SLO Bytes GROUP

SAN LUIS OBISPO PC USERS

HARD COPY

What's New

Disaster struck last tuesday at George Campbell's house in the form of a lightening bolt. The only computer running at the time was the system George uses to run the bulletin board. It goes without saying that the SLO Bytes BBS will be down for a while. George also lost several other computers and his laser printer. Computer equipment was not the only victim. George lost quite a bit of wood-working equipment, part of his woodworking shop, and his phone & electrical service. George says that he hopes to have everything back to normal by the end of April.

Now for the normal stuff.

Last month's "new user" meeting found George discussing an emergency backup disk for your computer. By making a backup disk, you can save yourself a lot of time and agreat deal of frustration if your computer refuses to boot up properly. George demonstrated the steps taken to make the backup boot disk. Check out the article

By John Ewing

"Setting Up an Emergency Boot Diskette" beginning on page 2 of this month's edition of Hard Copy.

The feature of the main meeting was the assembly of a '386 desktop computer for the club. Bob Hunt acquired all of the necessary components at cost and assembled the computer under the scrutiny of the membership in attendance. As can be expected when one is under the gun, Murphy's Law will prevail. After the computer was assembled, the system refused to boot. As it turned out, the harddrive was wired incorrectly at the factory and had to be corrected. Everything worked out in the end and the system is working flawlessly. Thanks go out to Bob Hunt from all of us.

Next month Jin Bigelow will demonstrate GeoWorks Ensemble. See "Ensemble, Everyones Multasker" on page 3. Jim will have discount vouchers for those interested in buying Ensemble.

The Great 720K Diskette Scam

Through the summer and into this fall, a number of users group newsletters carried articles by uninformed "experts" asserting that the only difference between an expensive 1.44MB 3" diskette and its 720K cousin was simply the labeling the manufacturer put on it.

A company called Biological Engineering supposedly had done extensive research on this subject and "proved" that the magnetic media were the same inside the plastic case.

That company, by the way, happens to market a special tool for "just $40" in order to punch the necessary holes into the 720K plastic case so the 3" disk drive will be fooled into thinking the diskette is really a 1.44MB

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President   George Campbell
Vice President   Sam Powers
Treasurer   Bernice Meador
Secretary   Bob Ward
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Setting Up An Emergency Boot Diskette

by George Campbell

SLO Bytes PCUG

One day it'll happen to you: You hit the big switch on your PC and wait a bit for the machine to boot up. "Beep." it says, then it goes "Beep....Beep" and you see a message on the screen that tells you there's a problem. The machine stalls, and won't boot up. What will you do? What will you do?

Well, maybe you have a floppy disk in drive A: and you just need to remove it, then press a key for the computer to continue the boot-up process. But then again, maybe not. Maybe instead, you've got real problems.

Sure, somewhere you have a copy of DOS on floppy disks, but that might not be enough. What you really need is an emergency disk you can use to boot up your system. Here's why:

To Boot or Not to Boot....

There are several reasons why your machine might not boot.

» Your hard disk might have died. That's unlikely, but it could happen.

» You may have accidentally deleted COMMAND.COM or other files from your hard disk's root directory. This is all too easy to do, and is a very, very common reason for boot failure.

» There could be a bad connection or loose cable or card somewhere in your computer.

In all of those cases, you need to be able to boot up quickly from a floppy disk, so you can identify and fix the problem. But just any floppy disk won't do...you need a specialized emergency disk. Here's how to make one for your computer. You may never need it, but if you do, you'll be glad you did it:

Creating your Boot Disk

First, grab a blank floppy disk that is the correct type for your drive A:. If you're stuck with a 360K disk, you won't have a lot of room there for some of the steps below, but I'll explain how to make the most of even that small diskette format.

Boot up your computer (remember, you're doing this while the computer still works, right?). Now stuff your blank floppy in Drive A: and give this command:

FORMAT A:/S [Enter]

You already know about the FOR-MAT command, but the /S switch does more than just format the disk. It makes that diskette into a boot disk, copying the necessary hidden files and COMMAND.COM onto the disk.

Once the formatting and system transfer is finished, press N to tell DOS you don't want to format another disk.

AUTOEXEC.BAT and CONFIG.SYS

While the disk you just made will boot your computer, there are a few additions you'll need to make. To do these, you'll need a text editor, like SLED, which is on the disk containing this file. You could also use a word processor that can save files in PURE ASCII format.

With the floppy disk you just formatted still in drive A:, but with the C:> prompt showing on the screen, give these two commands:

COPY AUTOEXEC.BAT A: [Enter]
COPY CONFIG.SYS A: [Enter]

This will copy those two all-important files to your floppy disk, preserving your normal boot setup. BUT....you may need to modify them slightly.

So, load the files, one at a time into your text editor or word processor. Start with CONFIG.SYS. **NOTE:** Be sure to load the copies on the floppy disk, **NOT** the ones on your hard disk!

Here's something like what you'll probably find: If you don't see all these commands in your CON-FIG.SYS file, don't worry:

```
FILES = 20
BUFFERS = 20
DEVICE = C:\MOUSE.SYS
DEVICE = C:\DMDRVR.BIN
DEVICE =C:\DOS\ANSI.SYS
```

You can safely ignore the first two lines...just leave them as they are.

The remaining lines, the ones that refer to drive C: or another drive, however, need changing. If there are no drive names at all on these lines, just leave them alone.

What you need to do here, and this will depend on your individual setup, is to copy the files named in those DEVICE lines onto your new emergency boot diskette. Once you've copied the files, then change these lines to show drive A: instead of the drive shown originally. **REMEMBER:** You're only changing the CONFIG.SYS file on the new floppy! Don't mess with the ones on your hard disk.

So, the final result would look like this:

```
FILES = 20
BUFFERS = 20
DEVICE = A:\MOUSE.SYS
DEVICE = A:\DMDRVR.BIN
DEVICE = A:\ANSI.SYS
```

Ensmeble
Everyone's Multitasker
by Jim Bigelow

SLO Bytes PCUG

Now everyone can multitask, everyone, even those with XT's who don't know how to multitask, as long as their computer has a hard disk drive and a mouse.

It is here, now, the software of the ages that we have been waiting for. GeoWorks has brought it about in their fantastic computer program, the first state of the art multitasker, for the average user. Ensemble is its name.

If you don't want to tackle Windows 3, OS2, Unix or any of the other mind boggling giants that actually require a 386 computer with loads of memory and computer specialists to set up and operate, you can purchase Ensemble. And with Ensemble you can set up all your favorite applications included with Ensemble, such as a word processor, drawing program, planner, calculator, notepad, card file, scrapbook, solitaire game, and communications program all in one.

That is only the beginning, also you can run all of these programs, and several of each simultaneously. (I have run and viewed on my screen as many as four text files in GeoWrite and two other applications simultaneously and easily and quickly switched from one to the other, as well as transferred data from one application to the other.) This is called multitasking. And it can be done by you on your XT.

Quite amazing, GeoWorks Ensemble contains some of the best of applications, GeoWrite for instance is simple, mouse driven, with all the formatting controls a secretary would use. It comes with 9 scalable fonts, from sizes 4 to 792 points, with 7 styles. It doesn't include a spelling checker and thesaurus as the behemoths such as Wordperfect or Microsoft Word, but it is loaded with plenty of extras, enough to make up a simple newsletter. By the way, the scalable fonts are basic to Ensemble and are available to its internal applications such as GeoDraw.

Ensemble loads up with a most strikingly colorful and efficient graphical user interface called a Welcome screen, which allows three selections: Appliances for the beginner, Professional for the Pro., and DOS for executing your favorite programs outside of Ensemble.

The *Geomanager* application provides you with all of the controls that are needed for Ensemble applications, file management, as well as disk controls, formating, etc. It is very well done.

GeoDex is a neat little card indexing application that will dial your phone for you. It will do basic sorting, though it lacks sophisticated sorting capabilities and will sort only by the name or number typed in the index field. It will print index files, phone numbers or labels.

GeoDraw is a vector-based application with many surprising extras, such as 5 viewing sizes, line, text and area color and texture property choices. It lacks freehand drawing capabilites, but has a "line connected" tool that serves quite well. It also imports bitmapped images.

GeoPlanner is a complete and very clever planning and scheduling application with alarms, whistles and bells. Its capabilities are elaborate and varied.

Documents, files and drawings also can be copied to *GeoScrapbook* where they are saved for future use. And if you want to communicate with bulletin boards, other computers, and information systems, GeoComm will serve you well. It contains plenty of features for setting your protocol, terminal, and modem. You can capture text, write script, and carry on like the big boys.

The manual states that GeoWorks America Online application will allow you to download thousands of public domain and software programs, check stock prices, the latest news, play games and do much more. At the time of this writing I have logged on and explored but have not gone much further.

The amazing part of Ensemble is that there is so much in so little a package, power of which users only dreamed; all these applications and all linked so that either files, documents or the applications themselves readily switch from one to the other.

The package comes well documented with nearly 500 pages of easily read and understandable manual, plus a Quick Start, Customer Support Handbook and a Troubleshooting, Tips, and Extra Features manual.

GeoWorks 2150 Shattuck Avenue Berkeley, CA 94704 Retail: $195 With coupon at meeting: $50

Jim Bigelow is a member of the SLO Bytes PCUG. He contributes to Hard Copy Frequently. Jim will demonstrate Ensemble at the April 7th SLO Bytes meeting. ed.

New Members

New Members for March, 1991
Welcome to SLO Bytes PCUG

Make Sure Your Computer is Well Stacked

by Frank Megilligan

[Reprinted from Computer File, October 1990]

FATAL: INTERNAL STACK FAILURE, SYSTEM HALTED

The CONFIG.SYS file is used each time you start or restart your computer. This file allows you to customize and optimize your system for your particular computer needs. There are many different commands that may go into the CONFIG.SYS that allow you to control different aspects of your computer. This month I would like to take a look at the STACKS command.

The STACKS= command is used in the CONFIG.SYS file to alter the number of available stack frames and their size. Stack frames are used to process hardware interrupts. One "free" (unused) stack frame from the pool of available frames is used to process each interrupt. After the interrupt is completed, the stack frame returns to the available pool.

The syntax for the STACKS command is:

STACKS=x,y

where x=the number of stack frames (from 8 to 64) and y=the size of the stack frames (from 32 to 512 bytes). Setting x=0 and y=0 indicates that no dynamic stacking is to be installed.

The default values for both x and y vary with computer processor types. The 8088 and 8086 microprocessor based computers have a value of zero (0) for both x and y. All other microprocessor based computers default to x=9 and y=128.

Users with a large number of devices installed on their systems sometimes get a "Fatal: Internal Stack Failure, System Halted" DOS error. This usually occurs because there are too many hardware interrupts.

The STACKS= command can increase the stack space and allow the system to process more hardware interrupts. Allocating more stack space also increases the amount of memory that the resident portion of DOS will use, thus decreasing the amount of memory available for your application programs.

One more note on the STACKS command. If you have a program that you know runs on an 8088/8086 microprocessor based computer and it causes the "Fatal: Internal Stack Failure, System Halted" error message on an 80286 and 80386 based computer, try disabling the dynamic stacking by placing the command:

STACKS=0,0

in your CONFIG.SYS file. Note that as with other commands placed into the CONFIG.SYS file, there are no spaces between the command, the equals (=) sign and the variable option.

Birthdays for March

Charles Goldberg	03/07
Mickey Muran	03/13
Sam Powers	03/17
Kathy Yakal	03/21
Harvey Hafer	03/23
John Ewing	03/30

If you would like a BIG SLO Bytes "Happy Birthday" in our newsletter please submit your special month and day to Bob Ward.

720K Diskette Scam

Unfortunately, Biological Engineering did not fully do their homework and at least some people fell for it and started writing articles on how it was smart and perfectly safe to format a 720K disk to 1.44MB .

The truth has now started to come out; several articles have appeared (Central Texas PCUG, PC Magazine, and others) documenting the fact that the magnetic media is different on the two types of diskettes.

The 1.44MB disks use high coercivity oxide which requires a magnetic strength of 600 oersteds. In contrast, the 720K disk is of lower coercivity and is designed to be written at 300 oersteds.
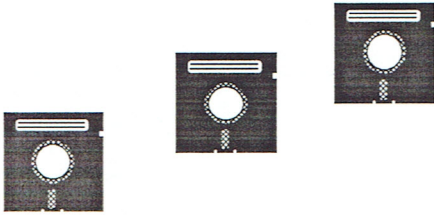
Using the stronger (1.44MB) magnetic field on the 720K media results in a signal that can be initially read by the drive, but which may become unreadable later because of interference from nearby particles in the oxide.
In short, for reliable data storage, use a diskette that was designed for the drive and formatted capacity you are using. When you calculate how much it will cost you to regenerate lost data, the magnetic media looks pretty darn cheap even if you have to buy 1. 44MB disks at $ 50 a box.

Editor's note: The reference to the 3" disk is believed to be incorrect in that the author is assumed to be discussing 3.5" disks. It is the policy of Hard Copy to reprint articles from other newsletters in the original context.ed.

SLO Bytes Library

I cleaned house this month. If anyone has seen my work area (some have, and lived to tell about it!) you know disks seem to multiply around my computer. I ran through about a hundred disks here and there and came up with the following for our library this month:

#381 - HUGO2 - Hugo II Whodunit? Continuation of Hugo 1.5 found on disk #366. Good 3D animation adventure game.

#412 TYPEDOS - practice your DOS commands. PCLEARN 5.0 updated from 1.74 and moved from disk #385 due to increase in size.

#413 - Miscellaneous PCX clip art from Computer Completers.

#414 HDMIV - Hard Disk Manager IV. Nice menuing system

#415 DVP - Disk Duplicator. Multiple copies from same disk without rereading original. ALMANAC - It's time to plant the garden, or so the almanac says.

#416 RTM - resident task manager 2.01. If the boss or wife doesn't remind you of your chores you can plan them out on this one. CALRPT - formatted calendar reports for Side-Kick +. CALTRV - formatted Side-Kick + calendar for business travel.

#417 - EZ-BUSINESS - use for billing, business mailing labels, Rolodex cards, database, etc.

UPDATES:

#412 - PCLEARN50 updated to 5.0 from 1.74 and moved from disk #385.

#358 & 359 - Wildcat Testdrive full feature BBS system. ver 07/15/90

#418 - Network virus scanning programs were part of #381. Disk split due to increase of size of updates. Added VC100 - Virus Central, menu driven program to scan disks for viruses with Mc-Afee Virus Scan programs.

#419 - CLEANP74, SCANV74, VSHLD74, VCOPY74 updated from version .72.

Demo Disks:

#190 Publisher's Powerpak - scalable fonts on any printer by Atech Software.

#191 PC-cillin Virus Immune System by Trend Micro Devices

#192 Skills Bank II from Skills Bank (teachers look at this one!)

#69A & B - Test drive a '91 Buick from your computer. Varooooom, chugaa chugaa!

Calendar

April 7th	Jim Bigelow will present Ensemble from Geoworks. Here's a very popular Windows look-a-like for 8088 and 286 machines.
May 5th	Russell Hoffman creator of P11 Animation Software will present his product.

Emergency Boot Diskette

The files in the DEVICE lines MUST be on the new floppy, so don't forget to copy them.

Why not just leave them on Drive C: and let DOS find them? Well, suppose you had disk trouble, or had deleted your root directory? Aha!

Hard Disk Managers

The line above, which reads DEVICE = C:\DMDRVR.BIN, is critical. Many users have large hard disks which use a disk manager program to handle the partitioning of the drive. DMDRVR.BIN is the name of the file used by DISK MANAGER, a popular program. Your computer may use another file, but if you copy all files named in the CONFIG.SYS file to the new disk you'll be safe. If you don't do this, though, you may not be able to access your hard disk after booting from the emergency floppy.

NOTE: Keep CONFIG.SYS simple on your emergency disk. Don't load drivers for your CD-ROM drive, memory managers, or any drivers other than those you really need in the short term.

AUTOEXEC.BAT

The other file you need to modify is your AUTOEXEC.BAT file. **AGAIN, MODIFY ONLY THE ONE ON YOUR FLOPPY DISK**. Here's a sample AUTOEXEC.BAT:

```
PROMPT = $P$G
PATH = C:\;C:\DOS;C:\UTIL;
C:\BATCH;D:\WINDOWS
SHARE
MOUSE
SK
PCTOOLS /R
```

Keep the first two lines of this batch file. You'll want your PROMPT and PATH commands, so your computer

will seem familiar to you when you boot from the emergency disk.

SHARE is an important command. Retain it if you use DOS 4.x and have a large hard disk. You'll need to copy the SHARE.COM file onto your new floppy. If this command doesn't appear in your AUTOEXEC.BAT file, you don't need it.

If you load your mouse in the AUTOEXEC.BAT file rather than in CONFIG.SYS, you'll need this one too. Just be sure to copy MOUSE.COM onto the floppy disk.

In fact, any command used in your AUTOEXEC.BAT file which runs another program requires that program to be moved to the floppy disk. In addition, you'll have to alter the drive designation on the line that calls the file.

The rest of the lines are memory-resident programs (TSR), and you simply don't need them when booting up from an emergency disk, so delete these lines. In fact, you probably won't want them installed, since you may have problems that require all TSR's to be out of memory.

NOTE: You can keep anything you want to, but try to simplify your boot-up system for this emergency disk. Keep the CONFIG.SYS and AUTOEXEC.BAT files as simple as possible.

Additional Emergency Disk Procedures

So far so good, but there's a lot more you can do to make your emergency disk more useful.

Start with a common problem and its solution. Have you ever given this command?

DEL *.* [Enter]

Sure, we all have, then we just type "Y" without thinking when DOS prompts us. Well...it's awfully easy to

do this while you're in the root directory, causing you to lose all the files stored there. It can be a disaster.

There's a quick fix, though. You can store your entire root directory on your emergency diskette. But don't just copy the files onto drive A:... that'll cause problems. First, create a new directory.

Start at the C:\ prompt, then give this command:

MD A:\ROOT [Enter]

When the prompt returns, give this command:

COPY C:*.*   A:\ROOT [Enter]

This'll copy all files in your root directory into the A:\ROOT directory. Then, if you accidentally delete your hard disk's root directory, you can simply give this command, after booting up from your emergency disk:

COPY A:\ROOT*.*   C:\ [Enter]

All fixed, and you'll be back in business.

CAUTION: If you are a sloppy user and have actual programs in your root directory, you won't be able to get them all on your emergency floppy. Remember: good hard disk management means keeping your root directory free of all unnecessary files. All you really need there is COMMAND.COM, CONFIG.SYS, AUTOEXEC.BAT, and maybe your hard disk manager's driver. If your root directory is full of files, you should consider moving programs and utilities into other directories, using the PATH statement or batch files to run them.

You don't have to do this, but you'll sure be sorry if you don't and you delete your root directory. And believe me...you will make that mistake one day.

Emergency Boot Diskette

Still More

OK, now you have a basic emergency disk, one which can save your hide in most cases. But there are some other things you might want to add, if you have enough space on your floppy disk. This won't be a problem on 1.2 MB or 1.44 MB disks, but smaller formats may not be able to include all the things listed below. If you have a 360K or 720K drive, you can cut the list as needed.

DOS files

You may want some of your DOS files available on your emergency disk. CHKDSK, FORMAT, and others are useful, especially if you have a serious problem.

Give this command, with your emergency floppy in drive A:

MD A:\DOS [Enter]

Now, copy the DOS files you want to have handy into that directory on drive A:. You may even have room to store your entire DOS directory, but here's the minimum list your emergency disk should contain:

        SYS.*
        FORMAT.*
        DISKCOPY.*
        CHKDSK.*
        DEBUG.*
        BACKUP.*
        RESTORE.*
        SHARE.*
        FDISK.*

Include any others you use regularly, as well.

Directories Grow on Trees

How's your hard disk organized? Hey, don't ask me...it's your hard disk. But, if your disk actually crashes and can't be fixed, you'll want to re-create your new disk with the same structure. So maintain an emergency structure file on your floppy disk. Here's how:

First, create a directory to store this information:

MD A:\TREE [Enter]

Now, from the C:\ prompt, give this command:

TREE C:> A:\TREE\TREE-C.TXT [Enter]

DOS will write a neat text file showing the directory structure for drive C:. What? More drives? OK, just repeat the command, changing the necessary stuff. For example:

TREE D:> A:\TREE\TREE-D.TXT [Enter]

That's it.

Your Personal Toolbox

Very few of us can stand to be without our favorite utility programs. If your system goes down, and you need your emergency disk, you'll want access to those programs, and you'll want it fast. So, depending on the space available on your new emergency diskette, add your favorites.

But first, create a directory for them...with this command:

MD A:\UTIL [Enter]

Now copy your favorites into that directory on drive A:.

You're going to be close on space here, so use your best judgement on what utilities to choose. Here's a basic set that will always be useful:

A text editor, like SLED.COM A file browser, like LIST.COM A file undeletion utility, like Norton's QU.COM

Documentation files for these, if you're not completely familiar with their use.

Add to these any others you might need. By this time, your disk may be just about full, so you're about ready to quit.

Special Cases

Think about your computer. Do you have a tape drive for backups? Do you use a special program for backups to floppy disks? Do you have a special monitor or any other essential equipment that uses special drivers that are loaded in CONFIG.SYS?

If so, you'll need to modify these instructions to include your special needs. Most likely, all you'll have to do is keep some lines in your CONFIG.SYS or AUTOEXEC.BAT files. Just remember that you'll also need the files named in DEVICE = lines or ones you run from the AUTOEXEC.BAT file. Copy them to your floppy disk and change the appropriate lines to tell DOS where the files are.

Tape backups and special backup software are especially important. Make sure you can use your software from floppy disks...check the manuals. You don't need to keep the backup files on your emergency disk, but you need to be ready. If your only copies of these programs are on your hard disk, and it crashes, you're pretty much out of luck. Make certain you have working copies on floppy disks.

NOTE: These recommendations are just that....recommendations. An emergency boot disk is a personal thing, and you may have other ideas about what will make it useful to you in case of trouble. Go ahead and set up the way YOU like.

From The Editor...

On the front page of this mornings edition of the local newspaper (Telegram-Tribune 3/23/91), an article appeared telling of "amatuer" hackers being tripped up. Apparently two local dermatologists were receiving numerous calls to their modem line. The caller would attempt to log in with an incorrect password. After several unsuccessful attempts, the computer software would shut down the system.

The phone line was tapped, and revealed that over two hundred calls were received in one day. Search warrants were served on three local residents who called the dermatologists' phone number at least three times in one day. The three computer "hackers" did not know each other, but had a common denominator. All three residents had a program that identified the doctor's phone number as Cygnus XI.

For those of you that have been computer enthusiasts and BBS users for a while, you might recall the Cygnus XI BBS. This was a public BBS that operated in San Luis Obispo a few years ago. The SysOp moved and discontinued the board. It appears that the phone number was reassigned to the dermatologists.

My personal opinion is that the phone number is still listed in personal dialing directories as Cygnus XI, and people are innocently calling to exchange information and download files. These so-called hackers know that the password they used worked in the past and attempt to connect several times. The password may even be recorded as part of a script file. If this is the case, my sympathies go out to those who have had their hardware & software confiscated.

Check your online dialing directories. If you have a listing for Cygnus XI, don't use it. Better yet, delete the information from the directory.

You might want to review all of the phone numbers in your dialing directories and make sure they are current. Hopefully, you wont find yourself in a situation that will jeopardize your computer investment.

Emergency Boot Diskette

Using your Emergency Boot Disk

Before going any farther, you need to test your disk. Stick it in Drive A: and reboot with [Ctrl]-[Alt]-[Del] or hit the reset button or the power switch. Your computer should reboot and show you an A:\ prompt. If not, check your work, or repeat the instructions.

Keep your new disk safe, and be sure to label it clearly. It's even a good idea to make extra copies of this disk and store them in another location. Remember: if you need this disk, you'll need it badly!

When an emergency arises and your computer won't boot, just grab the disk, stuff it in drive A: and reboot. You'll start up your computer and see an A:\ prompt. From there, you can explore the problem.

Start by giving this command:

DIR C:\COMMAND.COM [Enter]

If you see a "File not found" message, then you've deleted your root directory accidentally. To fix this, give this command:

COPY A:\ROOT*.* C:\ [Enter]

Then reboot after taking your floppy out of the drive. Things should be OK again.

Other problems are less simple, and you'll have to figure out what's wrong as best you can, or get professional help.

But, if you've prepared in advance, your job will be much easier. With any luck, you'll never need your Emergency Floppy Boot Disk, but if you ever do, you'll be back in business quickly.

Note: This information was presented to the SLO Bytes Group at the early meeting in March. A disk with this text file and many of the other popular utilities is available on disk in our library.ed.

Club Information

The SLO BYTES Newsletter is a monthly publication of SLO BYTES PC User's Group located in San Luis Obispo, California. Information in this Newsletter is derived from both our own membership and other PC User Group Newsletters. The purpose of this publication is to inform our members of meetings and provide information related to the use of IBM PC's and compatible computers.

Membership: Dues are $20 per year. Newsletter only is $12 per year. Full membership entitles you to our monthly newsletter, full use of the public domain software library and discounts at local computer stores.

Article Submission: Deadline for submission of articles is the 15th of each month. Articles should be provided in ASCII format without any type of formatting from your wordprocessor including tabs, indents, extra spaces, or highlighting. We prefer articles on disk but will accept hardcopies if necessary.
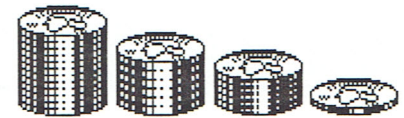
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Direct all correspondence to Bob Ward, 2100 Andre Ave., Los Osos, CA. 93402. Call (805)756-2164 M-F 7:30am - 5pm and (805)528-0121 all other times.

Editor: John Ewing, 1710 15th Street, Los Osos, Ca. 93402. Phone 528-7196.

Meeting Times

General meetings are held the 1st Sunday of every month, unless noted otherwise in the newsletter calendar, at 2:30 pm in the Cal Poly University Biology Department, Fisher Hall 286. Special Interest Groups (SIGS) meet at 1:30 - 2:15 pm.

New User's SIG - F.H. 286

Our Public Domain Library is in Fisher Hall 292. Hours 12 Noon till closing.

SLO BYTES BULLLETIN BOARD

Due to an electrical storm, the bulletin board is down until further notice.

Treasurer's Report

SLO Bytes PCUG
Expenditures March, 1991

Beginning Balance:	+2139.71
Expenses:	
Newsletter 02/21/91	- 137.79
Computer parts	-1755.20
Disk Drive, HD disks	- 188.00
Postage Stamps	- 29.00
	=======
	-2109.99
Deposit 03/04/91	+606.90
	=======
	+606.90
Balance 03/10/91	+ 636.61

DISCOUNTS

Star Computers 855 Morro Bay Blvd. Morro Bay 772-7827	5% 10%	Any software in stock. Paper, ribbons, cables, and other supplies.
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