

# (TPUG Newsletter)

Views and News of Toronto Pet Users Group  
c/o John Easton, 258 Lake Promenade, Etobicoke, Ontario, M8W 1B3 phone (416) 251-1511

Late Fall — 2014

**From your President ...**

**There's room for you in this picture ...**

**The World of Commodore**

**December 6, 2014 from 10 a.m.**

**At the Admiral Hotel which is located on the north side of the QEW, just west of Erin Mills Parkway in Mississauga**



Come see demos, vendors and guest speakers covering new and innovative products for Commodore Computers

Visit us at:

<http://worldofcommodore.ca>

## Member Information

### Voice Info

We have discontinued our TPUG phone listing - contact members as listed here at home phones.

Website: [www.tpug.ca](http://www.tpug.ca)  
e-mail: [info@tpug.ca](mailto:info@tpug.ca)

### Membership Rates

**\$15 per year  
else, with e-mailed Newsletter,  
\$10 per year**

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Meetings	Leif Bloomquist
	and Ernie Chorny
Shows	Tom Luff & Ernie Chorny
Webmaster	Ian Colquhoun

### Newsletter

Editor John Easton (416) 251-1511

## Meeting Schedule

**Westside and Amiga West:** Third Thursday of the month (except summer) at Alderwood United Church, 44 Delma Drive. Delma Drive is just west of and parallel to Browns Line, south of the Queen Elizabeth Highway, north of Horner Avenue. From the west, exit QEW at Evans Avenue, east on Evans to next stoplight, south on Gair to Delma Drive. From the north or east, follow signs from QEW or Hwy. 427 to Browns Line, exit right to Evans Avenue, turn south on Gair (first stoplight) to Delma.

Contact - **Leif Bloomquist** (416) 737-2328 [leif@schemafactor.com](mailto:leif@schemafactor.com)  
or **Ernie Chorny** (905) 279-2730 [chorny@bell.net](mailto:chorny@bell.net)

## From your Editor ...

Well now, here's a surprise ... a third issue for this year ... admittedly, it's on the shorter size, but why not ... the World of Commodore is about to materialize, and we've still a bunch of articles to disseminate. And besides, who could miss the opportunity to purchase our 2014 WoC T-shirt ... quantities *are* limited.

To Joe Quittner ... sorry, I decided to eliminate the Machine Code portion of your program notes because they were incomplete ... but you knew that. Anyone wants that portion, why not just enter the program as presented, and disassemble at your leisure.

Leif's story on Convex was to be followed up with a report from Chicago ... next issue (and that means I can still use the cartoon) ... and I'll expect a report on this year's Maker Faire this weekend (as I'm putting this together on Nov. 21).

We've had some interesting demonstrations lately by our long past president, Tom Luff. Ya see, he's into robotics and Arduino and all that runs between. Fascinating stuff. You'll see more this issue.



*Starbucks invasion crew, September 2014*

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**Notice to new owners of SuperPet and CBM 8296 machines**

TPUG has copies of the Waterloo LANGUAGE DISKS (3 in 4040 format) as supplied with the SuperPet on original purchase.

TPUG has the EXECUDESK disk (8050 format) as supplied with the CBM 8296 on original purchase.

These disks are an integral part of the operating systems of the above machines and since Commodore insisted on referring owners of these machines to TPUG for service, we have added these somewhat proprietary (and also virtually unobtainable) disks to our library - all part of the TPUG mandate of service to our members.

We also will attempt to search out copies of original program disks to replace corrupted disks. In this category you will find such programs as VISICALC, WordPro, and PaperClip.

**TPUG Annual General Meeting**

Take notice that the annual meeting of TPUG will be held in conjunction with the regular February 19, 2015 meeting, only earlier—7:00 p.m. This is your opportunity to discuss club issues and to contribute to the organization as desired.

Typical items covered at an Annual Meeting are, but not limited to: establishment of a quorum, minutes of the previous meeting, reports on activities within the club, new business, nomination of officers and election of officers.

If you are unable to attend and wish your proxy vote counted, please ensure that your assigned proxy is in the hands of the Board prior to the meeting. E-mail to the vice-president, [jeaston@rogers.com](mailto:jeaston@rogers.com) will be considered a legitimate means of submitting a proxy to the Board.

*Typical Proxy Voting Format:*

*This will allow ..... to vote on my behalf on all matters at the Annual Meeting of TPUG held February 19, 2014*

*Name ..... TPUG Member # .....*

*Signature ..... (difficult with e-mail)....Date .....*

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 (Just add a standard PC floppy drive)  
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**JP. PBM Products by Mail is the NEW Manufacturer of Super Snapshot Cartridge V5.22 - NOW SHIPPING**

\*CURRENT Commodore Club MEMBERS SAVE \$5 MORE off the regular price before freight and taxes.

Mail Cheque/M.O. to:	SSv5.22 Cartridge	\$ 74.95
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DOWNSVIEW, ONTARIO		
CANADA M3L 1B0	subtotal	\$ _____
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All Prices Are Cdn. Funds	Subtotal	\$ _____
US Funds at par		
Send \$2 for a catalogue on disk (1541 format)	Canadians add GST/HST+	\$ _____
	TOTAL (CDN. FUNDS)	\$ _____

**Visit [JPPBM.COM](http://JPPBM.COM) for full product listings and PayPal ordering information.**

# Joe's World 28 ... Date/Time on Top

After typing this in, and before running, save this program because it deletes itself after running, permitting you to enter a different program, with the top line continuing to show the date and time. If you keep the computer running for more than one midnight, poke 40956,0 before the 2nd and each of the later midnights to update the day and month at each midnight.

Ed note ... the POKE line 2 is questionable, probably left by Joe as an option. (he DID put the REM there).

```

0 rem "date/time on top ... by Joe Quittner
1 rem "as of March 18, 2010
2 rem poke 55,0:poke 56,158:clr:
  rem" Protect 40448+
3 for i=40950 to 40959:poke i,0:next
80 for i=40448 to 40949:read a:
  if a>255 then 100
81 poke i,a:next:stop
82 data
  74,1,14,21,1,18,25,70,5,2,18,21,1,18,25,
  77,1,18,3,8, 65,16,18,9,12
83 data 77,1,25, 74,21,14,5, 74,21,12,25,
  65,21,7,21,19,20
84 data 83,5,16,20,5,13,2,5,18,
  79,3,20,15,2,5,18,78,15,22,5,13,2,5,18
85 data 68,5,3,5,13,2,5,18:rem "Months
90 data 0,7,15,20,25,28,30,36,42,51,58,66
  :rem starts
91 data 6,7,4,4,2,3,3,5,8,6,7,7:rem lengths-1
92 data 32,29,32,31,32,31,32,32,31,32,31,32
  :rem months+1
100 input "Enter month,day,hour,minutes as
mm,dd,hh,mm";mo,da,hr$,mi$
101 print" am or pm? ";:gosub997:
  print g$: poke40950,asc(g$)-65
102 poke 40951,mo:poke 40952,da:
  if len(mi$)=1 then mi$="0"+mi$
103 if len(hr$)=1 then hr$="0"+hr$
104 h1$=left$(hr$,1):h2$=right$(hr$,1):
  a=val(h1$)*16+val(h2$)
105 if peek(40950) then a=a+128
106 poke 56331,a
107 m1$=left$(mi$,1):m2$=right$(mi$,1)
108 poke56330,val(mi$)*16+val(m2$)
109 poke 56329,0:poke 56328,0
  :rem start the clock
110 data 8, 160,255, 200, 169,32, 153,0,4,
  192,39, 208,246:rem clr top
120 data 165,251, 72, 165,252, 72
  :rem save 251/2
121 data 174,247,159, 189,73,158
122 data 133,251, 169,158, 133,252
  :rem starts into 251/2
123 data 189,85,158, 141,249,159
  :rem lengths into 40953
124 data 160,255, 200, 177,251, 153,3,4,
  204,249,159, 208,245, 200:rem months
125 data 104, 133,252, 104, 133,251
  :rem restore 251/2
130 data 169,0. 141,250,159, 173,248,159,
  201,10, 176,6
131 data 141,251,159, 24, 144,9
132 data 238,250,159, 56, 233,10, 24, 144,237
140 data 173,250,159, 208,3, 24, 144,7
141 data 200, 24,105,48, 153,3,4
142 data 200, 173,251,159, 24, 105,48,
  153,3,4:rem day
143 data 200, 169,44, 153,3,4:rem comma
150 data 173,11,220, 41,31, 201, 10,48,5
151 data 169,49, 141,17,4
152 data 173,11,220, 41,15, 24, 105,48,
  141,18,4:rem hour
153 data 173,10,220, 41,15, 24, 105,48,
  141,21,4, 169,48, 141,20,4
154 data 160,48, 173,10,220, 41,240, 208,13,
  192,48, 208,3, 24, 144,13
155 data 140,20,4, 24, 144,7,:rem minutes
156 data 200, 56, 233,16, 24, 144,234
157 data 173,9,220, 41,15, 24, 105,48,
  141,24,4, 169,48, 141,23,4
158 data 160,48, 173,9,220, 41,240, 208,13,
  192,48, 208,3, 24, 144,13
159 data 140,23,4, 24, 144,7:rem seconds
160 data 200, 56, 233,16, 24, 144,234
161 data 169,1, 141,26,4, 173,11,220,
  41,128, 240,5:rem a
162 data 169,16, 141,26,4:rem p
163 data 169,13, 141,27,4:rem m
164 data 169,58, 141,19,4, 141,22,4
  :rem colons
165 data 173,8,220,:rem show time
170 data 173,11,220, 41,127, 201,17, 240,3,
  76,215,159:rem hour=11?
171 data 173,10,220, 201,89, 240,3,
  76,215,159:rem +59 minutes?
172 data 173,9,220, 201,89, 240,3, 76,215,159
  :rem +59 seconds?
173 data 173,8,220, 201,9, 240,3
  76,215,159:rem +.9 seconds?
180 data 173,246,159, 208,3, 76,215,159
  :rem pm?
181 data 173,252,159, 208,6, 238,252,159,
  238,248,159:rem next day?
182 data 172,247,159, 185,97,158,
  205,248,159, 240,3 76,215,159
183 data 169,1, 141,248,159, 238,247,159
  :rem 1st of next month
184 data 173,247,159, 201,13, 240,3,
  76,215,159
185 data 169,1, 141, 247,159:rem January
190 data 40, 76,49,234
200 data 120, 169,110, 141,20,3, 169,158,
  141,21,3, 88, 96, 999
201 sys 40923:print chr$(147):new:end
997 poke 204,0:get g$:if g$="" then 997
998 if peek(207) then 998
999 poke 204,1:return

```

# Arduino ...

My name is Tom Luff and last night at the TPUG meeting I presented the **Arduino Micro-Controller** as an alternative programming platform. During the meeting I mentioned several websites I visit and buy from. Here is a list and information about each.

## SparkFun

<https://www.sparkfun.com>

A great site for products and information. A large amount of useful tutorials. Products that are retired do not disappear, their information is placed into an accessible Retired Produced section. Although a lot of the SparkFun products are available through Creatroninc (<https://www.creatroninc.com/>) at 349 College St. in Toronto and now at a second location, 3127 Sheppard Ave. East, Scarborough, for me it just as easy to order from SparkFun direct. Delivery is about a week and I don't recall ever having to pay duty and customs charges. I recommend you log in as a Canadian to get the price tags adjusted to Canadian Dollars. Shipping cost are about \$10.00.

## RobotShop

<http://www.robotshop.com/ca>

Another great site to buy and learn about Arduino and other robotic products. They carry a good selection of SparkFun products, as well as other manufacturers that SparkFun does not carry. Warning: If RobotShop retires a product the information disappears. Delivery by mail is about 2 days (most orders are charged about \$9.00 shipping). Next day if you want to pay Courier charges. Although RobotShop is a US company they do have a Canadian warehouse, so you have no border concerns.

## Arduino Home Page

<http://arduino.cc>

This site is a fountain of information about programming the Arduino and Arduino products. It is not the best site to navigate and find the information, but the information is there. This is the first site I use to understand the "C" language as the Arduino uses.

## Newark : Element 14

<http://canada.newark.com/>

Another Canadian warehouse selling electronic and robotic parts and components. This is a great site of low priced items, 2 day delivery and a shipping fee under \$10.00 normally. I have ordered from DigiKey.ca but I prefer Newark. Warning : some items have minimum purchase quantities.

## LED-Switch

<http://led-switch.com/>

The sample LEDs which were passed out last night came from LED-Switch. Go to the site and explore. It is a simple, site not all of information, but good prices. You can find better but you will need to really search. Shipping and handling charges are about \$11.00. and you may need to pay taxes and custom charges (not a lot). No Clearing Charges.

These are the sites I have been buying from for the last 4 years. And not once have I had to worry about clearing charges from products coming into Canada. Clearing charges alone can be \$100.00.

One last suggestion, any time you buy a product download all the support documents and save them on your computer. Just because something is on the web does not guarantee you will find the information later, especially if the revision changes.

I hope everyone has fun with Arduino.

Tom Luff



# Crazy Canuck Checks out California and CommVex Commodore Convention

In July 2014 my summer vacation took me to California's Silicon Valley, home to tech giants Google, eBay, Facebook, Electronic Arts, Intel, and hundreds more. In addition to the usual tourist fare, I got a personal tour of eBay which was very cool.



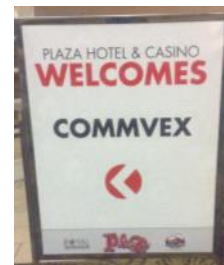
I also made another trip to the Weird Stuff Warehouse (as previously reported in TPUG Newsletter Spring 2010), but I'm sad to say all their Commodore equipment is now gone. It's still an amazing place to visit and a fantastic resource for any retro computer enthusiast, but all I could find for Commodores were some sealed boxes of Double-Density floppies for \$1 a box (of course I bought one.)

Fortunately, the timing worked out such that I was also able to attend CommVex - the Commodore Vegas Expo in Las Vegas, for the first time ever. This is an annual event organized primarily by Robert Bernardo of the Fresno Commodore User Group, and this year it was held on the weekend of July 26th and 27th.

Greg "goog" Alekel and Steve "AgentFriday" Davison from Portland, Oregon picked me up from the Las Vegas Airport on Friday night, and we went straight to the Expo hotel: The Plaza, at one end of Las Vegas' legendary Fremont Street. I quickly unpacked and set up my demo table, and then a bunch of us went to Fremont Street for some food, drinks, and nightlife.



On Saturday the main Expo started. It was great to meet so many people that I'd spoken with only online, or to catch up with several friends I hadn't seen in years. There was plenty of Commodore software for sale, and lots of really interesting hardware and software projects being demonstrated.



One project that particularly caught my eye was David Maurer's "Clone-a-Dore: C64 Micro ATX Replacement Motherboard". David has done something extraordinary - he has completely redesigned the Commodore 64 motherboard so that it fits in a standard Micro ATX PC case, while still using mostly the same chips from a C64 and maintaining 100% compatibility. He had a prototype there and was verifying the design before beginning manufacturing. Incredible! He asked us for recommendations for an "enhanced" Version 2, so he is considering making a new version with Dual SID chips, USB keyboard, built in Ram Expansion Unit (REU), the list goes on. Well done David!



Check out <http://clone-a-dore.blogspot.ca/> for more info.

Also notable was the FPGA Arcade project, presented by Jim Drew (designer of the original Supercard+ and the new Supercard Pro) which allows you to run perfect faithful reproductions of the Amiga, VIC, C64, and countless arcade classics. There was also a video of the Commodore Magic Voice speech synthesis cartridge being used with Gorf and Wizard of Wor, and Ray "WizardNJ" Lejuez showed his work-in-progress on a menu system for the sd2iec devices. I repeated the demo of my "gaming glove" from World of Commodore 2013 and did a short sales pitch for the TPUG Library CD (I sold 2!)

We took a break and went to one of Fremont Street's legendary buffets for dinner, and then returned to the Plaza for more late-night retro hacking and discussions.

The Expo continued until Sunday, but I had to leave Sunday morning to catch my flight back to Toronto. Commodore Engineer Bill Herd was to have done a presentation via video, but I ended up missing it. Still, it was an excellent chance to connect with the Commodore scene on the (almost) West Coast.

To learn more about CommVex, visit [www.portcommodore.com](http://www.portcommodore.com) and click on the CommVex link.

Leif Bloomquist



## LED's

At the last TPUG meeting I was discussing LED's (Light Emitting Diodes) and it has come to my attention that I may not have been all that clear about how to use them.

An LED, like all diodes, allows current to flow in one direction, anode to cathode. The cathode is usually marked two ways. 1) the short lead is the cathode. 2) at the bottom of the lens there is a rim, but on one side the rim it is not present, the lead closest to this flat spot is the cathode. The cathode connects to the negative side (called Ground or GND or —) of your power source and the anode connects to the positive side (called Vcc or +) of your power source.

Like most electrical devices an LED requires that two working parameters are met to work properly, voltage and current. The voltage most LED's use ranges between 1.7 volts and 2.2 volts dc (direct current – *not* ac like wall plugs). Typically I use 2 volts dc (for Blue and White LED's the voltage is 2.8 to 3.4 volts dc). As for current, typically 20 ma (mil-amps) which is the same as 0.02 amps. Using a higher voltage increases the current across the LED and it will destroy it. To correct for this, we place a current limiting resistor usually between the anode and the positive side of the power source.

To calculate what size resistor to use just follow this example:

Source Voltage - working LED voltage = excess voltage to compensate for.

For the Arduino we are talking 5 volts dc on an output pin. We will use 2 volts dc as the working voltage. Therefore;

$$5 \text{ volts} - 2 \text{ volts} = 3 \text{ volts (excessive voltage)}$$

And now we use Ohms law to calculate for the limit resistor:

$$E = I \text{ times } R \text{ or voltage} = \text{current times resistance}$$

In our example it looks like this;  
3 volts = 20 ma times Resistance  
or

$$\text{Resistance} = 3 \text{ volts} / 0.02 \text{ amps} = 150 \text{ ohms}$$

So we need a resistor of 150 ohms to protect the LED.

Use this example for any device.

Tom Luff

Plus a comment from Jim Brain:

Not that 150 is bad, but I typically wire them with 330ohm, as that easily handles 10mA and 20mA LEDs. Lots of designs show 330 ohm resistors, so I keep a stock on hand, as well as 470 (9V drop down for LED, 1K, and 10K variants. \*Most\* of the time, nothing else is needed.

Jim Brain  
[brain@jbrain.com](mailto:brain@jbrain.com)  
[www.jbrain.com](http://www.jbrain.com)

**TORONTO PET USERS GROUP  
C/O JOHN EASTON  
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**— Late Fall 2014 —**

