your input first. What do you think this national newsletter should be? If you want to tell us, fill out the two-page reader survey elsewhere in this issue and send it back. We won't drop you from the mailing list if you don't, but if you care to take the trouble you will have participated in the shaping of this, YOUR newsletter.

Now about the last problem: how to reach all those Morrow owners we don't know how to contact. According to the number of people on Morrow's warranty list, only about 30% of Morrow owners have sent in their warranty cards! Besides, many machines change hands and contact with the new owners is never made.

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When we looked at the numbers of people associated in any way with a local Morrow users' group or newsletter we discovered that only 7% of the current owners are connected! Those lucky ones attend meetings, communicate through newsletters and electronic bulletin boards, provide mutual assistance, have opportunities to contact Morrow employees in person and share their adventures. In other words, they not only have support, they have fun!

Now let those 7% of us take a quiet moment to imagine how it feels to be one of the 93%

Now open your eyes and look around. What do you see? Unlimited possibilities of course! One of them is this new national newsletter which intends to include the 93%. It will be a vehicle of communication complimenting the ones already in place: local newsletters and meetings, local computerized bulletin board systems, and so on. This publication is intended not only for all Morrow users but also all Morrow dealers and all Morrow employees. We are all one community, centered around the use of one type of machine. We users are in an excellent position to encourage interactions among all the members of the Morrow community. Join the fray!

Morrow Owners Review

P.O. Box 5487, Berkeley, CA 94705

(415) 654-3798

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Editor and Publisher	-	Sypko Andreae
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Assistant Editor	-	Clarence Heier
Advertising and layout	-	Dana Gaskin

April 1984 press run 20,000 copies

Bulkmail 12,000

Shipped with new MDs 3,500

Special mailing to dealers

Deadline for submission of articles,
classified ads, display ads:
Friday, May 4th, 1984, noon,
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WRITTEN CONTRIBUTIONS of more than 30 words should be submitted on a 5 1/4 " Morrow format floppy in a WordStar file (^OR = 50). Always include printed hardcopy of your prose. Add postage for the return of your floppy. Modem transfers of articles only by special arrangement.

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DEPARTMENTS & FEATURES

Here's a list of existing or proposed departments or features for this newsletter and instructions on how to contribute to them.

- MAILBOX - You should use this to address your fellow users. Share information or ask questions. Mail your material to: STANLEY AHALT, 102 B Victoria Lane, Clemson, SC 29631.

- LOST AND FOUND DEPT. - This will help you get in touch with Morrow users in your region. See the short article on page 39 in this issue. Clarence Heier will coordinate and lend you a hand. Mail your queries to CLARENCE HEIER, 3430 93rd Street, Sturtevant, WI 53177.

Materials for all departments and features listed below should be mailed to:

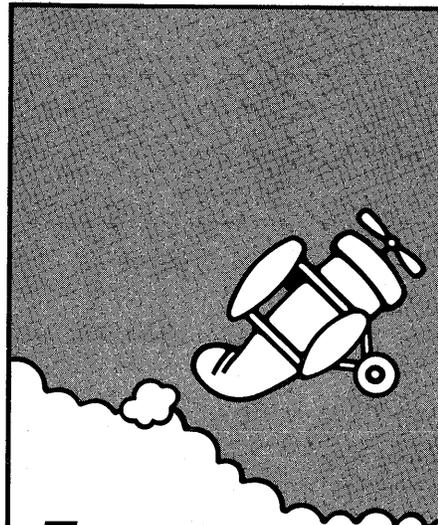
MORROW OWNERS' REVIEW
P.O. BOX 5487, BERKELEY, CA 94705.
Attention: (one of the following)

- LETTERS TO THE EDITOR
- DAVID'S Q & A COLUMN
- BEGINNERS CORNER (Column)
- HOT TIPS (short items on use of soft/hardware)
- CHEAP (BULK) SUPPLIES (what, where and price)
- NEW PRODUCTS (applicable to MD machines)
- HOME-MADE HARDWARE
- PUBLIC DOMAIN (MD) SOFTWARE LIBRARIES
- FROM THE DEALERS POINT OF VIEW
- NEWS FROM THE MORROW PLANT
- FOCUS ON LOCAL GROUPS (news and ideas)
- MORROW ORIENTED CBBSs (phone #, info)
- CLASSIFIED ADS (With your check!)
- MORROW USER GROUPS AND NEWSLETTERS (listing)

We are looking for writers to submit articles on the following subjects:

- + Disk additions for REV. 2.n MD2s and MD3s
- + Tutorials on Morrow bundled software
- + Reviews on commercially available hardware and software useful to Morrow owners
- + Power Surge/Noise protection
- + Simple maintenance (disk cleaning, minor repairs, preventive)

The name MORROW OWNERS' REVIEW is really only a working title. We invite you all to think of a new name of supreme quality and relevance. And if you are a graphics artist you may consider sending us designs for a beautiful, fitting, attractive new "masthead".



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TECHNICAL & FOREIGN LANGUAGE TEXT

This article first appeared in the BAMDUA newsletter of February 1984

By Phyllis Brooks

I use a NEC Spinwriter 3510 to print what I painfully compose in WordStar on my Morrow MD2. It's noisy, but gives me wonderful copy. I can also buy extra thimbles, with a wide variety of script and character choices. But in several months of using my system I had never, until recently, found out how to get access to the extra characters that appear on the 128-character thimbles.

Why would anyone need 128 characters? Try typing technical materials, or foreign language text, with an ordinary complement of characters! In many cases it can't be done. Since I know more about foreign language typing, I'll use that as the source of my examples.

For anyone typing in a foreign language that uses diacritical (accent) marks, there are two options: a thimble using the usual 94 characters, but tailored to the language concerned (with a key dedicated, for example, to the Spanish ñ -- "n" with a tilde); or a thimble with each diacritical mark on a separate keystroke, to be combined by means of an overprint (Control PH) with the letter concerned. The first is the most useful kind of thimble for those who type only in one foreign language (for which a thimble happens to be available). But if you want to type in Rumanian or Turkish, which put the little, comma-like cedilla under "s" (and "t" as well in the case of Rumanian), you have to move to the second kind of thimble.

Fortunately NEC puts out some elegant International thimbles, and I eagerly bought one. I could see the precious characters as I turned the thimble under a good light. There they were: dieresis, cedilla, acute accent, even a neat little Turkish "i" without the dot on top. (Honestly! It exists.) An upside-down exclamation point and question mark for Spanish, the combination "ij" needed in Dutch -- all were waiting for me. But I couldn't figure out how to get at them! The WordStar User's Guide was no help at all, although the example text that came with my WordStar program mentioned the ability to "shift" in and out of an alternate character set.

My dealer couldn't help me, but did ask that I let him know how to do it if I ever did find out. So I did the only possible thing, and wrote to MicroPro. Within a week I had a response that solved my problems!

The letter began with a statement that the company could provide no specific technical information on how to use their programs with any specific computer. Then I got a page and a half of information, all of which works on the Morrow MD2. I pass on the gist of it.

If you have a NEC 3510, it should be installed by choosing the NEC 5510/5520 printer menu selection. Then each time you want one of the alternate characters, you hit Control PQ. If you then use the shift with the appropriate key, you will get the desired character instead, for example, of a capital letter. To go back to the ordinary character set, use Control PW. (This is documented on pages D-5/D-6 of the WordStar 3.0 Installation Manual -- a ridiculous place to put it because it is operating information, not installation information!)

Of course my screen shows, for example, a capital "L" when I use the alternate character set and ask for an upside-down question mark. And if I want an "s" with a cedilla under it, what I see on my screen looks like this: [^]QE[^]Hs[^]W. The printer understands what I want to do, but the terminal sticks to its established habits. So how do I know what's what? If you regularly use one of these 128-character thimbles, you may like to follow these hints:

1. Print off a neatly aligned text showing each key on your keyboard, with its shift directly below it, and then the Control PQ/shift characters. (See Figure 1.) Use this as a guide to your typing.
2. If you use the thimble frequently, you might wish to apply adhesive stickers to the front surface of those keys you need often.
3. To speed up typing, and to avoid having to hit eleven strokes for each letter+diacritical combination, you may do one of two things:
 - a. Leave the Control PQ on except when you want to type a capital letter. Then you type Control PW, the capital letter, and Control PQ again. This is the most efficient way to go if your text contains many different letter+diacritical combinations.
 - b. If your text contains only a few different combinations, assign an arbitrary character, like @ or {, to each combination, hitting it every time you would hit that combination in the file. Then run a global search and replace (Control QA, with N and G options), substituting your letter+diacritical mark combination for each character you chose.
4. Proofreading? Eventually you will be able to "read" the peculiar screen, but until that time do as I do: Print the document and proof the hard copy!

So, the two commands Control PQ and Control PW give you access to all the characters on NEC thimbles. The same principles (but with less need for overprinting) apply to using extended, 128-character thimbles carrying technical symbols (for example, engineering or mathematical signs).

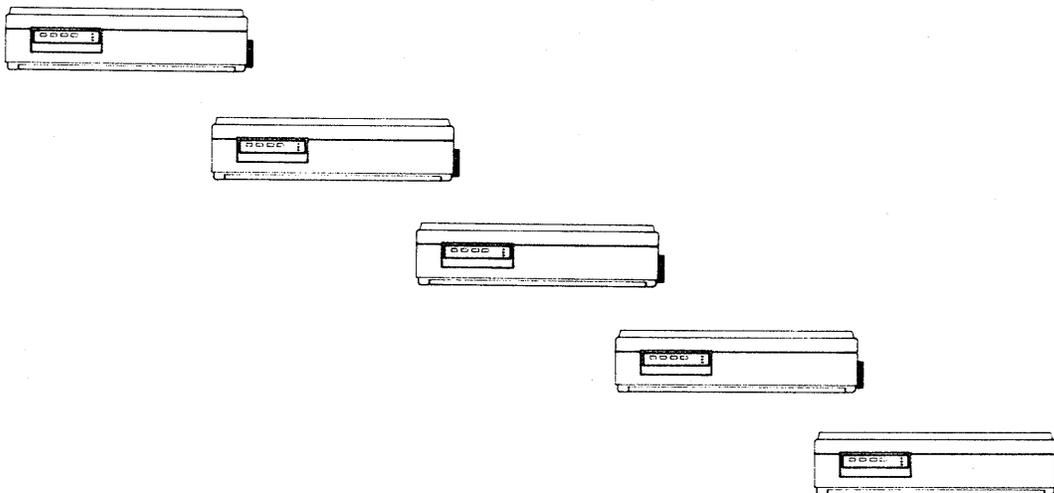
This material may help some of the many people who work on technical material or in languages other than English. (I also have information about patching some of the existing characters on the Morrow keyboard -- ~ ^ ' -- so that the machine

inserts an automatic Control PH after them, making them overprint the next character hit. But I'm still figuring out how this works! It will not work with the alternate character set, however.)

NOTE: Many of the characters on these extended thimbles are not ASCII characters. If you are trying to transmit your Vietnamese text via a modem, I have no idea what problems may arise. This is a problem for greater minds than mine!

1 2 3 4 5 6 7 8 9 0 - = `	
! @ # \$ % ^ & * () _ + ~	-- Shift
! ' # \$ % & * () ° + ~	-- Control PQ/Shift
q w e r t y u i o p []	
Q W E R T Y U I O P { }	-- Shift
° A . ° Æ œ Ø Æ () { }	-- Control PQ/Shift
a s d f g h j k l ; ' \	
A S D F G H J K L : "	-- Shift
~ ij ~ ' \$ ~ + œ ¿ : "	-- Control PQ/Shift
z x c v b n m , . /	
Z X C V B N M < > ?	-- Shift
¢ " á £ 1 " ~ ^ ?	-- Control PQ/Shift

Figure 1: Keys on a standard Morrow MD-2 keyboard, showing printout of an "International" NEC thimble -- unshifted, shifted, and alternate shifted printout for each row.



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NEWORD VS. WORDSTAR: The Challenge of the Underdog

John Vanderwood, Editor/Publisher at Morrow
This article first appeared in the BAMDUA newsletter of March '84.

Those of us who know WordStar invariably love it, and are loath to adopt an unproven upstart imitator. But as someone who has acquired an intimate familiarity with both programs, I can assure you that the "unabashed top dog" of wordprocessing has a worthy competitor in NewWord.

There will of course be relative benefits in both WordStar and NewWord. This article will try to make a dispassionate comparison, and see which of the early criticisms of NewWord are justified. (See "Preliminary Review of NewWord" in February '84 BAMDUA Newsletter.)

Obvious Benefits of NewWord

The utter compatibility of NewWord commands and files with those of WordStar is not really a plus; it just means you can make an effortless transition. It also means that the wealth of third-party WordStar training manuals and accessory programs (like Random House Proofreader and WordIndex) are there for NewWord as well.

Above all else, NewWord's built-in merge printing may alone be worth the cost of the program. Writers can chain long documents across several files, even across disks; lawyers can assemble custom legal forms from scattered "boilerplate" files; commercial users can print reams of personalized form letters, envelopes, and mailing labels.

The dot commands that govern merge printing are identical to those in WordStar, with the exception of the obscure .IJ command. The result is that with NewWord, controlling the format of merge-printed text becomes a bit more complicated. (The discussion of advanced merge print details is the only weak part of an otherwise excellent NewWord User's Guide.)

Next on my list of definite NewWord advantages is the menu-driven installation program. Suppose you're ready to change the default help level. With Wordstar, you have to slog through the labyrinthine manual to discover that ITHelp: is the location to patch, after descending through layers of cryptic and irrelevant installation screens. You'll probably end up just using ^JJ every time you start WordStar.

With NewWord, all such details (margins, insert mode, and justification on/off, to name a

few) are established with familiar and foolproof menus. Prompts and help messages make this NWINSTALL.COM program far less daunting than WordStar's equivalent INSTWS.COM. You will be more likely to take the obvious but hitherto frightening step of customizing your wordprocessor for your needs, and even creating several versions of NW.COM for various types of tasks.

Another minor but sometimes invaluable feature of NewWord is UNDO, or ^U. WordStar has a similar bail-out command that usually requires an extra ESC keystroke. Unlike WordStar, NewWord's ^U has the wonderful ability to "unerase" your last erasure: character, word, line, or block. So when you hit ^Y instead of ^T, don't groan; just do a ^U. (The buffer that holds erasures is only 100 characters long as shipped, so you wouldn't be able to unerase all of a large block. However, the size of this buffer is one of the things you can change with NWINSTALL.)

Now for a laundry list of miscellaneous NewWord niceties:

- o Find a page - You know how to find a certain page in Wordstar: try to locate some unique words on the page in question and search for them. NewWords uses ^QP to search for a page by its number.
- o Embedded rulers - NewWord's .RR command is not available in WordStar. You can read a modified ruler line (the one that marks margins and tabs) into your text with ^OO, and then overwrite its first three characters with .RR. Now, whenever the cursor passes this dot command while you're working on the document, the current ruler line changes to the one depicted in the command. Normally you'd do this at the beginning of files that have unique margins or tabs. You can embed several .RR commands in a document at points where its margins or tabs change, if you like.

The .RR command more than compensates for the fact that NewWord, in contrast to WordStar, returns to the default ruler when you save a document.

- o Speed - NewStar tells me that NewWord is significantly faster when scrolling through a document and saving it. I can't attest to this; no one to my knowledge has done reliable comparisons. But it's certainly no slower

than WordStar.

- o When creating a new document, NewWord stops to ask "Cannot find it. Create a new one (Y/N)?" At first, this may seem like a bother. But think: how many times have you mistyped a file name in WordStar, only to have to immediately type ^KQ, and then twiddle your thumbs while the abandon command processes?
- o Improved printer drivers - NewWord's printer drivers exercise many more of the advanced features available in dot matrix printers, like alternate character widths and microspacing. You can also use more than one printer with NewWord without two different installations of the program, since one of your print-time options is selecting a non-default printer driver.
- o Superior menus, help messages, and documentation - For novices, the non-technicality of NewWord's online help is definitely an advantage. Its menus are "cleaner" to the eye. And while WordStar's 3.3 manual is far better than the 3.0 manual familiar to Morrow users, NewWord's is still a cut above.
- o Handling of user numbers - This is an issue with the MD-11 or other CP/M 3.0 systems only. WordStar has no provision for logging into various user areas or copying files among user areas. NewWord does have this capability. But that's a technical matter, so lets move on.
- o Novice version of NewWord - The novice version is a separately-priced option that may be useful to people with absolutely no wordprocessing experience. For the sake of simplicity, many features like block operations are not included, so it will be outgrown quickly.

Definite Advantages of WordStar

There aren't too many, but here they are:

- o Column mode - I've never used it, but others tell me that it's so cumbersome as to be almost useless.
- o Dimming of marked blocks - NewWord simply puts markers (and <K>) at block ends, which is not nearly as nice. This is being changed, however; see below.
- o Backspace backspaces - WordStar filters the ^H of a Backspace stroke to be a ^S, or cursor-left. NewWord does not. Thus a Backspace under NewWord acts like a Delete.
- o Print straight from memory - WordStar's ^KP command (print document as is from memory without saving) is completely absent from

NewWord. NewStar simply decided that it wasn't used enough to justify implementing it.

- o Return and Insert Mode - With WordStar, the action of the Return key depends on whether insert is on or off. With insert off, you can step down the screen with Returns. In NewWord, Return always acts as if insert is on. Therefore, if you try to step down the screen, all you do is insert a bunch of blank lines.
- o Numbered in-text markers - These are place markers used frequently by programmers so they can conveniently scroll around source listings (^K1 to place it, ^Q1 to find it). Regular folks don't use them much, especially when you consider that they're not saved with the document.

Matters of Taste

Some differences between NewWord and WordStar are judgment calls. The changes were made intentionally by NewStar, Inc., so I'll try to present their rationale.

- o ^N, or Insert blank line - NewStar Inc. opted to change the meaning of ^N from Insert a Hard Carriage Return to Clear a Hard Carriage Return. Now, I really miss WordStar's ^N. Any time I want to insert a blank line, I have to go to the end of the line above that and press Return.

On the other hand, you know what a chore it is to clear hard carriage returns in WordStar. If you entered text with word wrap off, and then later decide you'd like to change its margins or justification, you've got your work cut out for you. Not so with NewWord. Flip a coin.

- o Use of bright and dim - WordStar dims its menus, and highlights your text (except for marked blocks). NewWord dims everything except keystrokes in the menus. Now there's a reason for this: AN UPCOMING RELEASE OF NEWWORD WILL UNDERLINE AND BOLD ONSCREEN INSTEAD OF DISPLAYING ^B AND ^S. Blocks will be marked with reverse video. Since bold will be highlighted, the rest must be half-intensity for contrast.

Of course, your terminal must be capable of displaying these attributes. Morrow's MDT-60 and MT-70 will work, as will the MD-3p portable Micro Decision. MDT-50 and 20 will not. Stay tuned - upgrades will be available for those with the current NewWord and WordStar.

- o Return to defaults after ^KD - NewWord has been criticised for returning to the default settings to justify, insert, margins, and help

level after saving a document with ^KD. Now, this would be a hassle if it happened after ^KS, where you'd be working on the same document.

NewStar's line of thinking is this: Most of your documents will use the default values for these items. If most use other values, you should change the defaults with NWINSTAL, the installation program. If you're working on an unusual document and you've changed margins, etc., you're likely to be done with it after a ^KD. You'll be moving on to another document that probably does use the default values. With WordStar, you'd have to reboot to get the default settings back. In short, if you're changing margins, help level, or anything else too frequently, you should change the default settings with NWINSTAL.

See also "Embedded rulers" above.

- o What constitutes a word - A picky matter, perhaps. Well, if you wanted to correct hickory-dickory-duck with WordStar, you'd have to use repeated ^S's to move into the phrase, since a ^F moves you past it. Not true with NewWord. Also, if you wanted to erase just "hickory," you'd need to use seven ^G's, because ^T would erase the whole phrase. Again, NewWord sees the dashes as word-borders.

Now the down side: When you erase a word (^T) under NewWord, it eats up the spaces between it and the next word. So you end up going "CONTROL-T-SPACE" a lot.

- o Cursor placement after ^KS - WordStar leaves your cursor at the beginning of the file, with a message to enter ^QP if you want to go back to where you were. Any other keystroke, even a stray one during the save, disables the option. NewWord takes you back to where you were regardless. I agree with Mr. Tannenbaum's mixed feelings about this. In any case, the difference is not significant.

Conclusion

This article has challenged or conceded all of Mitchell Tannenbaum's criticisms of NewWord in the February '84 BAMDUA Newsletter, except one: refreshing the directory display after switching diskettes. The NewWord Opening Menu command for this is L, to log onto a new disk. You must do this whenever you change disks, so I don't know how it escaped his attention.

In the opinion of this professional writer, NewWord is undistinguishable from WordStar in all important areas. Where the two programs are not exactly identical, NewWord has more marks in its favor than does WordStar. Regarding the ease of changing the installation options and the quality

of the documentation, online and manual, it is quite superior. And with merge printing included, it is an exceptional value at \$249.

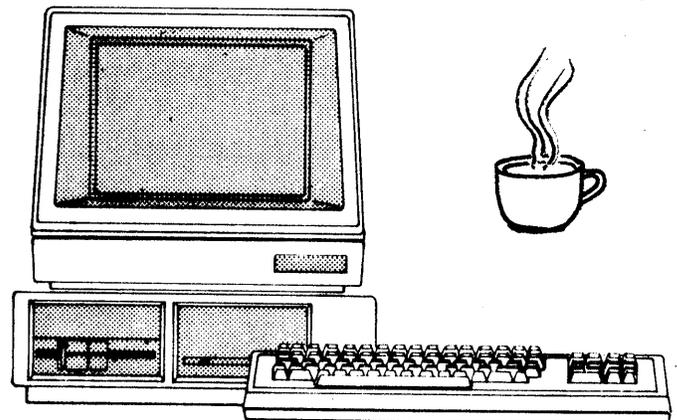
(NB: Owners of WordStar. Morrow has contacted dealers with the information that an upgrade from WordStar to NewWord is available for customers for a special price of \$100. The customer must make the upgrade trade through a dealer. Only ORIGINAL WordStar distribution diskettes will be accepted and your dealer might require full payment at the time of the order. See CURRENT MORROW PRICES in this issue. Editor.)

SPECIAL CREDITS

This issue has enjoyed the combined talents and skills of many people. A few deserve special mention:

AUGUSTA LUCAS-ANDREAE - M.O.R. logo on page 1
GAYL CHUN - drawings on page 12
ROBERT JOHNSON - cartoons on pages 1 and 16
JEFF WEISSMAN - photo's on pages 25 and 26
WILLIAM RODARMOR - photo on page 27
PAMELLA ASQUITH - drawing on page 29
CAROLYN SHAFFER - in-house editor, who did all she could to cover up the fact that the grammar and punctuation of your editor-publisher is less than perfect.

Let's also give credit to the faithful MD11 we borrowed to "typeset" this issue. Occasionally it would rattle its cage. For lack of attention? And it would start somewhat reluctantly in the early mornings. Does it need coffee? But that is nothing compared to having all that disk space and speed and the use of graceful CP/M 3.0 utilities.



Consider: you're the owner of a small business, needing comprehensive computer accounting to manage for growth. But you're wary of spending big dollars demanded by the heavy hitters now on the market.

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MEET THE DISK DRIVES IN YOUR MORROW

by Sypko Andreae

This article first appeared in the BAMDUA newsletter of March 1984

Ever wonder what the names of the disk drives in your Morrow are and who makes them? One day you may have to face your dealer or his technician with a drive problem. If you start blubbering about what's wrong with your disk unit he may lend you an ear, but if you say: "Listen, I have a Toshiba drive with the 'sleepy drive' syndrome," he may really pay attention: Hmmm, a customer who knows of which he/she speaks ...

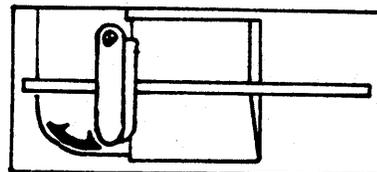
May I introduce you to your disk drives? All floppy-drives on the Micro Decisions are Double Density (DD). If you have an MD2 you most likely have SHUGART SA200 single sided (SS) drives. They have a door handle and a red arrow to show you the way. Put SS and DD together and you will understand why the floppies you buy for these drives are called "SSDD, soft-sectored".

If you have an MD3 you will have any one of four makes of double sided (DS) drives shown in the picture alongside. You feed them with "DSDD, soft-sectored" floppies. True, you could use SSDD floppies in a DSDD drive, but then you take a cut in reliability.

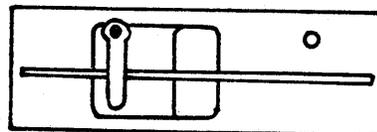
Notice that the MD3 drives only take up half the space of the MD2 drives. In the MD2 two whole 3 1/2 " high slots are taken up by the A (left) and B (right) drive, while in the MD3 only the left slot is occupied by drive A (bottom) and B (top). Now you know how to tell an MD2 from an MD3 just by the looks of it. You'd be surprised how many users don't know the difference, or even care to know.

The SHUGART SA455 drive is nearly identical with the MATSUSHITA JA551 drive at the bottom of the picture. The TOSHIBA DDF-30 is the only one with a little springloaded door and drive lock switch. If you move that switch to the left you cannot open the door anymore, so your toddler is inhibited from removing your precious data or program disk and consuming it whole. The TOSHIBA drive is not shipped any more with MD3's. If you got your MD3 recently you may have the TEC/NSA F5503 drive.

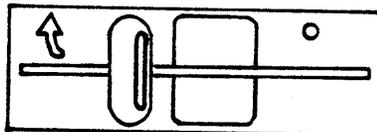
Why has Morrow sent all those different drives in the field? Well, it is a matter of wheels and deals, delivery times, etc. But fear not: All these drives adhere to the same standards of writing and reading disks and you may never know the difference.



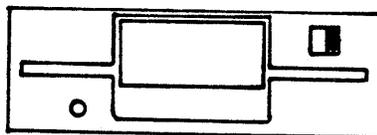
SHUGART SA200



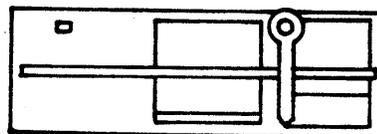
SHUGART SA455



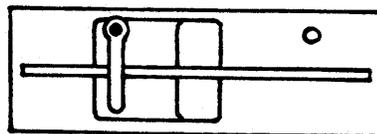
QUME QT142



TOSHIBA DDF-30



TEC/NSA F5503



MATSUSHITA JA551

The "Sleepy Drive" Syndrome.

Recently users reported a problem with some of these MD3 drives. Suppose your drive had been sitting still for some time, while you were carefully re-phrasing your WordStar lines on the screen. Now you do something that calls the disk into action. Very rarely but most annoyingly the drive may never get up to speed. It may try to go and putter a bit with its red light glowing, but nothing else happens. Finally CP/M runs out of patience and proclaims "Disk error: drive B not ready," right in the middle of your carefully honed WordStar phrases.

You just witnessed the "sleepy drive" syndrome, caused by stickiness of the head. No, no, not your head. Relax. Contrary to what many users thought when they witnessed this: This is not your fault.

What happened? Let's take a look inside the drive. As long as the drive is not spinning the read/write head is actually touching the disk surface. Wouldn't that scratch the disk? Not really, because when everything goes all right at the time the disk starts spinning, the head actually "takes off" like a little airplane. When the drive is up to speed it flies low - very low - over the disk surface.

Pilots among you may recall what "ground effect" is. The head actually flies in "ground effect", barely, but not quite, touching the disk. Close enough to pick up the magnetic field changes that bits and bytes are made up of, but not so close that it scratches the floppy surface. When the drive stops spinning, the head more or less gracefully "lands" back on the disk surface again, and slides to a stop.

This is what happened when the drive failed to come up to speed: The read/write head was sticking to the disk surface like two panes of glass. The little airplane was unable to take off. Sea planes (float planes) have the same problem on a mirror-flat lake. A well-known trick of bush pilots in such a situation is to taxi around the lake to destroy the glossy mirror and then take off in their own waves.

Wake-up Cure for Sleepy Drives.

One nightmarish aspect of this problem was that it occurred so rarely. If something fails all the time at least you can repeat the circumstances and study it. Not so in this case. Nevertheless the Morrow engineers figured out that certain very flat heads, positioned over certain tracks on certain floppies had a propensity for sticking, enough to occasionally balk an attempt of the drive motor to overcome the resistance:

"Putter..putter...put.....put.....put."
Silence.

Unlike the bush pilots the Morrow engineers could not very well create waves. Instead they solved the problem by jiggling the head back and forth at the time the drive was asked to start spinning. That did the trick. A nice "work-around" as this kind of solution is called: It does not really solve the problem but it gets around further hang-ups. And that's really all you need.

So blame yourself no further for having done something to bring the wrath of CP/M diagnostic messages upon you. Ask your dealer for replacement of your ROM with ROM Rev. 2.5. It will faithfully do its little head-jiggle and keep you out of further trouble.



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DISK DRIVE ADDITIONS FOR

MORROW MICRO DECISION

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The Morrow Micro Decision Computer can use up to 4 disk drives. There is little information available to the user on how to add the additional drives. These notes describe the method I used. I can't guarantee that you'll succeed, but my system has been working well for a couple of months now.

THE COMPUTER:

Morrow has a number of different configurations in use in the MD series. The system described here has Shugart SA200 disk drives and a Revision 1.1 motherboard. This configuration has 2 serial ports, no parallel port, and an expansion disk connector at the rear of the computer. Note the numbers above the drive expansion connector in Figure 1. They refer to the pins on the connector.

SOFTWARE:

Before you make ANY hardware changes, make the needed changes to your software. (While you "know" everything still works!) You'll have to set up your CP/M to recognize the third and fourth drives. To do so, place your CP/M distribution disk in drive A and boot the system. Follow the prompts. When it asks for the number of drives, type '4'. When you get to the main menu, type ESC

to exit. Place your CP/M distribution disk in a safe place.

Boot your new CP/M working disk. You should be able to access drives A and B as before. If this works, try accessing drive E. This should act as a virtual drive. (You'll be requested to remove the disk from drive A, and insert the disk for drive E.) Finally, try accessing drive C and drive D. For either of these drives, you should receive an error message inviting you to abort, retry, or ignore the error. If you get the correct responses from the software, you can then use SYSGEN to move copies of the system to other disks. Make sure that you have 4 formatted disks on hand for testing.

HARDWARE:

To add the two drives, you will need two Shugart SA200 drives (with manual), a dual horizontal disk drive cabinet with power supply, a 34 conductor cable with edge connectors, wire, solder, and hand tools.

Begin with the cable to connect the drives to the computer's expansion drive connector. You can buy it, or make it yourself. If you make one, you will need a length of 34 connector ribbon cable and three matching edge connectors. Assemble the cable with one connector at one end, and the other two connectors spaced about a foot apart at the other end. If the connectors are the slip-on style, be sure to install the connector marked 'C' before installing the other connectors. (Considerable pressure may be needed to insure good contact between the cable and the connectors. A rubber mallet or vise may be useful.)

Fig. 1: MD2 REAR VIEW

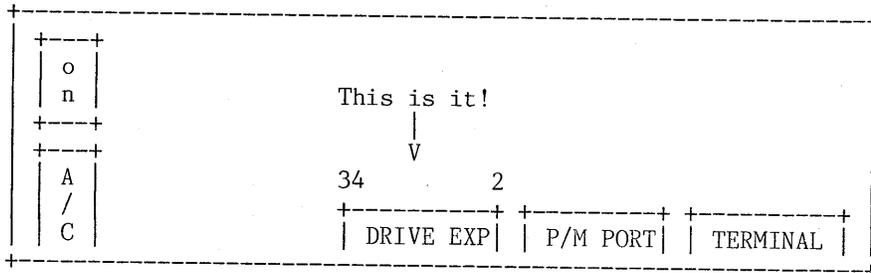
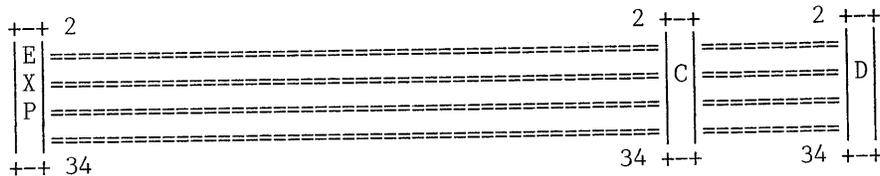


Fig. 2: CABLE LAYOUT



Next prepare the drives. Referring to Fig. 3, locate the terminating resistor pack (T in Fig. 3) and remove it. Locate the Disk Select jumper and place the jumper at DS1. This will be drive C.

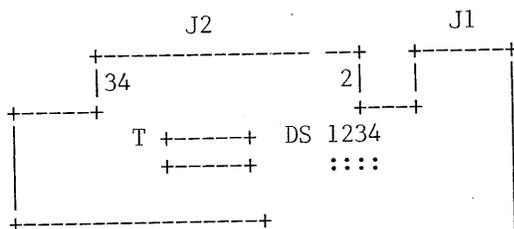
Preparing drive D is a bit more complicated. Some soldering will be required, so plug in your soldering iron. Leave the terminating resistor pack in place. Place a jumper at DS2. Now refer to Fig. 3 and locate edge connector J2. The pins on this connector are odd numbered on the bottom, and even numbered on the top. Viewed from the front of the drive, pin 2 is on the right, and pin 34 is on the left. Carefully solder a small piece of wire from pin 4 to pin 12. It is important to solder the wire on the drive side of the pins, so that the edge connector can still slide over the pins. This jumper connects +5VDC to the drive Select 2 input. (Some documentation from Morrow indicates that pin 2 and pin 12 should be connected, but that did not work in this case.)

Power up the entire system, and if it passes the blue smoke test, try drive A and drive B to make sure that they still work correctly. Then try drive C and drive D. You should be able to read the directory for all 4 disks. If things are still going well, try to format the disks in drive C and drive D. Use PIP to transfer files from A and B to C and D. If that is successful, check to insure that disks written on C and D can be read on A and B.

With care, you now have a functioning four drive MD2. If you have problems, review the entire procedure. Pay particular attention to the disk connector cable; it is the "weak link" in the setup.

Special thanks to Rick Rowe of Morrow Computers for his assistance.
 Note: Micro Decision (R) is a product of Morrow Designs, Inc. CP/M 2.2 (R) is an operating system developed by Digital Research, Inc.

Fig. 3: PARTIAL TOP REAR VIEW OF SA200



Next install the drives in the cabinet. The Shugart SA200's are 2/3 height drives that are to be installed horizontally. They may be mounted side-by-side, as in the MD2, or stacked.

Important: Install the drives horizontally, with the printed circuit boards on the top. If the printed circuit boards are mounted underneath, the drives may be damaged.

Connect the power supply to J1 of each drive, and perform the initial checks listed in the SA200 manual. Power up the drives for the blue smoke test.

If the drives are functioning properly at this point, install the cable from the computer to the drives. Take care that pin 2 on the computer is connected to pin 2 on the drives!

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CUSTOMER SUPPORT PERSON: Help wanted - Morrow currently has positions open in the dealer support department. Primary job function is to provide telephone support for both hardware and software on the Micro decision product line. Possibility of working from your home anywhere in the country. If interested send resume to Morrow, Inc., 600 McCormick Street, San LeanOdro, CA 94577, attention: Personnel. No phone calls accepted.

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DAVID'S Q & A COLUMN

This is Dave Block, Micro Decision Product Manager, one of the people at Morrow who receive some 200 "fan letters" every day. One of his life's frustrations is that he cannot possibly answer them all. This Q & A column is the next best thing and will be a regular feature in this newsletter.

Portions of this column have been extracted from the soon to be released best-seller Micro Decision Question and Answers, by David Block himself.

+ + + + +

Q: According to the Micro Decision manual, the I/O ports are programmable. How can I control them? Is it possible to change the speed of the printer port under software so that I can use a printer at 9600 Baud, and a Modem at 300 Baud without going inside and changing the switch setting?

A: On REV 1 Micro Decisions, there is a program called "SETBAUD." This program only allows you to switch between the Baud rate set on the switch inside the Micro Decision, and 1/4 the Baud rate set on the switches (i.e. 1200 and 300, or 4800 and 1200). It accomplishes this by telling the 8251A USART to use divide by 16, or divide by 64, when receiving characters. Rev 2 Micro Decisions came with a program called SETUP. This will NOT work on the Rev 1 board.

On REV 2 Micro Decisions, there is a programmable timer (8253) chip used to determine the Baud rate of the serial ports. The CBIOS developed by Morrow for the Micro Decision has been provided with the necessary intelligence to allow easy setting of the Baud rate for either port from within an applications program. A sample assembly language routine to change the Baud rate of the Printer / MODEM port is given here. To change the routine to set the Baud rate of the Terminal port, just add one more "DEC L" to the code.

The following procedure will work only with REV 2 Micro Decisions.

```
SETRATE: LD HL, ($F242)      ; get pointer to
                                ; baud rate index
          DEC L
          DEC L
          DEC L
          DEC L
          DEC L              ; baud rate index
                                ; now in HL pair
```



```
LD (HL), BAUDINDEX ; store index of
                    ; desired baud rate
CALL $F252          ; re-initialize
                    ; counter timer chip
RET
```

Note: The addresses given here are for 64k CP/M systems only.

BAUDINDEX is a number which corresponds to the baud rate desired, as follows:

BAUDINDEX	BAUDRATE
0	110
1	300
2	600
3	1200
4	2400
5	4800
6	9600

Q: Where can I get a listing of software which runs on the Micro Decision?

A: Morrow has compiled a book called the Morrow Microcomputer Software Sourcebook. The book lists 100's of programs for the Micro Decision. Each program has a list of required equipment (MD2, MD11, Plotter, etc), the software developer, and the distributor.

Although not available for purchase, each dealer has a reference copy available so that you may look for a program to meet your needs. If you've been looking for specialized software, you may very likely find it here. Even if you need a Swine management program for managing your farm, it's there.

In addition, Microsystems magazine (POB 1987 Morristown, NJ 07960) published a list of over 1700 CP/M programs in the Dec. 1983 issue. Well worth the effort to track down.

Q: Why are there no upgrades available from an MD1 to an MD3? How about MD2 to MD11?

A: To let you in on a secret, the upgrade kit to turn an MD2 into an MD3 contains everything required to turn an MD1 into an MD3 as well. The upgrade consists of two double sided disk drives, Quest accounting software, and a double-sided CP/M master diskette. It is available through your dealer for \$649.00.

No upgrade is available to turn an MD2 into an MD11, because in performing such an upgrade, there is absolutely nothing other than the cover from the MD2 that can be used for the MD11. All things considered, it would cost significantly less to sell your used MD2, and buy an MD11. (You can keep your terminal if you want.)

Q: Is it possible to run the new CP88 16 bit co-

processor board in an MD11?

A: Yes. The CP88 board, scheduled for delivery in late April, will work in an MD3, or an MD11.

Q: I want to use my Micro Decision to communicate with the TELEX network. Is special software required?

A: We have not yet made a public announcement of it, but Morrow has recently acquired the Micro ez-Link software package. We will be bundling it with the 300 baud Morrow MM300 modem, along with the ReachOut modem program. Micro ez-Link is specifically designed to allow sending and receiving of TELEX's using Western Unions ez-link system. The cost of the modem, including Reachout and Micro ez-Link is \$299.00. Remember, you read it here first!

Q: How can I custom install WordStar to make use of all the features my dot matrix printer claims to have. When I re-installed WS, I found that my printer was not on the list of supported printers, so I had to settle for a 'Teletype like' printer. I would really like to be able to change between 10, 12 or 17 characters per inch, and use the double width or italic characters.

A: Although it will take a bit of studying, and possible cause some frustration, section 7 of the WordStar manual defines the various functions that can be customized to drive your printer.

Suggested areas to patch for different functions are:

<u>WordStar Terminology (label)</u>	<u>Possible Function</u>
Non-Daisy Alternate pitch (PALT)	Set double wide char mode
Non-Daisy Standard pitch (PSTD)	Reset double wide char mode
Non-Daisy Roll Up (ROLUP)	roll up for sub scripts
Non-Daisy Roll Down (ROLDOW)	roll down for superscripts
Non-Daisy Ribbon color (RIBON)	Set italics mode
Non-Daisy Ribbon color (RIBOFF)	Reset italics mode
Special user function 1 (USR1)	Set 10 CPI
Special user function 2 (USR2)	Set 12 CPI
Special user function 3 (USR3)	Set 17 CPI
Special user function 4 (USR4)	Set Enhanced print mode

Not all of the above suggestions are supported by every printer, but this will at least help sort through the process. In order to patch the WordStar, you must re-install WS using the program INSTWS on the WS DISTRIBUTION DISKETTE. Answer NO CHANGE to EVERY question, or YES if it wants you to confirm something, until you get to the question 'ARE THE MODIFICATIONS TO WS NOW COMPLETE?'. Answer No, and you will drop into the patcher, leaving you at the point where one must understand what one is doing, or you may end up lost.

The general format of the patching is:

WORDSTAR OUTPUT

Location to change?
...New Value?
Location to change?
...New Value?
Location to change?
...New Value?
etc...

YOU TYPE

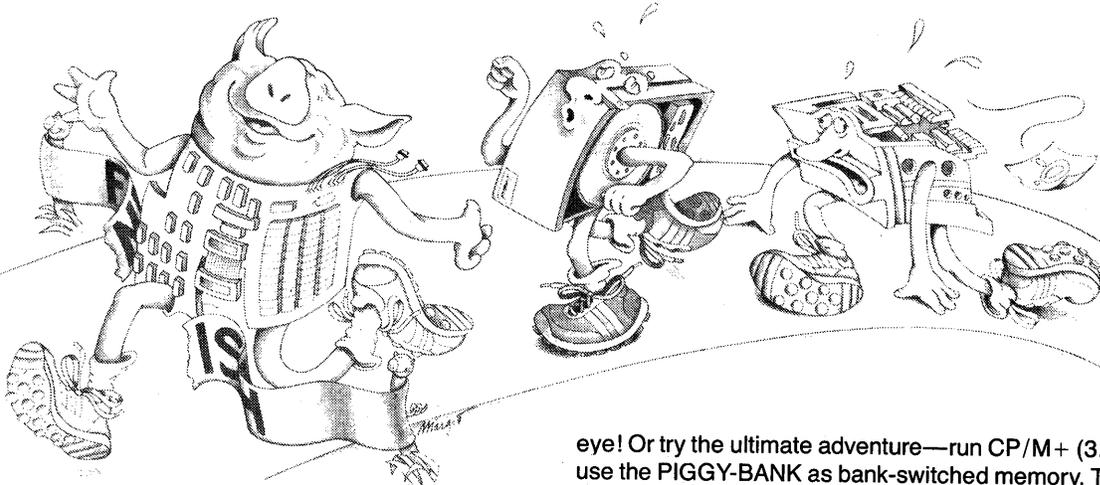
LABEL: i.e. 'PALT:[RETURN]'
Number of bytes required for function
[RETURN] advances to next byte
1st byte of string
[RETURN] advances to next byte
2nd byte of string

Perhaps someone out there would like to write an article on a specific dot matrix printer they have patched for. Any takers?

Q: I manage several different accounts. How can I run more than one Quest?

A: The \$37.50 registration fee for Quest is for one account. To run multiple accounts with different company names and data, you must register again with Quest.

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- Osborne 1: Single density Osborne Executive Morrow
 Double density Kaypro

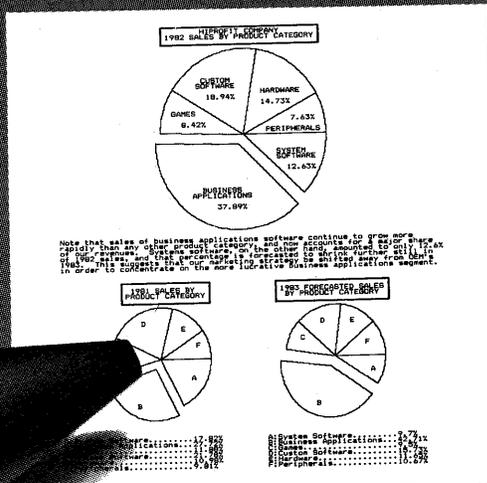
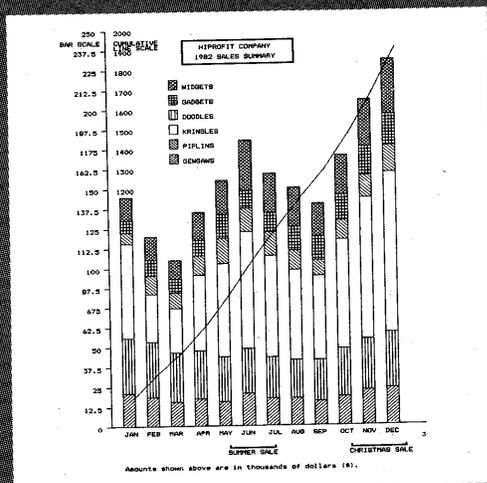
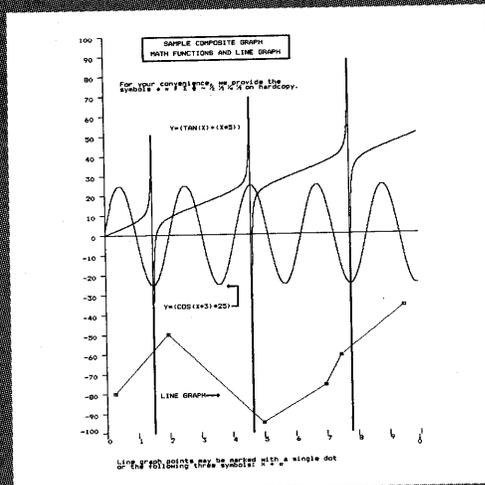
Name _____

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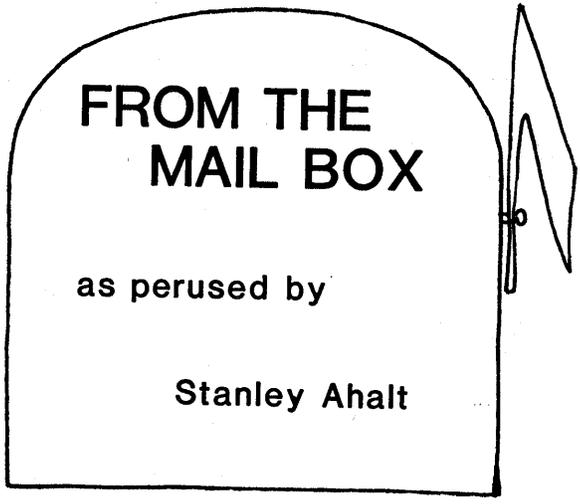
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I was installing a U.S. Robotic Password Modem and their documentation is poor and absolutely no help. Fortunately the modem SOFTWARE I purchased contained the HARDWARE information I needed to complete the installation! The following cable configuration is extracted from the MITE User's Manual. MITE is a product of Mycroft Labs, Inc., P.O. Box 6045, Tallahassee, Florida 32314. If anyone is looking for a good modem program I strongly recommend MITE.

Cable configuration:

Computer	Modem
2-----	3
3-----	2
4-----	5
5-----	4
6-----	20
7-----	7
20-----	8

This column is a public forum for the Morrow users around the country. I hope that you all will feel free to send in your questions, and any answers you want to share with your fellow users. I will attempt to deal with technical questions which are either software or hardware in nature, and if I can't answer your question, maybe one of our fellow users can!

As some of you might already know, I am attempting to put together the "Best of the Public Domain Software." I have received excellent software from many people, and I owe them all thanks. Since this is the first issue of a truly nationwide Morrow newsletter, let me take this opportunity to ask that you send me any public domain software that you have found particularly useful (the disk will be promptly returned). I intend to gather it all together and make sure it is tested and includes documentation (where possible). Then I will make it available, at no cost, to anyone who sends disk(s) to me.

From R. R. Seely, Sumter, S.C.:

Here are some of the problems and solutions for installing a modem on a MD2. I called Mycroft Labs and received their permission for you to print this information in the newsletter, if you desire.

The notes in Morrow Designs User's Guide, Appendix, D concerning J2 modem configuration are misleading and I could not get my modem to operate with J2 configured the way the manual depicted. The explanation leads you to believe that if you configure J2 as a printer port you need only reverse pins 2 and 3 on the modem cable - WRONG! The alternative presented is to reconfigure J2 - WRONG again!

(The above diagram shows more connections than you need for most modems connected to an MD. It may suffice to just connect pins 1-2-3-7, with lines 2 and 3 crossed. Try it. Editor.)

I suggest that you buy a male and female [DB25] connector and connect the wires between the two connectors as shown above. The two connectors wired together will properly interface your modem to the MD2. Connect one end to the modem and the other end to the MD2 printer/modem port. I do not recommend altering the pin connections on your modem; it may void your warranty. Sources for the DB25 connectors can be found in most computer magazines or you may find them locally at a electronics parts' supply.

(If you don't like soldering buy the EIA Line-Link from INMAC, (408) 737-7777. It has detachable jumpers for wires between the connectors. Insertion/extraction tool included. Connector combinations M/F, M/M or F/F. \$20 on the plastic. Editor.)

William L'ampl requires that his MD3 be able to talk with other computers which expect even or odd parity. Unfortunately, the MicroDecision has no provision for transmitting characters with odd or even parity, (the system automatically sends No Parity). I believe it will be necessary to write a small program to reprogram the 8251 UART which serves as the serial port controller. If anyone has already written such a program, or can suggest an alternative, please get in touch with me. (See first answer in DAVID'S Q & A COLUMN on page 16 in this issue. Editor.)

From Dave Garland, Minneapolis:

..... Re the 0-length .COM file to restart programs, I just now tried it with MBASIC and it worked for me. Procedure: loaded MBASIC in A:, loaded a .BAS program from A:, saved to B:, changed the B:disk and saved to B: again...it gave me the CP/M DISK R/O error and went back to A>...typed "RUN"(my 0-length program is RUN.COM, and it is on most of my program disks, including the one that holds MBASIC) and was back at the command level of the BASIC interpreter; the program I originally loaded was still there and could be LISTed; apparently CP/M relogs the disk when it hits the error, because the program was successfully saved on the next try. I also tried RUN instead of SAVE when I got back into the interpreter, and that worked also.

Perhaps the TVI (TeleVision Interference) problem mentioned is due to a defective power supply. I know that Morrow at one time (back before I got my machine) replaced the power supplies on all the MD's (including those already sold) due to (I think) excessive emission. I have no problems with a (very cheap) TV in the same room.

I've written a BASIC program to fix Pearl output files; there was a listing of it in the MUG.1 Newsletter, but enclosed is a copy to save you the work of keying it in. It's also available on one of the MUG.1 program disks. It was written for handling a mailing list via MailMerge, but also has provision for just moving those trailing spaces rather than deleting them, should you be using Pearl to directly generate your output format. The only problem with MailMerge use is that if one inadvertently has a comma in a field, everything gets out of sync; CLOSEGAP could be fixed to check for commas and put quotes around any field containing one... I'll probably do that if people complain...

From Larry Dessner, Ohio:

The location of WordStar's default Line-Height setting is 0366(hex). But it "is repeated" at 036A, 036E, and 0372, and "must be repeated" at 0376 and 037A. Larry surmises that "is repeated" and "must be repeated" are the same thing.

Larry also notes that he has ROM Rev. 1.3 (as do I - Stan) and wonders if there is any advantage in attempting to replace the old one. Does anyone out there have any feel for this issue? Replacing the old ROM is a simple matter of pulling out the old chip and replacing it with the new one, but are any BIOS changes required? What ROM's go with each board revision?

From Scott Goldstein, NY:

Scott writes to ask what the "SET-UP", "BREAK", "HOME", "LINE FEED", "SAVE", and "PRINT" keys are for on his terminal. Well, that depends on what ASCII codes are generated by each key, and this varies from terminal to terminal manufacturer.

In general, the "BREAK" key causes the transmit line of the serial port on the terminal to go low for a specified period of time (approx 1 ms). This used to be used as a signal to a mainframe computer that the terminal user required attention (HELP!). There isn't much use for it on a most microcomputers (we can always hit the reset key if the dang thing runs amok). "LINE FEED" does just that, it makes the terminal scroll up a line.

Usually, the "SET-UP" key is used to initialize the terminal's baud rate, parity, line width, scrolling mode, etc. The rest of the keys may or may not generate anything that your computer can understand. For instance, on my terminal I have a "SEND PAGE" key that generates the ^K^D sequence, which is what WordStar expects to receive when the user is finished editing a document. If you can get a copy of the technical manual for your terminal, it will list the exact code sequence that each key generates. Then, you can attempt to determine what effect each of the keys will have on any particular program you are running.

From Robert Seals, Tennessee:

Robert would like to get his IDS Model 480 printer to microjustify his letters when used with Wordstar. Has anyone had any success along these lines?

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PROGRAMMER: Looking for senior systems programmer. Should have experience with CP/M-86 and MS-DOS, BIOS and hardware drivers. Good growth potential for the right person. Salary commensurate with qualification. Send resume to Morrow, Inc., 600 McCormick Street, San Leandro, CA 94577, attention: Personnel. No phone calls accepted.

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WHY NOT ALICE IN THROUGH THE CPU?

By Lenore Weiss

This article first appeared in the BAMDUA newsletter of Feb. '84.

I'd like to see Alice in Wonderland behind a computer, giddily making her way through data base, word processing, spread sheet and BASIC programming. Who knows? It might change the face of computing.

She'd probably think of many innovative uses as long as they could fit between tea times which seems civilized enough indeed. Or just imagine Alice let loose at a Computer Faire, preparing for the big purchase. Why, her encounters with various cryptic engineers, programmers, and marketing staffs, would make the Mad Hatter and the Queen of Hearts look tame.

But just think. If Charlie Chaplin's image can be enlisted in the service of computers, why not Alice? She seems a perfect symbol for the computer age -- always asking questions and very puzzled by the illogical logic contained in each response.

I suppose many marketing departments would argue against Alice representing their product because she doesn't have money. After all, she's just a little girl with probably a pittance of an allowance. But does Charlie Chaplin have money? No! In fact, how can one very large computer company be so sure that the little tramp won't disappear down the horizon twirling his cane? Especially with the onset of warmer weather.

Why Not Alice???

Now, I love Charlie Chaplin and I don't want to malign even his commercial stand-in by suggesting that he'd renege on a contract, particularly if it's a paying one. Charlie, like most of us, would have better sense. All I'm asking is, why not Alice?

It's no secret that marketing departments generally sell to people they think will buy their product. It's in the big leagues where Alice loses out.

The marketplace for computers is perceived to be corporate men whose John Hancock carries some weight at the end of each fiscal quarter. Alice and her sex just don't have the same financial backing. But with the so-called "shake-out" going on in the personal computer industry, I think marketing departments throughout Silicon Valley would be wise to give Alice a second appraisal.

Do you remember when Alice had all those strange encounters with shrinking and expanding, shutting up like a telescope, and then wondering if her hands would ever again be able to tie her shoes? Well, the income of today's family has been undergoing drastic changes just as significant as Alice's.



Federal Census Study

According to a recent Federal Census Bureau survey, nearly six million American wives earned more than their husbands in 1982. The study found that of 3,997,000 couples in which both partners worked, the wife had a higher income. And the figures on women as the sole wage earner totalled 1,933,000. For many families these days, it may well be that women have at least equal say in making major financial decisions.

Furthermore, as two-income families become the norm, more women are choosing to work at home because (1) they aren't getting the promotions within corporations; (2) they have children and working at home provides greater flexibility, and (3) working at home gives women a chance to build upon personal community and business contacts developed over the years.

It is estimated by the National Alliance of Homebased Businesswomen that two to five million people (mostly women) in the United States are working from their homes. The personal computer, business tool that it is, offers new possibilities for just this group of people.

Let Communicators Communicate!

But apart from Alice's financial standing in the computer community, one thing seems very curious, indeed. Women have traditionally been viewed as the "communicators" within our society. So why isn't this group automatically perceived as computer naturals?

Can you see the Victorian boy of Alice's day getting mixed up with a Caterpillar, a Cheshire Cat, White Rabbit, Dodo Bird, Dormouse, and a Duchess with a baby of a pig? Somehow, I see that boy engaged in more specialized pursuits like grooming horses, or trying to sneak into a pub.

In fact, there may be a scientific basis for this difference of development between girls and boys. Christine de Lacoste-Utamsing, working at the University of Texas' Health Science Center, indicates that the corpus collosum which connects the right and the left brain, is larger in women and allows for more communication between the brain's two spheres. These parts of our brain are individually responsible for the way we process our intuitive and logical thinking.

Her studies indicate that this difference may have been the result of adaptive environmental pressures. Women, traditionally responsible for rearing children, have needed a more integrated understanding of the world, while men as "hunters" have traditionally required more specialized skills.

Secretaries and Computers

But here we are with a new technology that's heralded as an "information processor," a machine that can integrate facts and figures with charts and text. For years, secretaries have been performing all data processing tasks -- keeping appointments, telephone lists, calendars, rudimentary spread sheets, and typing, typing, typing! The computer really isn't that new.

Apart from making coffee, the computer is doing what secretaries have been doing for years. But in our visually-driven culture, the computer is primarily associated with the suit and tie set. Women are not seen by themselves as a mass market for this new technology. And by limiting the use of the computer to a certain image, the computer remains too much of a specialized tool indented to something called "number crunching," "projections," or worse, "integrated software." Come on, now. What is that?

What's happening in the financial districts of the world is that the secretarial pool is being replaced by the computer station. By and large, it's women who're becoming expert at using computers. At some point, the new office assistant is sitting down with her boss to show him a more effective way, for instance, to do his accounting. And I wouldn't be surprised if she has the decisive vote as to which trial computer gets to remain in the office.

Or look at our computerized "junk" letters, home financing statements, charge account bills or subscription renewal notices. Check the name at the bottom. It's usually a woman's signature. She's behind the scenes directing traffic, the computer's equivalent to an IN and OUT gate.

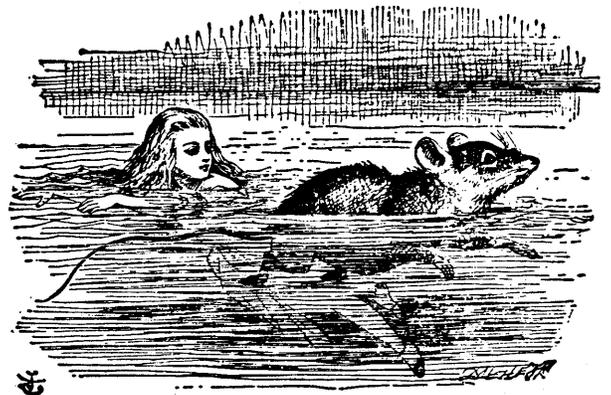
I believe the computer industry has confused "compatibility" with "same think." Isn't there a place for imagination? When are we going to see a glossy ad of a mother and daughter sitting down together at the computer terminal?

The Caucus Race

Perhaps part of the problem is the computer industry has not found a simple common denominator to explain what this new technology is all about. All of us, like Alice, seem to be running around in a Caucus race, and we are told, "The best way to explain it is to do it."

Sure, let Alice get hands-on experience. But let's also start talking about the computer as a communications tool, and contact Alice to explain on national network TV what she's learned by falling down a computer network.

Charlie Chaplin, I know you'd understand.



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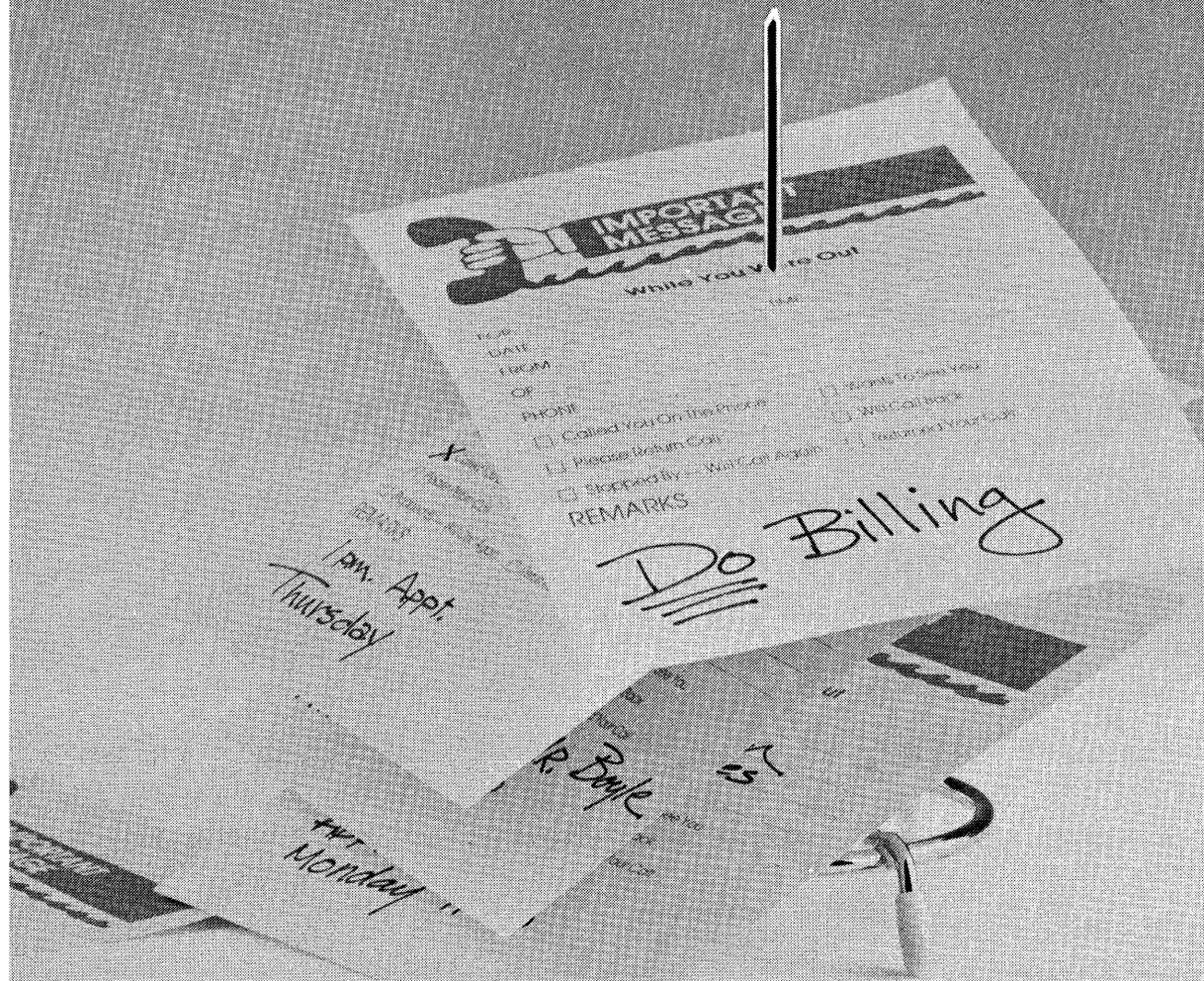
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User-friendly: George Morrow

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This article first appeared in the BAMDUA newsletter of February 1984.

Hooked to the podium by a microphone wire, George Morrow looked as if he were connected to a large, upright wooden computer. The founder of Morrow Designs squinted into the spotlights at Berkeley High's Little Theater, trying to find his questioner among the 600-plus people who showed up for the special January meeting of the people who swear by - and occasionally at - the computers he makes: the Bay Area Micro Decision Users Association (BAMDUA).



Where BAMDUA president Sypko Andreae was impeccable in tan suit and Dutch accent, Morrow wore rumpled Levi's, a dark sports jacket, blue-and-white Nikes, and talked like a cracker barrel philosopher. Though his access was a bit random, Morrow treated his audience with humorous respect. His bald head gleaming under the spotlights, George Morrow was well matched to his audience of users.

BAMDUA has grown to 600 members in its first 11 months and gets 30 new applications a week, but it is hardly in the same league as the vast groups that tug their forelocks toward IBM or Apple. On the other hand, Morrow is no giant either: it had sales of \$20 million in the fiscal year that ended June 30, and shipped fewer than 20,000 computers last year. (By contrast, IBM shipped that many in two days)

With trade magazines, user groups like BAMDUA are the noisy life-line between computer manufacturers and the public, for whom enthusiasm

and ignorance often go hand in hand. Computers are a complex new technology, and even someone who does his own car tune-ups needs more than a wrench to make his new toy do what he wants it to.

For anyone who ever unpacked a computer and then realized he was barely able to plug it in, BAMDUA and its sister user groups are a friend indeed. They offer a network of people willing to help, classes, and group purchase prices on software and supplies. Where some freely trade software that has been pirated - copied onto disks without permission - BAMDUA insists that the programs it distributes at cost be in the public domain. Computer book writer Bob Lafore was annoyed to learn that he had to pay for his BAMDUA copy of a program that allows one computer to format disks to match the characteristics of another. "I thought that was the whole point of a user's group!"

To share the wealth of information that sharing technology can generate, BAMDUA puts out a lively newsletter filled with helpful hints, doleful complaints, and gleeful break-throughs. In a recent issue, for example, BAMDUA members were told how to "customize" their WordStar program to make it run faster. But after carefully running through the steps in the article, some users found that the program reverted immediately to its former lethargic ways. Not to worry: in the very next newsletter, two members shared tips to make the changes stick.

Many Morrow owners in the Bay Area consider BAMDUA and its newsletter invaluable. But a recent poll showed that 93% of Morrow owners nationwide have no contact with any user group at all. With Morrow's financial blessing, a group of BAMDUA members decided to publish "Morrow Owners' Review" - a national user newsletter independent of both Morrow and BAMDUA, with a first printing of 20,000 copies.

While the "Review" gets on its feet, Morrow will pay for printing and mailing, while allowing the newsletter to keep any ad revenue. The tie-in has obvious risks and benefits, and it will be interesting to see whether the fledgling newsletter is able to keep its independence. BAMDUA president Andreae claims that Morrow has promised him full editorial independence, but readers can only hope the "Review" will be as irreverent as its local counterpart.

In contrast to this grassroots approach, large computer manufacturers tend to rely on advertising - often the biggest hurdle buyers have to overcome. One of the most dramatic television ads in recent years is Apple Computer's plug for its new Macintosh. Produced in England for \$400,000, it shows a woman marathoner running through a hall filled with mesmerized zombies - hired from a modeling agency that specializes in real live English skinheads - and hurling a sledge-hammer at the giant screen image of an Orwellian Big Brother. The not-so subtle message: colorful, energetic little Apple is going to smash the industry behemoth, IBM.

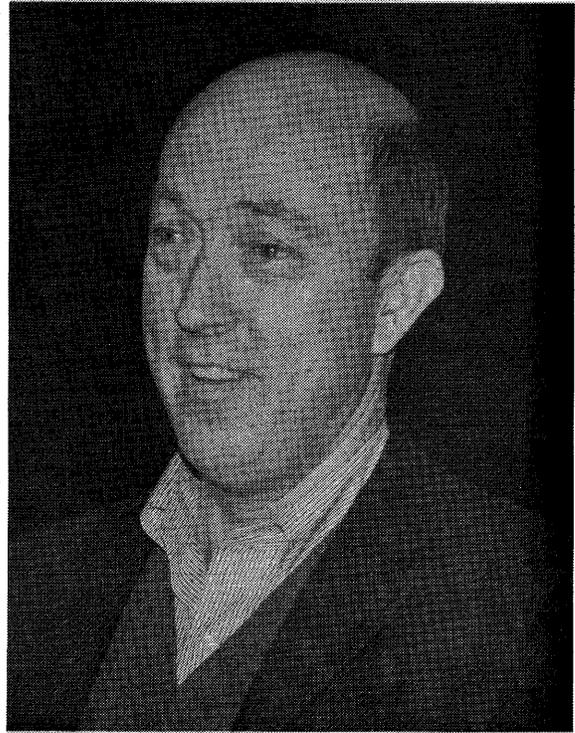
But once the shards of glass have clattered to the floor and the liberated masses rush out to find freedom in Apple's newest computer, what have they actually learned about the product? The flashy ad, which earned millions of dollars in orders for the Macintosh within hours after Apple ran it during the Super Bowl, revealed absolutely nothing about the new computer itself.

At the January BAMDUA meeting in Berkeley, Morrow tried to be more informative, while projecting a user-friendliness that occasionally made him seem as bemused and suspicious as the rankest novice. To a question from the floor about RAM drives Morrow joked that "RAM disk disease is a virulent disease which I hope none of you catch." RAM drives are added memory chip boards that bluff the computer into thinking they are disk drives. They allow very fast access to data, but Morrow says most personal computer users don't need them.

Though his company has started selling three Morrow-compatible printers (the models are "slow, slow, and medium slow," cracked Morrow associate David Block), Morrow confessed that "one of my life's mysteries is how computers and printers get together." And when a questioner complained that "nobody is dextrous enough" to use the tractor feed on the new printer, Morrow replied that one of his kids does his homework with that machine, and that he would consult with him.

Morrow Designs is a closely held company - between them, Morrow and his wife Michiko own 72.5 per cent of the stock - but the Berkeley get-together at times looked for all the world like a stockholders' meeting. Morrow announced some new products, and predicted some changes in old ones. For example, he plans to make his computers' operating system compatible with the IBM's, which is now the industry standard. And he answered questions about the company's financial situation.

While other small computer makers are being pushed aside in the IBM-Apple duel, Morrow pointed out that his company has survived for about five years, and is likely to continue. The company raised \$3.5 in venture capital, has 130 employees, and has almost always had a positive cash flow.



"We're still paying our bills," Morrow said, though he showed no small irritation with the price he pays for working capital. "Money is the only lethal drug available on a non-prescription basis, and the banks are the druggists."

Morrow Designs has also had some bad luck recently: a Washington state buyer with only \$5000 in his account stiffed the company with a \$95,000 check that bounced. Morrow said the episode reminded him of a friend who had bought a surprising amount of equipment from a manufacturer. Morrow couldn't understand how the friend had been able to afford it. "Oh, I just wrote them a 'reader,'" was the answer. "That's a check 'for reading purposes only'."

While happy to still be in business, Morrow admitted that the company wasn't as profitable as it would have been if it hadn't considered going public last year. After a run of big-dollar offerings that made millionaires of a number of small company founders, Morrow got ready to sell stock just when the market soured on new offerings. Missing the boat was costly. "We had expected to raise \$25 million," he said, "and are guilty of spending money we didn't have."

There are other problems as well. No sooner had Morrow proclaimed his deep affection for user groups than a user nailed him with a long complaint about the inadequacy of his dealer's support - often a sore point with computer buyers.



Morrow answered as best he could, finally explaining that because of his commitment to low prices ("Build it Right, Sell it for Less," is a Morrow motto) he didn't have first pick of dealers; the profit just wasn't there. But he invited BAMDUA members to keep the pressure on. "We will!" president Andreae cheerfully promised.

Where Apple is concerned about the Big Brother side of IBM, Morrow feels that government is the real enemy, and informed computer users the only guerillas likely to fight back.

Foreseeing the advent of a cashless society, Morrow is afraid we may wind up using credit cards with "a very secure program" that government could use to control a person's spending habits. "Suppose someone has been a bad citizen; why not

adjust his taxes?" he asked. "If criminals have their taxes raised, then government will be profiting by crime. I think it'll be an irresistible temptation!"

When the laughter died down, Morrow brought the fable home to his audience. "In this new environment, who will the new criminals be?" He paused, then added slyly, "I'm looking at them. People who know a little about computers are going to be very dangerous!"

William Rodarmor is a freelance writer, radio reporter and French translator. He lives in Oakland, California.

SERIAL PORT COMMUNICATIONS

by Dave Mintie

This article first appeared in the CMDUG newsletter of Feb/Mar 1984.

If you use a modem or have a serial printer, you know how necessary serial ports are for transmitting data with your Morrow computer. Many users are unfamiliar with exactly how the two serial ports function. What follows is a brief overview in laymen's terms of exactly how the ports work. It is written for the beginner. I've included some basic definitions of terms often used when discussing data communications.

Basically, a serial port is a data channel on a computer that allows serial data into and out of the computer. It converts parallel data to serial data, and serial data to parallel data. The output can then go to your serial printer, modem or other serial device.

Internally, information or data speeds around the inside of your computer in a parallel manner. To understand how parallel data transmission occurs, it is first necessary to comprehend that the smallest piece of data a computer can handle, is called a "bit". "bit" is a conjugation of the words binary digit. In computers, a bit may only have the value of a "0" or a "1". A "byte" is a grouping of eight "bits" that are used by the computer to represent any one of 256 different values which in turn represent a single digit number or letter.

The American Standard Code for Information Exchange (or ASCII for short) is used on most small computers. Such is the case with your Micro Decision. This code assigns a one byte value to every common letter or number or special character such as control characters. These bytes dash around the inside of your computer at lightning speed in "parallel."

If you think of parallel data transmission as an eight-lane highway that data travels on, it will enhance your understanding of why serial ports are necessary and why they are standardized.

Data starts out on this eight-lane highway in eight parallel lines. To go through a phone line (That's just a single wire folks!), the bits must be placed in single file. The eight-lane highway suddenly becomes a single-lane country road! Serial ports are built for just this purpose, transforming data from parallel to serial and back as required.

A serial port usually consists of a UART chip (Universal Asynchronous Receiver/Transmitter) and a 25 pin DIN connector, popularly referred to as an RS-232 plug or connector.

The bytes, which we defined earlier as being made up of eight 1 or 0 bits, are ready to go. They are directed right to the UART chip as ASCII data or code. ASCII however, is as standardized as a format requiring only seven bits for data representation instead of eight. You end up with a situation where there is one "left over bit" in every byte. (Sounds like a jingle for a new breakfast cereal!) What do you do with a left over bit? You don't do anything, your ingenious serial port does, however. It uses this "left-over" bit to detect errors in data transmission. This left-over or eighth bit is referred to as a parity bit. Think of this parity bit as part of your serial port's quality control team, checking each byte transmitted for errors.

This leads us to another area known as protocol. Picture two persons, each speaking totally different languages, trying to communicate some very important information to each other. Hard as they may try, their articulations will usually be in vain. Information will be exchanged but not understood. There is no agreement on the language to be spoken. That's where protocol comes in. Protocol determines the type of communication to be used between computers or serial devices. Items to be decided upon include Synchronous or Asynchronous communication, the speed of the transmission (300 or 1200 baud etc.) and the type of parity bit (left-over bit) to be used among other things.

Communication is just not intelligible unless both computers are "speaking the same language," using the same protocols. Once the data is processed by the UART chip it is then directed to the RS-232 port. That's the 25 pin DIN plug mentioned earlier.

What happens inside the UART is also of interest. The UART converts the data to electrical voltages. A "0" bit is represented by +3 to +15 volts. A "1" bit is represented by -3 to -15 volts.

As you've probably come to know (and bemoan) by now, there are not too many "standards" in the computer industry. Serial ports are one of the few. The voltage levels and number of pins are standardized in most computers.

This combination of the correct protocol, standardized electrical signals, etc., allows your computer to send and receive information from other computers, utilize modems, and serial printers as well as many other serial devices.

THE "LO-TECH ELECTRONICS" RS-232 SWITCHBOX.

by Dick Ellis

This article first appeared in the MUGW newsletter of Feb. '84.

Do you have both a serial printer and a modem that you need to hook to your older MD2 that only has one serial output port? Are you tired of plugging and unplugging cables? Well, you can construct a switchbox to eliminate the hassle. The switchbox plugs into the computer and both the printer and the modem get connected to the box, all you do is flip 3 switches (see Figure 1). The switches stick up from behind your computer and toggle from left to right, but could just as easily toggle front to rear. If you set your terminal on top of the CPU or you feel that the suggested design would place too much strain on the port, you may want to adjust the design by running a cable out of the box and have it sit beside the computer.

Three switches are specified in this design because in our case, using the MP-200 printer and Hayes Smartmodem, a total of nine lines must be switched to maintain the RS-232 connection. To determine the number of lines used for your system, dismantle the connector hood at the CPU end of your cable and make a record of the pins in use. On our system, the printer utilizes pins 1, 3, 5, 7 and 20. Many advertized aftermarket switchboxes use electronic components to handle all potential 25 lines in an RS-232 connector with a simple master rotary switch but this can be costly, for example, Radio Shack sells a one-line-in and two-lines-out box for about \$150.

You may be able to get double-throw switches with nine poles from a wholesaler like Arlington Electronics but we chose a cheaper route. Radio Shack has a new three pole double-throw (3PDT) toggle switch. This takes any three lines of input and routes them to either of two possible three-line outputs. Thus, three side-by-side switches will handle our nine lines of RS-232 information. We mounted the toggles to go all one way for the modem, the other way for the printer. They could possibly be mechanically connected together to toggle simultaneously.

The remaining materials you will need are a single 25-pin subminiature RS-232 male connector called a DB-25 (and a cable and hood if you want the box beside the computer) and two female DB-25s. The male connector plugs into the computer. Wires 1-3 from this connector are soldered to the center (input) pins 1-3 of the switches, and the corresponding output switch pins are wired to the two female connectors. Pins 4-6 of the male go to the second switch and thence to 4-6 on the females. Pins 7, 8 and 20 go to the third switch and on to the two females. Note that the ordering

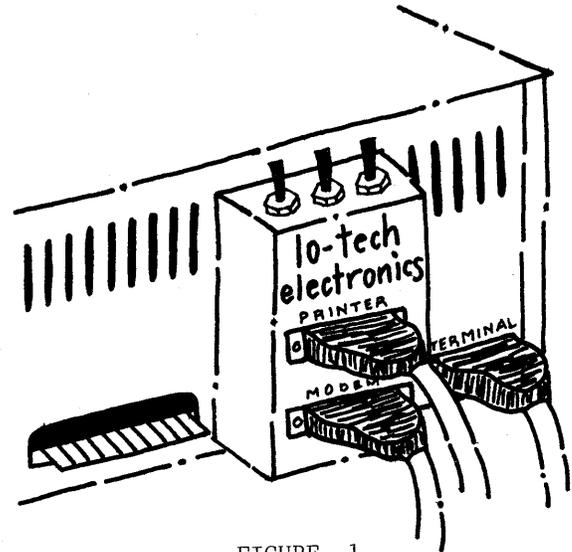


FIGURE 1

of the pins is mirror-imaged between the two connector types so that when they are plugged together everything hooks up properly. Your pin requirements may differ; you may have to switch lines 2 and 3 for output to the modem (see Appendix D of your MD manual) or you may not need all nine lines.

In soldering, you'll need a good clean miniature iron and a light touch; remember, the solder will flow toward the heat. You begin with a secure physical connection of the wires, touch the iron to one of the exposed surfaces, then solder to another and let it flow together. A desoldering squeeze-vacuum bulb will help if you get too much solder on the connector and a C clamp or hobby vise helps hold the parts steady, freeing up both hands for the work. We used ordinary solid-core hookup wire in 4-inch lengths (27 pieces in all). The wire fit the connectors exactly but had to be forced gently through the holes at the switch terminals. Only a short 1/8" stub will go into the connector. Overheating the connector will distort the plastic and pin alignment but using the needle-nosed pliers you can restraighten the pin before the plastic cools. Be careful about overcrimping the leads at the switch ends.

We wired and tested the project before actual assembly in the 4" by 2 1/2" by 1" box (see parts list). If building the computer-mounted version, the male connector should be at the bottom front of the box (see Figure 1) and the two females in

the middle rear with the switches on top. Trace the rough pattern for the connector mounts on the plastic case and use a razor knife to cut the holes. Switch holes (1/4") and small starter holes for the connector screws are drilled. Place the connectors through the holes from the inside, install the connector screws, mount the switches and screw the box back together. To dress up the job, use press-on lettering (taped over to prevent rubbing off) to identify the connections and switch directions. We also added the "house brand name" of Lo-Tech Electronics.

In constructing the stand-alone version, instead of cutting a hole for the male connector, assemble the project with a 12-18" piece of multi-strand cable (depending on the number of lines you need) and just cut a hole for the wire out of the box. Use a strain relief. Solder the male to the end of the cable and use a connector hood. You may also wish to reposition the female connectors and the switches depending on your installation.

Parts list for the Lo-Tech Electronics switchbox (from Radio Shack):

PARTS	STOCK #	QUANTITY	COST	TOTAL
3PDT toggle switches	275-661	3	\$3.39	\$10.17
RS-232 male connector	276-1547	1	\$2.99	\$2.99
RS-232 female connector	276-1548	2	\$3.99	\$7.98
project case	270-221	1	\$1.89	\$1.89

		Total		\$23.03

NOTE: You will also need hookup wire and for the stand-alone version a multi-line cable, connector hood, and strain relief.

Using the Hayes Smartmodem

by Preston Burner

This article first appeared in the MUGW newsletter of Feb. '84.

To begin, the MODEM712 program in the MUGW public domain software library is the latest version of the much modified original MODEM. (Not any more: MODEM729 is the very latest. But MODEM 712 will do nicely for this discussion. Editor.)

MODEM712 has been patched for Morrow and works well--not great, but for the \$4 disk copy fee, it, and the Utilities disks are well worth the effort to acquire and to LEARN. Two comments, BACKUP! and READ the .DOC files. Then read them again.

The Hayes Smartmodem is the current standard by which the others are judged. Both models, (300 and the 1200) are smart -- auto answer and auto dial. They respond to both rotary and TouchTone dial, and have a built in speaker so that you can hear the connection being made (can also be set to hear the entire communication, if desired).

The current discount prices in this area are about \$235 for the 300 and just under \$500 for the 1200 (beware, the 1200B is for IBM). The U.S. Robotics Password is about \$425. I understand that it's not as versatile as the Hayes. If you really want to cut \$\$, go to the Vienna Winterfest on

February 26th. That is the Ham/Computer fleamarket in Vienna, watchword being LET THE BUYER BEWARE.

If you are only using CompuServe or The Source, it doesn't make too much difference whether you have 300 or 1200 baud modem because they charge more for the 1200 connection, but you will spend less time on the phone line.

When you attach the modem to your Morrow, you need a null cable which connects pins 1-1, 7-7, 2-3 and 3-2. These are all the connections necessary. Bring up MDM712 and at the >>COMMAND, type M to view the menu. Call any handy Computer Bulletin Board System (CBBS), just to try it out. If 123-4567 is the desired number, then after the >>COMMAND, type CAL 123-4567. When the BB answers, you answer the questions. If you have a dumb modem, type T (or E) at the >>COMMAND and continue as above.

Next time I will say something about local Remote Bulletin Board Systems (RBBS) and discuss how to download files from them. If you have any questions, write to MORROW OWNERS' REVIEW and I'll attempt to answer them.

Micro Cornucopia

We Have
Something
Special for

Morrow Users Disks
\$12⁰⁰ each



Your Morrow

The following are full disks of software assembled specifically for the Morrow. Each program has a .DOC (documentation) file and many come with source.

NEW!

Morrow Disk M1 Modem software

This disk is absolutely priceless if you will be using a modem to communicate with bulletin boards, other micros or mainframes.

MMODEM: Morrow version of MODEM 795. You can change your baud rate inside the program. Includes source and library so you can customize it if you wish.

S.MODEM: This is MODEM7 setup for SMART-MODEM compatible modems. Handles autodial and autoanswer.

SQ/USQ: Programs to squeeze and unsqueeze files for faster transfer.

NEW!

Morrow Disk M2 Utilities

Really oodles of spiffy little (and big) programs to help you get full use of your KayPro.

ZESOURCE.COM: A true Zilog format disassembler for 8080 and Z80 object(.COM) files. Now you can turn .COM files into .MAC files.

UNERA.COM: Simply enter "UNERA" followed by the name of the file you just erased and presto, the erased file is back! A lifesaver.

FINDBD54.COM: Checks an entire disk, reports bad sectors, and then creates a special file containing those sectors. You save a bundle on disks.

CAT2: This a group of programs which create and maintain a single directory of all the programs you have on all your disks. Even keeps track of which programs are backed up and which aren't.

DUMPX, DU-77, COMPARE, FORMFEED, DIR-DUMP, ... and all have documentation on disk.

NEW!

Morrow Disk M3 Games

PACMAN.COM: Despite the KayPro's lack of graphics, this one looks and plays amazingly like the real thing! Keep it hidden.

ZCHESS.COM: Chess with a 1-6 level look ahead.

OTHELLO.COM: You learn it in minutes, master it in years.

BIO.COM: Generates custom graphic biorhythm.

MM.COM: Master Mind.

WUMPUS.COM: Classic wumpus hunting.

ADVENTURE.COM: This is the famous 550 point super version of Adventure. There isn't room on one disk for this program and all the data files (the cave is huge) so the data files are on Disk M4.

NEW!

Morrow Disk M4 Adventure Data & Aliens

ADVT.DAT: This disk contains the data files for the 550 point Adventure (the latest, greatest, most cussed version ever devised by half-mortals). You must have both M3 and M4 to play Adventure.

ALIENS: This is the game that made arcades famous. Keep this one hidden from the younger set or you won't get to play Adventure.

NEW!

Morrow Disk M5 MX-80 Graphics

A complete MX-80 graphics package including example files. Same as M6 except for MX-80 (or compatible) printers.

NEW!

Morrow Disk M6 Prowriter Graphics

This is a complete Prowriter graphics package written by the same Micro C subscriber who wrote the MX-80 graphics package. Plot points, lines, circles, boxes, and more. Examples, documentation, and more.

NEW!

Morrow Disk M7 Small C Version 2 Compiler

This is a greatly extended version of Ron Cain's Small C compiler. Version 2 has more expressions and larger library, true subset of Unix C. Disk contains compiler, documentation, and library—everything you need.

NEW!

Morrow Disk M8 Small C Version 2 Source

This disk contains the source (written in Small C) of the Small C version 2 compiler. Get M8 if you want to try extending the compiler. (You must have M7.)

NEW!

Morrow Disk M9 ZCPR

ZCPR: The big news on this disk is the self-installing version ZCPR available only from Micro C. Once you have ZCPR in your CP/M, you'll never go back to straight CP/M! For instance, ZCPR searches drive A for any program not found on drive B, so, even an empty disk in drive B appears to contain every program on A. It's great for text editors, compilers, etc. Plus many more new features to make CP/M easier to live with. In fact, Digital Research incorporated many features of ZCPR into CP/M 3.0.

EX14: a super replacement for SUBMIT.

NEW!

Morrow Disk M10 Assemblers

We've received a lot of requests for a Z80 assembler. So Dana put in some long hours getting the Crowe Z80 assembler to run on the Morrow (and every other Z80 machine).

CROWECPM: This is a first class Z80 assembler. We use this assembler daily (and we included its source). Takes standard Zilog mnemonics.

LASM: This is a more powerful version of the ASM assembler you received with the KayPro. This will link multiple programs together at assembly time.

PRINTPRN: This program makes it easy to print the listing files generated by the Crowe assembler.

NEW!

Morrow Disk M11 Library & Checkbook Programs

CHECKS: This has been a very popular group of programs. Categorizes checks so you can keep track which are tax deductible and which get charged to which projects. Includes source and excellent example check files. Very powerful.

LIBR: This is a complete set of library routines which let you group files into a single file called a library. Then CP/M sees them as a single program, but with the library routines, you can list them out separately, run them separately, or divide them up again. Almost like a unix environment.

NEW!

Morrow Disk M12 Pascal Compiler

This is a real Pascal compiler. It supports only a subset of the language (no records, pointers, booleans, reals or complex) but it generates a real .COM file. Everything is on this disk: the compiler, its source, example programs and documentation.

NEW!

Morrow Disk M13 Z80 Tools

This is for those of you who are into Z80 assembly language.

XLATE.COM: A very good 8080 to Z80 translation routine.

DASM.COM: An easier to use version of ZZSOURCE (the Z80 disassembler). This full disk includes source and documentation for both routines.

MICRO CORNUCOPIA

P.O. Box 223
Bend, OR 97709



(503) 382-8048

A TRIP THROUGH COMPUTER LAND

With the Port Washington Curmudgeon (Part One)

(c)-Copyright - 1984 - Jack A. Eckert

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PROLOGUE:

In the Summer of 1975 after a long, but not necessarily distinguished career in the U.S. Coast Guard, I put an oar over my right shoulder and headed East from San Francisco.

As I passed through Laramie, Wyoming an old timer asked, "What are you doing here with an oar over your shoulder?" I didn't even answer him back. I continued going East.

In downtown Omaha a youngster asked me what the oar was for. I ignored him and kept going. Crossing the Mississippi I went across Wisconsin and bumped into Lake Michigan, a wholly unexpected event. I stood before the waterfront and wondered how I ever would get across it. I had an oar over my shoulder and no boat to pull.

A rather well dressed man approached me with a puzzled look on his face. "Mister," he said, "What ever on earth is that thing that you have on your shoulder?" I replied with a big smile on face, "I have found a home and here is where it is going to be." I stuck the blade end of the oar into the ground, ran up the flag and have been here since.

True, old friends of yore must spend a dollar to send me a post card, but this is where I was meant to be.

A lengthy stint as a Power Plant Supervisor, short stints as an Engineering Consultant, and currently as a Technical School Instructor indicated that I was beginning to lag behind and the world was about to pass me by. My meager course in data processing taken at George Washington University in the late sixties could no longer keep me abreast of the passing parade.

I was about to join the "Computer Revolution" !!!

The bandwagon was passing through town (How it ever found this one I will never know). I just knew that I had to jump on it while there was yet room. So I ran after it. Maybe I could tether it to my flag pole long enough to insure a seat on this "success express."

HOW IT ALL HAPPENED:

I started visiting computer stores. For six months I visited computer stores. I read every

CONSUMER'S REPORT that contained a word about computers. I sat in front of everybody's machine fondling it, caressing it, and enjoying the pretty canned programs only found on showroom floors. Every machine was the absolute best of its kind. I know because the customer consultants (equal to but not quite equivalent of automobile and/or vacuum cleaner salesmen) told me so. I learned all about bauds, number crunching, word processing, apples, oranges, pears, cherries, but no lemons. No store had a lemon. Even garbage started to show up when I saw magazines on the racks in different stores with such names as peelings, cores, cider, bytes, and other bits of what seemed to be secondhand food particles used as names on the covers.

What kind of a world was I about to enter?

I continued to pursue my quest for the optimum machine. My boss, the Associate Dean, told me to wait because K-Mart would have a humungous sale on computers before the first of the year. "What kind?", I asked, visions of the about to be introduced "Peanut" from the "Itty Bitty Machine Company" flashing through my mind. (More food? Does all the computer world just eat continuously?) "Why, the Commodore," he said, "What else is there?" I thought, "What else indeed?" I provided no further input to that conversation, not wishing to reenter the rolls of the unemployed.....again.

As Fall approached my search narrowed down to three or four pieces of hardware. I began to see that the machines that advertised the fruit salad should have handles coming out of them on their righthand sides. (A quick pull on the handle might reveal whether or not the machine had lemons on one of the wheels.

I decided to buy an Osborne!

Osborne just had to be the machine. Portable, a competent operating system, a good reputation, software that I needed to get going on this project, and an active user's group in the area. The price was right. Only the machine's maddening little screen seemed to be a disadvantage and that could easily be overcome with a cheap monitor available for less than a hundred bucks.

On the day that I intended to draw a few dollars out of the bank an article appeared on the business pages of the morning paper announcing that Osborne was ceasing operations.

I could have bought the Osborne the day before and read about its demise the next day. The conservative Polish woman that lives in my house would have never let that one go by without comment. I was lucky indeed; indeed I was lucky.

Shortly thereafter, TI ceased small computer operations. While not particularly interested in one of those I did become disturbed about the trend. What could I buy with any assurance that the company would be in business through at least the period of the warranty? The IBM-PC seemed to be the safe bet but they had recently changed operating systems and the basic price was a bit more than I could afford. Radio Shack's hardware seemed to be substantial but the software or lack thereof was a concern. So was the price.

Woe was me. What to do? I indicated to the Polish woman that I might drop my plans to purchase a computer for the immediate future. My operative word was "might," she heard "drop" and "purchase". She bought a water bed but that is another story.

Gradually I drifted back into the computer stores. I began to zero in a little better on what I felt would be acceptable. Epson and Kaypro were offering the software that I wanted to get started. I saw an add for a Morrow and checked it out. Then began a period of soul searching for me. I now had narrowed the field to three machines. The Kaypro which was a neat package the Epson which was a simple but relatively expensive; and the Morrow which seemed to have all of the attributes that I wanted in a machine. I was about to come to a decision. (The line that follows this one is just too corny to include herein).

Early Christmas shopping began. One Sunday afternoon the big boss, the "capo" of my house, and I wandered into a computer store and met the "Lisa." She fell in love with it. I saw wind puffs and scenery. She saw the price and I escaped that one. Another setback.

In an obscure part of the want ads of an out of town paper on a Sunday morning I saw a simple ad which announced a "Price Blowout" on computers. Checking closer I saw the words "Morrow MD3" and "Call for the Price". I thought about it over night. It had a (414) area code so I called for the price. It turned out to be a beginning dealer located in an unmarked office above a bank. His motto was "For those who know what they want."

Even though I really wasn't that sure that I knew what I wanted I bought the Morrow anyway.

It was to take a week or ten days to obtain all of the components before delivery could be made. Not wanting to find myself in divorce court I mentioned nothing of this transaction to "she who is always right and must be obeyed" (with apologies to Rumpole. He doesn't have an exclusive on that one).

On the day that I expected to get delivery I drew the money out of the bank to pay for it. But the man who sold it to me was out of town and couldn't be reached.

Follow up calls bore no fruit (not intended as a pun, just slipped out). Here was I with a hot check in my hand, no new machine yet, a potentially irritated missus hovering over me, and the bank statement arriving at my house in an untimely manner. What to do. Slivers were beginning to come off the flag pole. Would I have time to convert it into an oar again?

TO BE CONTINUED.

[The next installment of the computer saga will find the Port Washington curmudgeon finally getting the machine, hauling it home and expecting to get started right away. The trials and tribulations were only beginning, not over.]

CALL FOR CONTRIBUTIONS

What this newsletter needs is good, solid, inspired writing by members of our own users' community. If only one percent of our readers takes up the pen we will have material enough to print four of these issues. So contribute your writings and, if they are good, we will print them.

If writing is not your thing, do not despair, you can contribute in many ways. You could become a contributing founding member, donor, supporter, sponsor or even a sustainer or benefactor! We ask only that your donated dollar amounts be divisible by twelve.

Your contributions will be applied to your future subscription fee. These gifts will enable us to bootstrap our operation and purchase the items and services we need to develop this national newsletter into something great.

\$12	-	Stapler member
\$36	-	Pyramid-waxer donor
\$24	-	T-square supporter
\$96	-	Light box sponsor
\$192	-	Answering machine sustainer
\$2592	-	MD11 benefactor

A most fitting gift acknowledgement will be yours.

QUIETING DOWN YOUR MORROW

MD3 Computer Disk Drives

by Brian Leyton

If your Morrow MD3 computer sounds like it's about to grind your disks to pieces every time it accesses the drives, this article may help.

The reason for this excessive noise is that Morrow formerly used Qume drives in the MD3. The Qume Head Step Rate, the speed at which the head moves across the disk, was too slow for the new drives, so they tended to make this terrible sound. But now YOU (yes, even you) can change this.

An overview of what you are going to do is:

- 1) Read your operating system from the system tracks of the disk into memory with SYSGEN.
- 2) Save this as a .COM file.
- 3) Modify this .COM file with DDT.
- 4) Write it back to the disk using SYSGEN again.

A bit complicated? Not if you follow the directions below exactly, but be careful. Remember, DDT is powerful. Ready?

In drive A, put a sysgened disk, meaning one which has the operating system on it. (You can check if the system is on the disk by hitting CTRL C. If you get back the A> prompt, then it is a system disk.) Copy onto this disk SYSGEN.COM and DDT.COM, which are on your CP/M system disk.

YOUR INPUT IS IN BOLD FACE. THE COMPUTER INPUT IS IN STANDARD FACE. NOTES ARE PRECEDED BY <---. <cr> MEANS HIT THE RETURN KEY.

A>SYSGEN <cr>

```
SYSGEN VER 2.0 MD1.2
SOURCE DRIVE NAME (OR RETURN TO SKIP)      A
SOURCE ON A, THEN TYPE RETURN              <cr>
FUNCTION COMPLETE
DESTINATION DRIVE NAME (OR RETURN
TO REBOOT)                                  <cr>
```

A>SAVE 48 CPM.COM <cr> <--- this saves your operating system called CPM.COM which has SYSGEN at the beginning of it. This will come in handy later.

A>DDT CPM.COM <cr>

```
DDT VERS 2.2
NEXT PC
3100 100
-d28a0 <cr>
```

<---by the way, the "-" is DDT's prompt. You want DDT to DISPLAY starting at 28A0.

```
28A0 F2 31 F3 21 DC 7D 04 BF 03, etc.
28B0 BF 03 05 1C FF 21 DC 7D 04, etc.
28C0 7D 04 BF 03 05 1C FF 21 DC, etc.
```

Your mission is to change the five occurrences of the byte BF to DF. The first one is at 28A7 and they are 9 bytes apart. So, you do this:

-s28a7 <cr>

28A7 BF DF <cr> <--- this is where you type it.

28A8 03 . <cr> <--- DDT gives you the next byte to change, but you don't want to change it, so you type a period to get the prompt back.

-s28b0 <cr>

28B0 BF DF<cr>

28B1 03 .<cr>

-s28b9 <cr>

28B9 BF DF<cr>

28BA 03 .<cr>

-s28c2 <cr>

28C2 BF DF<cr>

28C3 03 .<cr>

-s28cB <cr>

28CB BF DF<cr>

28CC 03 .<cr>

-CTRL C <cr> <--- to terminate DDT

(CAUTION: You may have to substitute all these 28's for 27's depending on which CP/M 2.2 revision you have. Use the trial and error method. Editor)

```

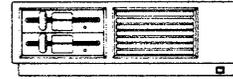
A>SAVE 48 CP.M1.COM      <cr>
                        <--- to save the new
                        version of CP/M
A>CP.M1 <cr>            <--- When you type
                        "CP.M1" you will be
                        in SYSGEN.

SYSGEN VER 2.0 MD1.2
SOURCE DRIVE NAME (OR RETURN TO SKIP) <cr>
DESTINATION DRIVE NAME (OR RETURN
TO REBOOT)                A
DESTINATION ON A, THEN TYPE RETURN <cr>
FUNCTION COMPLETE
DESTINATION DRIVE NAME (OR RETURN
TO REBOOT)                <cr>
A>

```

That's all there is to it!

To test it out, reboot and go to CP/M; access the drives using DIR <cr> after the A> (or by bringing up WordStar, etc.,) and see how quiet your drives are now. If everything works correctly, you can go ahead and sysgen all of your disks with the modified operating system. Not only have you quieted your drives, but you have also made them work FASTER! Enjoy!



FOCUS ON LOCAL GROUPS

A future column by Clarence Heier.

The following is quoted from Clarence's letter to the editor, wherein he develops the ideas for his column:

" to write a regular column on users groups activities. I would like to establish a contact person in every group. This person would report on the activities of their group. Ideas concerning meeting programs, public domain software distribution, membership drives, etc can then be shared via my column. In this way there is some positive interaction between groups and all will benefit as a result. As part of this column, I would like to report new groups that have been formed, and possibly distribute new Morrow BBS numbers. What are your thoughts on this?"

Your editor thinks that is just great! One of the most essential services the MORROW OWNERS' REVIEW can provide is the support of local groups and newsletters. Let us all submit news and ideas to make this column a valuable and informative means of communication. Mail your column correspondence on a diskette in a WordStar file to:

MORROW OWNERS' REVIEW
"FOCUS ON LOCAL GROUPS"
P.O. Box 5487, Berkeley, CA 94705

Your floppies will be promptly returned, if you include return postage. Perhaps you will find a little surprise on it ...

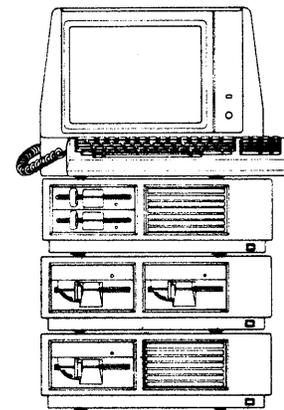
??????????

**** I RECEIVED TWO COPIES ** I GOT THREE COPIES! **
** I AM FOUR TIMES ON YOUR MAILING LIST ** WHY? ****

Just in case you are wondering: We used overlapping mailing lists in order to reach as many Morrow owners as we could. The majority of labels comes from the Morrow warranty list. We added several lists given to us by local groups and newsletters. These lists may overlap in multiple ways. Still we estimate that of the 12,000 bulkmailed copies only 5% will be duplicate mailings.

Well, we'll see: Write M.O.R., P.O. Box 5487, Berkeley, CA 94705 if you got extra copies and return all labels if possible. We will then analyze who got what via what list and attempt to straighten things out.

- 3
- 2
- 1



Even the fastest fingers slow down when they struggle with computer commands. And no matter what software you use, you still have to enter the same things over and over again.

That's why you need SmartKey II™, the software that lets you control your computer with a single keystroke.

Add SmartKey II to WordStar and you can juggle margins and insert "boilerplate" paragraphs or sentences with just one key. Add it to Lotus 1-2-3 and you can concentrate on the numbers instead of the mechanics. You can even tap into Dow Jones with the press of a finger.

Don't type in the same thing twice. SmartKey II can remember commands, words, paragraphs, even entire letters. With SmartKey II, you can work faster and never worry about which keys to press.

It's easy to see why thousands of people all over the world are already using SmartKey II to make their lives easier.

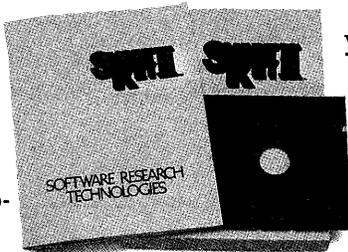
SmartKey II Features:

- Assign more than 3,000 characters to a single key.
- Define over 300 function keys.
- An exclusive "SuperShift" lets every key have up to four meanings.
- Change any keyboard to the Dvorak layout.
- Keys can be redefined while other software is running.
- Key definitions can be saved to disk for later use.
- SmartKey II is invisible to other software.
- SmartKey II runs on the IBM PC and compatibles, the PCjr, the Kaypro II, 4, and 10; plus all other MS-DOS, CP/M, CP/M-86, and CP/M-Plus based personal computers.

SmartKey II is a trademark of FBN Software. WordStar is a trademark of MicroPro, Inc. Lotus 1-2-3 is a trademark of Lotus Development Corporation. CP/M is a trademark of Digital Research, Inc. MS-DOS is a trademark of Microsoft, Inc. PC-DOS is a trademark of IBM.

Best of all, SmartKey II is still only \$89.95.

To see how SmartKey II can speed up your work, pick up a copy at your computer dealer. It's the smartest move you will ever make. Software Research Technologies, Inc.*
3757 Wilshire Boulevard, Suite 211, Los Angeles, CA 90010.
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The ten slowest parts of your computer.



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Now, SmartKey II only
\$69.95.

Take this ad to your dealer
or send it to us with your order.
Offer expires May 31, 1984.

MICRO KEYS AUTOMATES WordStar 3.0

IF YOU OWN A **FREEDOM 50 (MDT50)** OR A **FREEDOM 100** TERMINAL, TURN IT INTO A **DREAM MACHINE!**

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Complete with self-adhesive, durable plastic labels. Simple installation.

Regularly \$49.95 — **NOW \$25⁰⁰***

Send check to: **FIRST PRINCIPLES SOFTWARE, P.O. Box 4236, Santa Rosa, CA 95402.**

* (All orders add \$1.50 postage and handling. Calif. residents add \$1.50 sales tax.) Not available for MDT20 or MDT60. Not for New Word. Be sure to include terminal type with order. FREEDOM 50 TERMINAL HAS 5 FUNCTION KEYS (F-1F5); FREEDOM 100 HAS 10 FUNCTION KEYS (F1-F10).

FRUITS FROM THE GRAPEVINE

by Emma Paquin

COMPUTER SYSTEMS NEWS, Monday, November 21, 1983, carried a comprehensive Management Report on George Morrow and Morrow Designs. According to this article, Morrow Designs has acquired \$3.5 million in venture capital and has nearly always had a positive cash flow, with Michiko and George Morrow owning 72.5% of the company. Public offering of stock has been withheld, probably because hi-tech stocks have been depressed lately. The article emphasizes that George Morrow is doing all he can to avoid an Osborne-type failure. With only about 130 employees in San Leandro, isn't it a marvel that complaints get handled as well as they do?

POCKET GUIDE TO WORDSTAR by Tony Bove and Cheryl Rhodes is one of the Addison-Wesley 1983 series (\$7.25) that is handy-sized. Based on USER'S GUIDE, Issue 2, this gives a sample of the meaty rather than newsy style of USER'S GUIDE. This magazine is better than a book club; look for it at your newsstand, and if you can, order it (6 issues a year, \$18) from P.O. Box 3050, Stanford, CA 94305. This is a first-class effort.

MICROREF FOR WORDSTAR - This little flip-chart booklet is just what I always wanted (and meant to design someday). It has the steps for various procedures layered and thumb-indexed. Put out by Educational Systems, Inc., 1000 Skokie Blvd., Wilmette, IL 60091, \$14.95, it is available at Omni Unlimited in Pasadena, (where Stan Evans has moved from Data Systems West).

"Build it Right, Sell it for less."



INEXPENSIVE PASCAL

by Stan Ahalt

Since I frequently write my own programs, I was very interested in buying a high level language for use on my Micro-Decision. When I saw the ad for JRT Pascal, I immediately ordered a copy.

Now, no one can expect a lot for \$29.95. And JRT is probably worth what I paid for it. But I'm very glad I didn't pay more. JRT uses non-standard calls for file access, some of the utilities that are supplied work incorrectly (for instance, the program which indicates how many times a particular line is executed give incorrect answers), and the error messages are non-standard and usually uninformative. But it only costs \$29.95.

Enter TURBO Pascal, from Borland International. The TURBO Pascal package includes an excellent screen editor and the demonstration program is a very usable micro-spreadsheet. Most importantly, TURBO Pascal presents the programmer with an almost ideal programming environment. After you enter a program using the screen editor, you save the program to memory and then push C for Compile. If the program contains an error, a standard Pascal error message is displayed on the screen. If you push <ESC> the TURBO system invokes the editor and recalls the program from memory with the cursor sitting at the position at which the error was detected. Thus, debugging is quick and easy.

All of the screen editor commands are compatible with standard WS commands, so the editor is easy to learn if you already know WS.

The TURBO Pascal package is presently available for \$49.95. This is an excellent program which I heartily recommend. The only problem is that if you wish to sell any of the programs you develop using TURBO pascal, you must pay a one time license fee of \$100. This program is one of my favorites, and I would gladly have paid much more for it.

(Borland International, 4807 Scotts Valley Drive, Scotts Valley, CA 95066, (408) 438-8400, has since changed its policy on the licence fee. I quote from a letter by Philippe Kahn, President of Borland: "If you want to market programs utilizing code generated with Turbo Pascal, there is no longer a license charge, provided you return your signed license agreement." Editor.)

CURRENT MORROW PRICES.

As whispered in our ears by
John Seamster, Morrow, Inc.

MD2 with MDT60 terminal	\$1699
MD3 with MDT60 terminal	\$1999
MD11 with MDT60 terminal	\$2995
MD2 without MDT60 terminal	\$1299
MD3 without MDT60 terminal	\$1599
MD3-P, the portable	\$1899
MD11 without MDT60 terminal	\$2595

UPGRADES:

Revision 1. --> Rev. 2.	\$450
MD1 --> MD2	\$299
MD2 --> MD3	\$649
MD3 --> MD11	TBA
MDCP88 installed by dealer in MD3 or MD11 128 kB version	\$499
MDCP88 installed by dealer in MD3 or MD11 256 kB version	\$699
MD3-MDCP88 factory installed or MD11-MDCP88 factory installed 256 kB version only	\$499
MM300 modem with REACHOUT and ez-link software	\$299
WS --> NW (NewWord) Return your original WS disk. (See NB: on top of 2nd col., page 10)	\$100

PRINTERS:

MPT-100, for CENTRONICS port only	\$550
MPT-200, for CENTRONICS port only	\$695

If you need to use the serial port for the printer buy the \$100 serial converter model 770 from Engineering Specialties, 1501-B Pine Street, P.O. Box 2233, Oxnard, CA 93034 (805) 486-0817.

NEW PRODUCT

An RS-232-C port expander

E-SYSTEMS of Berkeley is coming out with the GangBox (TM), which can expand a serial port on your computer to three separate devices. No special cabling is required. The sex of the GangBox connector that you connect to the computer is male. To make the computer-GangBox connection you'll need a regular male to female RS-232 extension cable.

The three GangBox connectors (marked "A", "B" and "C") are female. They are connected to your devices with the original device cables used. Those devices could be modem, printer, etc. Housed in a tightly-sealed, attractive, die-cast aluminum case, the GangBox meets new FCC regulations #20780 Class B for EMI an RFI radiation.

It is simple to install and has a one year parts and labor warranty. Available through your dealer or direct from E-SYSTEMS, BERKELEY, 2308 Fourth Street, Berkeley, CA 94710, (415) 486-0686. Suggested retail price \$49.95.

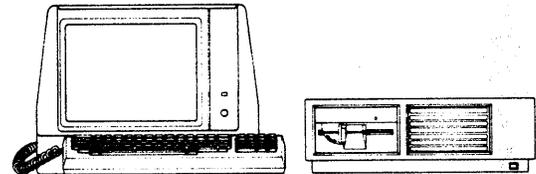
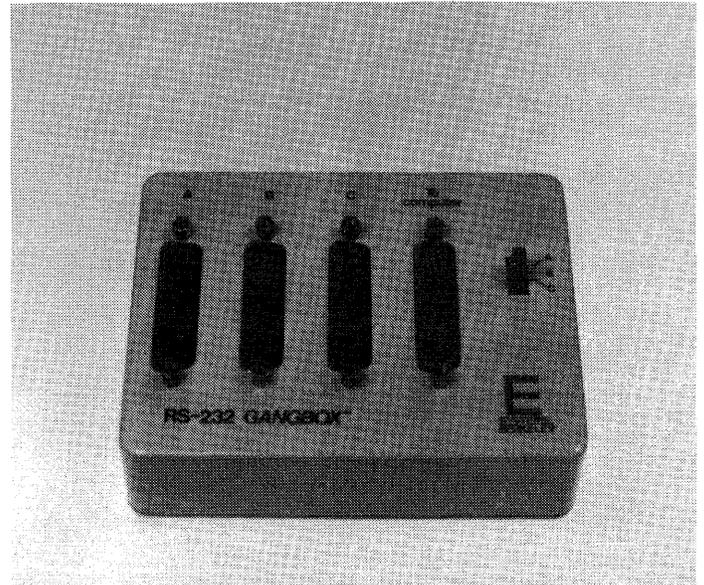
LOST & FOUND DEPT.

Are you one of the 93% of Morrow owners without a users' group in sight? You want to get in touch but you don't know how where to start? Write your name, address, phone number(s) to:

MORROW OWNERS' REVIEW
LOST AND FOUND DEPT.
Attn.: Clarence Heier
3430 93rd Street
Sturtevant, WI 53177

If enough people within a certain region write in, Clarence will compose regional lists and send those back to all the people on each list. Then all you have to do is call your new-found Morrow neighbors, form a local group if that seems appropriate, carpool to an existing one, start a local newsletter, or whatever suits your needs.

The information on these lists will be kept confidential, but we assume it is OK with you to release your name, address and phone to the people on your list. This information is used for LOST AND FOUND DEPT. purposes only. You don't even get on the mailing list of the MORROW OWNERS' REVIEW this way. If you did not receive a copy of this newsletter in the mail and you want to be on the mailing list, write to: MORROW OWNERS' REVIEW, P.O. Box 5487, Berkeley, CA 94705.



** OLD PRODUCT **

Attention St. Louis

ST. LOUIS, HERE WE COME!

Attention St. Louis owners of Morrow computers. We are trying to form a user group for the area in and around St. Louis, Missouri. Are you interested? If so, call or write to:

John DeMott
St. Louis Morrow Users Group
6 Lawrence Dr.
St. Louis, MO 63141
1-314-569-3061
1-314-362-7560

Manage the facts of life.

THE FACTS OF LIFE

Every day you deal with facts. You read about new products, services, and ideas that are important to you. People phone you with information, proposals, suggestions. You talk to customers, prospects, clients about their needs and plans. You write memos, speeches, books, papers, marketing plans. In short, you work daily with a continual flow of factual information.

How do you effectively and gracefully manage this information?

Recall at a moment's notice just the right answer to a question? Organize the mass of material you have gathered to prepare a legal strategy or write a book? Or stay precisely current for each of your clients or sales prospects — when you last spoke, what was said, when to call again?

With CITATION you can manage this kind of information and much more.

EFFECTIVE MANAGEMENT

CITATION supports effective fact management with fast, simple data entry, powerful access methods, useful reports, and an interface with typical mailing-list merge programs.

"... this is one of the best designed products of its kind that I have seen."

Lifelines 12/82¹

With CITATION you can store and retrieve information in your choice of three screen formats: name/address of person or company, book reference, or journal/magazine citation. Besides appropriate predefined fields, each of these formats allows up to 6 keywords and ten 80-character lines of "free text" to use as you like.

And you can freely mix these formats, so a database is not restricted to just one kind of information.

But the real power of CITATION is its effectiveness for finding and using

InfoWorld Software Report Card	
Citation	
	Poor Fair Good Excellent
Performance	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Documentation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Ease of Use	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Error Handling	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

"I seldom find myself with only positive things to say about a product, but Citation is a notable exception."

InfoWorld 8/82²

this information — it is directly and quickly accessible in several ways.

First, you can browse through a database on any subject (keyword). That is, you can name any subject, and your database will instantly appear to consist only of items related to that subject.

And you can browse for specific names, or book or magazine titles. Or authors. Or ZIP codes.

Or you can have CITATION find all items which match keyword combinations and ranges. CITATION conducts a search which you can monitor and control. You can print the found items (or any portion of them), write them to a standard file for use with mailing-list merge programs, and/or create a new CITATION database.

EXCEEDINGLY EASY

But powerful functions alone are not enough. To be truly useful a program must be so simple to operate that you never hesitate to use it when you need it. You'll find CITATION really measures up. For example:

- Unlike most database systems, CITATION is always ready to use. You don't design screens or reports or learn special commands.

- CITATION's text editor is built-in, so you don't have to use a separate program.

- A keyword index file is maintained automatically as you enter your data, so no time-consuming index-building programs are needed.

- CITATION is menu-driven with many one-stroke commands and help messages, making the manual almost unnecessary.

MULTITUDE OF APPLICATIONS

Deceptively simple in concept, CITATION has a range of applications as unlimited as your imagination. Here are some examples: You will undoubtedly see many other ways to apply CITATION in your own field of interest.

- Catalog business libraries
- cross reference information for legal cases or trials
- manage consulting notes by client, date, subject, time spent, next meeting
- maintain vendor directories for services, products
- manage research notes
- stay current on sales prospects by type of business, nature of interest in your products or services
- cross reference personnel skills in your company or in an agency
- cross reference physical files in your office to find anything by subject almost instantly.

You get the idea. The list could go on and on. And CITATION allows as many databases as you want on a single disk, so you can easily handle many different applications.

FEATURES WHICH MAKE YOU PRODUCTIVE

Your productivity is the purpose of CITATION. And as you use CITATION,

you will appreciate these advanced features which make CITATION a true productivity tool:

- Data compression techniques remove/restore blank characters to use less disk space and speed disk I/O
- fast-access B-tree indexed files are maintained automatically with no sorting or special indexing programs
- built-in recovery of damaged files in case of power failure or disk errors

"Citation's documentation ranks with the best."

Interface Age 8/83³

- word-processing-type commands with automatic word-wrap in the "free text" portion of your records
- can create files compatible with most mailing-list merge programs for labels, letters, bibliographies, etc.
- keyword index report/display shows all references for each keyword
- list of keywords used in the database.

GUARANTEED SATISFACTION

We know that when you've seen CITATION in action you will want to use it to manage your own facts. So, to make it easy and risk-free for you to try CITATION, we make this offer:

Buy CITATION from us and we guarantee you'll be completely satisfied. If not, return the system within 30 days of purchase for a prompt refund. You can't lose!

We welcome phone orders and accept VISA, M/C and COD. Most orders are shipped UPS Blue Label within 24 hours. So, call today or send us the coupon below. You'll be glad you did — we guarantee it!

CITATION

FACT MANAGEMENT

OK! Send my CITATION System for \$185 (Calif. add 6.5%)

Brand of computer _____
(CITATION requires 56K CP/M system or IBM-PC with PC-DOS and 96K RAM)

Send brochure and reprints of reviews

Name _____

Address _____

City _____ State _____ ZIP _____

Payment Check enclosed COD VISA M/C

Card # _____ Exp. date _____

Signature _____ Phone _____



EAGLE ENTERPRISES

2375 Bush St., San Francisco, CA 94115
(415) 346-1249

MORROW OWNERS' REVIEW GROUP SURVEY

-- MORROW OWNERS' REVIEW, P.O. Box 5487, Berkeley, CA 94705 --

Please complete this questionnaire and mail to the above address. The information collected will be used to make editorial decisions supporting your interests.

Your candid comments will help us. Please use an additional sheet if needed.

CHECK THE TOPICS YOU FEEL SHOULD BE IN EVERY ISSUE:

- 1. NEWS FROM MORROW _____
- 2. EQUIPMENT REVIEWS _____
- 3. SOFTWARE REVIEWS _____
- 4. LETTERS FROM USERS _____
- 5. ADS FROM USERS _____
- 6. INFORMATION ON USERS' GROUPS _____
- 7. WHAT REGULAR COLUMNS WOULD YOU LIKE TO SEE? _____

8. WHAT FEATURE ARTICLES WOULD YOU LIKE TO SEE?

PLEASE RATE THIS NEWSLETTER ON CONTENT AND RELEVANCE TO YOU.
(Circle one.)

POOR	AVERAGE						EXCELLENT		
1	2	3	4	5	6	7	8	9	10

COMMENTS: _____

ARTICLE MOST RELEVANT TO ME: _____

ARTICLE LEAST RELEVANT TO ME: _____

I WOULD LIKE TO SEE MORE _____

CHECK ONE

- I WOULD LIKE TO BE VERY ACTIVE IN THE NEWSLETTER, POSSIBLY WRITING A REGULAR COLUMN. (EXPLAIN.) _____
- I WOULD LIKE TO BE ACTIVE IN THE NEWSLETTER, POSSIBLY WRITING AN OCCASIONAL ARTICLE. _____
- I WOULD BE INTERESTED IN CONTINUING TO RECEIVE THE MORROW OWNERS' REVIEW. _____
- I AM NOT INTERESTED IN RECEIVING THIS NEWSLETTER. _____

THIS ISSUE HAS AN ADVERTISING-TO-TEXT RATIO OF ABOUT 1:3 . WHICH RATIO DO YOU FEEL IS:

DESIRABLE : AT LEAST A RATIO OF _____

ACCEPTABLE: NO HIGHER RATIO THEN _____

COMMENTS ON DISPLAY ADS: _____

ALTHOUGH THIS NEWSLETTER IS CURRENTLY FREE, HOW MUCH PER YEAR WOULD A NEWSLETTER LIKE THIS BE WORTH TO YOU AS A MORROW USER?

ISSUED:	BI-MONTHLY	MONTHLY
\$5-\$10	_____	_____
\$10-\$20	_____	_____
\$20 AND UP	_____	_____

COMMENTS _____

WHAT EQUIPMENT DO YOU HAVE?

COMPUTERS _____

TERMINALS _____

PRINTERS _____

MODEMS _____

SEPARATELY PURCHASED SOFTWARE _____

COMMENTS _____

PRIMARY USE OF COMPUTER _____ %

OTHER COMPUTER USES _____ %

_____ %

ARE YOU INVOLVED WITH A MORROW USERS' GROUP? _____
DO YOU KNOW ABOUT USERS' GROUPS NEAR YOU? _____
WOULD YOU BE INTERESTED IN ORGANIZING A GROUP? _____

(OPTIONAL, BUT WE'D LIKE IT, ESPECIALLY IF YOU WANT TO WRITE FOR MORROW OWNERS' REVIEW.)
YOUR NAME _____
ADDRESS _____
CITY _____ ST _____ ZIP _____
PHONE (HOME) (____) _____ - _____ /// (WORK) (____) _____ - _____

Thank you very much for taking the time to fill this out. Your responses will enable us to plan for the future issues you want. Any comments will be greatly appreciated.

If you know of any Morrow owners who did not receive this newsletter, tell them about it, and send in their names and addresses with this questionnaire.

PLEASE MAIL THIS TO:

MORROW OWNERS' REVIEW
P.O. Box 5487
Berkeley, CA 94705

MORROW USER'S GROUPS

For any changes and additions write to:
MORROW OWNERS' REVIEW - P.O. Box 5487 - Berkeley, CA 94705

BAY AREA MICRO DECISION
USERS ASSOCIATION (BAMDUA)
P.O. Box 5152
Berkeley, California 94705
(415) 658-0152
Contact: Sytko Andreae

Meets: last Tuesday of each month
Fees: \$12.00 per year; includes
monthly newsletter

CP/MORROW COMPUTER GROUP
6749 Arabella Way
Sacramento, California 95831
(916) 421-6268
Contact: Milton Levison

Meets: 1st Thursday of each
month
Fees: \$12.00 per year and \$3.00
for each family member

DIABLO VALLEY MICRO DECISION
USERS GROUP (DVMUG)
2255 Contra Costa Blvd., #100
Pleasant Hill, California 94523
(415) 676-9000
Contact: Curt Finney

Meets: 3rd Wednesday of each month
Fees: \$15.00 initiation fee and
\$18.00 per year; includes
newsletter and free access
to diskette library

MICRO DECISION BAKERSFIELD USERS
GROUP (MDBG)
1919 Lacey Street, # D
Bakersfield, California 93304
(805) 861-3682
Contact: Joe O'Bannon

Meetings: last Monday of month
Workshops: 2nd Monday of month
Fees: \$12 per year, newsletter

MORROW COMPUTER SPECIAL INTEREST
GROUP OF THE VALLEY COMPUTER CLUB
P.O. Box 6545
Burbank, California 91510
(213) 447-6541
Contact: Emma Paquin

Meets: 1st Monday of each month
Fees: \$10.00 per year; includes
newsletter

MORROW SIG OF SAN DIEGO COMP. SOC.
P.O. Box 81444
San Diego, California 92138
(619) 270-6519
Contact: Margaret Riggs

Meets: 2nd Mondays
at Linkabit Auditorium
3033 Science Park Road

MORROW SIG OF NO. ORANGE COUNTY
COMPUTER CLUB
P.O. Box 3616
Orange, CA 92655
(714) 998-8080
Contact: Thor Engstrom (714) 897-6665

Meets: First Sundays, 2:30 pm
Fees: \$15/year, newsletter

MORROW SIG
11430 Chandler Blvd.
North Hollywood, CA
North Hollywood Recr. Center

Meets: most recently 3/22, 7:30 pm
Contact: Brian Leyton
12613 Killion Str.
N. Hollywood, CA 91607
(818) 766-3307

SOUTH BAY MORROW COMPUTER SIG
Jade Computer company
18503 Hawthorne Blvd.
Torrance, CA 90501

Meets: 2nd Wednesdays, 7 pm
Contact: Eric Turnquist
2821 W. 152 Str.
Gardena, CA 90249
(213) 532-7257

The computer industry needs competent, professional distributors. The sole business of **Digital Distributors** is to bring computers and related peripherals and components to the computer dealer, OEM, or system integrator. Courteous service and prompt attention to your needs are our main goals.

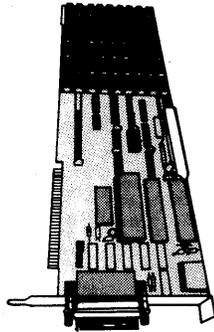
Consolink Consocard

This Multifunction Card for IBM-PC/XT and compatibles combines many functions commonly added to the IBM on one economical card.

- Expansion Memory-64 K to 384K
- Two RS232 serial ports
- Battery backed clock/timer
- Print spooling allows computer use while printing
- Ram Disk for fast access to files

Retail

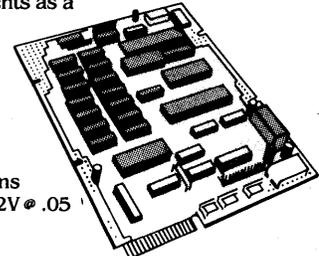
64K\$395.00
 128K 495.00
 192K 595.00
 256K 695.00
 384K 895.00



Ampro "Little Board" Single Board Computer

This board is for those wishing to build a very economical single board computer. It is designed to mount on the bottom of a 5 1/4" drive and uses the same power connectors and requirements as a floppy.

- 64K Memory
- 2 serial ports
- 1 parallel port
- CP/M 2.2 included
- 5 1/4" Disk controller
- Z80A CPU
- 5 1/4" X 7 3/4" Dimensions
- Uses 5V @ .75 amp, 12V @ .05 amp

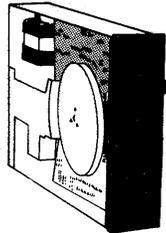


Qty 1-4\$349.00
 Qty 5-49 262.00
 Qty 50-249 245.00
 Qty 250-UP 238.00

National Disk Drives

5 1/4" Half-height double sided 48 tpi drives for use with a variety of Microcomputers, IBM, Morrow, Kay Pro, Corona, PMC, etc. These drives are also marketed under the Shugart, Panasonic, and Matsushita names. Low power consumption, fast 6ms set rate, and cool running make these drives an outstanding product.

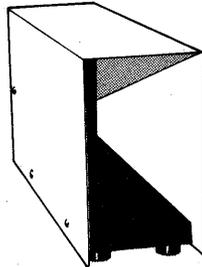
Qty 1 \$245.00
 Qty 10 225.00
 Qty 25 199.00



Enclosures for Half-height Drives

Vertical Cabinet with power supply to accept one or two Half-height drives. Cabinet is painted off-white.

Qty 1\$85.00
 Qty 5 78.00
 Qty 10 73.00

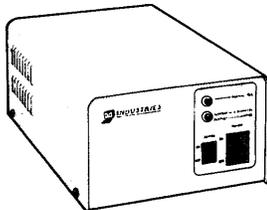


PTI Data Shield Backup Power Source

If loss of data due to a power failure or brownout would be disastrous your business or research project, then you need the best protection available....A Data Shield Backup Power Source. The Data Shield provides a constant 120V/60Hz A.C. when you have a blackout or voltage sag...giving you the precious time needed to power your system down normally.

- Back-up Time...
 - 50% Load - 20 min.
 - 100% Load - 5 min.
- Output Rating - 200 Watts
- Transfer Time - 4 Milliseconds

Retail: \$359.00



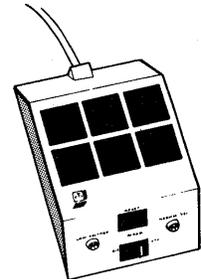
- Wyse Technology
- Qume
- Mitsubishi
- Ampro
- Consolink
- Teletex
- Head
- PTI
- Shugart

DataShield Surge Protector

The DataShield Surge Protector plugs into any 120 volt AC outlet providing the user with six protected outlets.

- "Brown-out" light
- "Brown-out" alarm option
- Reset Button protects from power-on surge
- In-operation light
- Replaceable Fuse
- 6 Filtered sockets

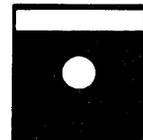
Retail.....\$79.00



Premium Quality "Generic" Diskettes

We use these diskettes in-house for our Diskette Duplication and Downloading Services. All Formats have been tested including 96 tpi double sided, with a negligible rejection rate. Diskettes have a 1 year warranty, and are supplied unboxed, but with sleeves.

	5"	8"
Qty 10-99	\$1.75 ea.	2.50 ea.
Qty 100-499 ...	\$1.65 ea.	2.25 ea.
Qty 500-UP	\$1.50 ea.	1.99 ea.



"...Bringing You the Tools of the Trade..."



P.O. BOX 8427
 SANTA CRUZ, CA
 95060

DIGITAL
 DISTRIBUTORS

(408) 423-1556

SANTA CRUZ MICRO DECISION USERS
GROUP (SCMDUG)
245M Mt. Herman Road
Scotts Valley, California 95066
(408) 438-5971
Contact: Charlie Stokes

Meets: 1st Tuesday of each month
Fees: ?

STANFORD MORROW USERS GROUP (SMUG)
1419 Prince Edward Way
Sunnyvale, California 94087
(415) 493-5000 ext. 5990 (B)
(408) 749-9285 (H)
Contact: Ed Gallaher

Meets: 2nd Wednesday of each
month
Fees: ?

HAMILTON ONTARIO MORROW USERS GROUP
13 Bold Street
Ontario, Canada L8P 1T3
(416) 527-8733
Contact: Ron Johnson

CONNECTICUT MICRO DECISION
USERS GROUP (CMDUG) NATIONAL
C/O Dave Mintie
773 Dixwell Avenue
P.O. Box 5
New Haven, Connecticut 06511

Meets: 3rd Wednesday of each month
Fees: \$12.00 per year; includes
newsletter

MICRO MASTERS
524-C Shower Place
Honolulu, Hawaii 96818
(808) 833-1338
Contact: Richard C. Witt, Jr.

Meets: every other Thursday
Fees: \$12.00 per year; includes
newsletter

CENTRAL IOWA MORROW USER GROUP
Rural Route Four
Indianola, Iowa 50125
(515) 961-6406
(515) 223-5754
Contact: Ralph Wallio

Meets: every Friday for lunch
Fees: no charge at this time

COMPUTER WORKS
136 West Hall
Slidell, Louisiana 70460
(504) 643-8400
Contact: Per Hansen

Meets: group just forming

MICRO DECISION USER GROUP OF
WASHINGTON D.C.
3501 Hamilton St., #4
Hyattsville, Maryland 20782
(301) 277-3760
Contact: Clifton Broumand

Meets: 2nd Tuesday of each month
Fees: \$25.00 per year; includes
newsletter

MUG.1
P.O. Box 32313
Minneapolis, Minnesota 55432
(612) 571-4318
Contact: Will Thorp

Meets: 2nd Wednesday of each month
Fees: \$15.00 per year; includes
newsletter

KANSAS CITY MORROW USERS GROUP
5309 E. 103rd Street
Kansas City, Missouri 64137
(816) 765-7017
Contact: Donald Trout



MANAGE YOUR M O N E Y

with
QUICK CHECK[®]

Peter McWilliams said, "If you want to find a simple bookkeeping program that is truly quick to learn and use, then Chuck's program is for you." Manage your money and make paying the bills and tax reporting easy.

Reduced from \$250. to \$95. for the disk and manual.

RETAIL INVENTORY

(Point of Sale) with **QUICK REGISTER[®]**

THE SIMPLEST WAY TO MIND THE STORE

Proven in many businesses all over the world. Simply enter the quantity and item as sold. QUICK REGISTER will do inventory control, reports, ordering, receiving, labels, and lists. No sorting!

\$250. for the disk and manual.

Order the DEMO DISK for \$10. plus \$3. shipping

*30 day Money-Back-Guarantee—
not copy protected



See your dealer or contact:

CHUCK ATKINSON PROGRAMS

Route 5, Box 277-C • Benbrook, Texas 76126 • (817) 249-0166

ST. LOUIS MORROW USERS GROUP
#6 Lawrence Drive
St. Louis, Missouri 63141
(314) 362-7560
(314) 569-3061
Contact: John DeMott

Meets: group just forming

MONTANA STATE UNIVERSITY MICRO
COMPUTER USERS GROUP
Office of Institutional Research
Montana State University
Bozeman, Montana 59717
(406) 994-2761, Contact: Steve Hample

Meets: every other month
Fees: none

MORROW USERS GROUP
(National Newsletter)
102-B Victoria Lane
Clemson, South Carolina 29631
(803) 654-2748
Contact: Stan Ahalt

Meets: no meeting at this point
Fees: none - has national
newsletter

DALLAS ASSOCIATION OF MORROW USERS
(DAMU)
P.O. Box 12293
Fort Worth, Texas 76116
(817) 451-8674
Contact: Gordon F. Reis

MILWAUKEE AREA MORROW USERS GROUP
(MAMUG) c/o Computer Commuter
183 East Wisconsin Avenue
Oconomowoc, Wisconsin 53066
(414) 567-9192
Contact: Brian C. White

MICRO USERS GROUP
P.O. Box 14241
Arlington, Texas 76094-1241
(817) 460-4876
Contact: Andrew Seidel

MUG DETROIT
3870 Eastbourne
Troy, Michigan 48084
(313) 643-6537
Contact: T. A. Dapper

THANKS TO ALL!

This first issue of the MORROW OWNERS' REVIEW is the result of the desire of many, the vision of a few and the tenacity of a small dedicated production crew.

Thanks to the Morrow people. Right from the beginning we enjoyed their enthusiastic support. Ed Niehaus has been involved in every phase of the planning, especially those involving financial arrangements and planning. Dave Block nearly wrote a users newsletter all by himself, until we started talking together. He offered many suggestions for tone and style and contributes the Q & A column. Renee Potter threw her dedicated energy behind making the very necessary communications with the users' groups. John Seamster had thousands of ideas about newsletter content and production; he was also instrumental in designing the advertising strategy. John Vanderwood of the Morrow Documentation Department wrote the enlightening article about NewWord versus WordStar. George Morrow and Morrow president Bob Dilworth have given this newsletter continuous and consistent support.

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Thanks to all you article contributors. At layout time we had about twice as much material as we could cram in a 48-page issue. If you did not get in this time, don't despair. Your time will come. Thanks for your generosity.

Thanks to all you readers. It was your eagerness for a true national Morrow users' newsletter that made this all possible.

