

# Cincinnati Commodore Computer Club

Phone: 513-248-0025 Email: thunderbird@iglou.com  
c/o 31 Potowatomie Trail Milford, OH 45150

June, 2006 President's Page

Howdy Fellow Commodore Users!

The C=4 Expo is in the history books! For those who volunteered to help out during the weekend, let me say thank you! I would like to make special mention of the following individuals, some not even members of our own club.

David Ross of SWRAP for his video projector, little did I know it would turn into a super karaoke projector for so many hours of fun on Saturday nite.

Bernie Hiles for his projection screen collection.

Oliver Viebrooks for the sound system. (Sorry 'bout that mic - Editor)

Chuck Kern for making direction signs to point folks to the right directions of our festivities.

Chris Stuhlmueeller for suggesting to Earl Evans an interview on Retrobits Podcast.

Jim Oaks for videotaping several hours of demos.

David Fisher for the great nametags.

Alan Reed for his graphics suggestions.

Mark Gladson for registering c4expo.org website, and providing a forum for folks to openly comment.

Ms. Willemieek Bijlenga of Commodore International Corp. for providing promotional literature and posters that everyone enjoyed looking over (...posters were highly coveted).

A big thank you to Roger Hoyer for doing the legwork necessary to find a good location for the expo.

Thanks to the folks who provided demos throughout the two day event. Also, thanks to the dealers who provided stuff for us to buy that wasn't already in our collections. Finally thanks to those who just showed up to witness the wonder of what the C64 and other Commodore machines can do. I was awed by several demos on both days.

For those who were unable to attend, you missed a lot of fun in those two days. I would not have wanted to miss it. To see some of the fun you missed out, check out our webpage, and go to the photos link. There I will be placing url's of photos of the Expo as I find out about them. As I write this article, two so far have popped up. Also included on that page is a link to the podcast called Retrobits, that I mentioned earlier. I am interviewed for approximately 12 minutes from the expo via telephone by Earl Evans.

If you thought our meeting was on the third Sunday this month, surprise! Due to Father's Day, we typically move it to the fourth Sunday of the month.

Join us on Sunday June 25th at the Norwood Retirement Community.

Keep on Commodoring!

David Witmer Cincinnati Commodore Computer Club President  
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## BASIC Tips & Tricks - BASIC Obfuscation Techniques

```
10 iif = 4  
20 then = 10  
30 print iif+then
```

list

```
10 if = 4  
20 then = 10  
30 print if+then
```

run

14

ready.

■

Consider the code at the right. Does it look a bit odd to you? Chances are this is a new one on a lot of you. I'd been using my C64 almost every day since 1985, and I had never stumbled on this trick.

MANY THANKS TO JIM BUTTERFIELD for teaching this little bit of BASIC obfuscation at C4.

Because of a quirk in the way that BASIC parses lines when you enter them, you can embed graphic characters in variable names. When BASIC tokenizes these lines, it will ignore the graphic characters, but it will also miss checking the variable names against known BASIC keywords.

Using this technique, you can now use BASIC keywords as variable names (sort of). Bear in mind that only the first two characters of the variable name are important. Everything after that is just fluff. So while you can make your BASIC program list with these keywords in it, your variable named "then" is really just plain old "th" to BASIC.

In the example above, I have used graphic character embedding to allow me to use the BASIC keywords IF and THEN as variable names. Imagine the confusion this would cause if an entire program was written in this manner!

## ML Corner - Adding two 16-bit numbers using self-modifying code

```
ADD16      ;Expects first # in x:a, second number on the stack lo-hi  
           ;returns the result in x:a, carry set if result > $ffff  
  
           sta ADD16a+1      ;store our first low byte  
           stx ADD16c+1      ;store our first high byte  
           pla               ;pull our second low byte from the stack  
           clc               ;pre-add clear carry  
  
ADD16a     adc #$ff          ;add  
           bcc ADD16b       ;no carry, skip  
           inc ADD16c+1      ;inc high byte if carry  
  
ADD16b     tay               ;stash this in y  
  
           pla               ;get second high byte from stack  
           clc               ;pre-add clear carry  
  
ADD16c     adc #$ff          ;add  
           tax               ;move result into x  
           tya               ;get our low byte back  
           rts               ;return
```

Example, to add \$1234 and \$5678:

```
lda #$12   ;high byte goes on stack first  
pha  
lda #$34   ;low byte goes on next  
pha  
ldx #$56   ;load our x with high byte  
lda #$78   ;load our y with low byte  
jsr ADD16
```

This could also be accomplished with zero-page instead of self modifying code.



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## OpenCBM, A 1541 Connection Solution

For years, I have been looking for a way to connect my Commodore drives to my PC that was relatively transparent, didn't require me to boot without a GUI, and was at least somewhat reliable.

Having tinkered with a number of different solutions over the years, and having limited success, I was ready for OpenCBM to be a real hassle to set up, and not very functional. I couldn't have been more wrong.

OpenCBM is a project based on cbm4linux, and is authored by Spiro Trikaliotis.

According to the user's guide I found at <http://opencbm/trikaliotis.net/opencbm.html>, OpenCBM supports Linux 2.4, Linux 2.6, Windows NT4, Windows 2000, Windows XP, and Windows Server 2003. No Macintosh version was listed, though I suspect that if you run OSX and have a parallel port, it shouldn't be too hard to port OpenCBM to your machine.

OpenCBM supports either the XM1541 or XA1541 cables. I opted to build the XM1541 because it was easier. XE1541 cables are not supported for various reasons, but to summarize, the XM allows an interrupt to be generated on the PC when the drive sends data, whereas the XE does not.

After building my XM1541, and attaching my 1541 and cable to my laptop, I downloaded OpenCBM, unpacked it, opened a shell window and went to the folder where it resides.

To install OpenCBM, you simply run the INSTCBM.EXE command.

(I did so, and this is the point at which I discovered that I had the parallel port on my laptop disabled in the BIOS. On another machine, I had a similar issue, in that the parallel port was disabled in the OS. You should probably check that neither of these conditions apply to your system.)

After rebooting, I went back to the shell, tried INSTCBM again. It complained about the driver already being there and told me to use "instcbm --update". This did the trick, and everything appeared to install without a problem.

To test, I tried "cbmctrl dir 8". I was rewarded with a directory listing from the attached 1541. It really was JUST THAT SIMPLE.

There are a number of tools that come with OpenCBM, including a d64 reader/writer, a fast formatter, a copier, and some tools that appear to just flash the drive light.

All in all, OpenCBM is a very simple, very useful cross-platform storage and file sharing solution. It is open source, and the dll comes with wrappers for Delphi and complete documentation.

In the illustration above, the diodes are 1N5819 or BAT85. All parts for building the XM1541, including the connectors are available locally at Debco Electronics on Edwards Road (513-531-4499 [www.debco.com](http://www.debco.com)).

CBM4WIN/OpenCBM is available at:

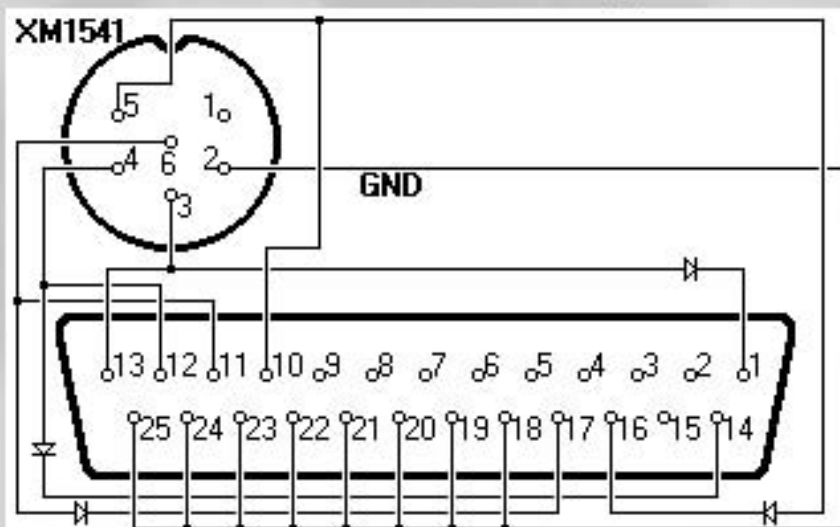
<http://prdownloads.sf.net/opencbm/opencbm-0.4.0-i386.zip?download>

GUI4CBM4WIN is a GUI for OpenCBM and can be found at:

<http://www.jammingsignal.com/gui4cbm4win/> (Ask Dragos for details)

Construction instructions for the XM1541 cable are available at:

<http://sta.c64.org/xm1541c.html>





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## Commodore Word Search

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

Can you find these words in the letters above?

ACTIONREPLAY  
ASSEMBLY  
BASIC  
COMMODORE  
CPU  
FLOPPYDISK  
HARDDRIVE  
KEYBOARD  
LIGHTPEN  
MOUSE  
POWERSUPPLY  
RAMLINK  
SID  
SUPERSNAPSHOT  
VIC

AMIGA  
ATARI  
CMD  
COMPUTER  
DISKDRIVE  
GEOS  
KERNAL  
KOALAPAD  
MONITOR  
PLUSFOUR  
RAM  
ROM  
SIXTYFOUR  
TRAMIEL



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**Commodore 64**

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**Next Meeting  
Sunday  
June 24, 2006**

**From 2PM to  
4PM at**

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