



# SHIFT838 NEWSLETTER

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This newsletter is dedicated to the ongoing support for the Texas Instruments TI-99/4A and Myarc Geneve 9640 user community and is published by SHIFT838.

It's been a full year of SHIFT838 Newsletters! I am glad I was able to do this for our TI/Geneve community. The year has flown by and in that time we have made strides in new hardware, software as well as had a few dedicated TI'ers fall and leave us. We have even seen a couple of new TI'ers com into the fold.

In this edition I was able to get some questions posed and answered to **John Behnke**, the developer of the original Tunnels of Doom Editor. I thought this would be a good contrast to the interview performed with **FRITZ442** of the new PC based Tunnels of Doom Editor.

Also please take note that home of SHIFT838 is moving! **Richard Polvika** who host 99er.net has graciously offered to host my SHIFT838 website. A few kinks are still being worked out with the provider around the subscription/email for sending out the newsletters. One of the limitations that has been overcome by hosting on 99er.net is that now there is no limitation on the **CHAT** portal. So go chat it up guys! Live chat is there and ready to go.

I am actively working on the site to get all the content moved over.

<http://shift838.99er.net>

I also want to wish everyone a Merry Christmas and Happy New Year!

And Yes, I got cheesy with a Star Wars Font for the title on the PDF version!

I am also wanting to start a section that has been requested for 2016 newsletters: '**TI/Geneve System of the month**'. I will be posting this on AtariAge for submissions of photos and descriptions of systems. The system chosen will be highlighted in that edition newsletter and I will be contacting the chosen individual for some background and a handful of questions. The systems to do not have to be extravagant, I will be looking at all types.

Also I will only be releasing PDF versions of the newsletter for now on. As releasing a web view and a PDF view is taking twice as long to create. The newsletter will still go out but will be just an alert with a link to the PDF file.

I also may not have the time I had this year to devote next year for the newsletter and the newsletter may go to a bi-monthly or even a quarterly release as I will be traveling for my job quite extensively overseas to deploy new technology for the company.

Thanks to all that have subscribed!

## John Behnke Interview

John is the original developer of the Tunnels of Doom Editor for the TI-99/4A as well as many other programs that made it to publication.

**Chris:** Can you explain briefly how you got into the TI-99/4A?

**John:** Growing up in Chicago back in 1978, I was a student in 8th grade and needed to pick a High School to attend. Most of locals decided to attend a neighborhood school but my parents insisted that I try out for one of the top city schools that required an entrance exam. Needless to say, I was admitted into Lane Technical High School, the largest and, at the time, most exclusive school in the city.

I hated every second of it! It required that I get up very early, walk half a mile to the bus stop and take a long bus ride across the city each day. Lane was in a semi-transition from a full-fledged technical school that taught the trades to a more traditional college prep school. Old friendships fell by the wayside as I went to a different school than the rest of the neighborhood, I found myself discovering new friends from all areas of the city. While this way good in a way, without transportation, these new friends were mostly "school only" and after school I found myself with lots of free time with nothing to do. Since Lane still offered trade classes, I signed up for all that I could get including Wood Shop, Cabinet Making, Electric Shop, Auto Shop, Drafting and even Foundry. Yes they allowed 16 year olds to work with molten metal with a blast furnace in the classroom!

In my third year I was allowed to take Computer Shop which is the one class I was dying to take since way back in 1980 when my parents bought me my very first Video Computer System or VCS. Yes this was the game machine Atari came out with and at the time people still bought into Atari's hype that it was really a computer than played games.

Now many of you might remember this but back then one of the things young boys did was to go to a local arcade filled with pinball machines and arcade machines. The High School I was attending had two of these arcades across the street (Lane had almost 5000 students so two arcades made sense) and we would sneak before school and after to spend our lunch money on games. We also would stop by during lunch and study hall.

The reason I am going into all of this is to explain a bit of my motivation of getting into the TI and writing so many games. You see, after endless hours of playing Asteroids, Missile Command, Lunar Lander, Space Invaders and all the rest in the arcade and then later at home on the Atari VCS, I wanted to make my own games. Computers, however, were too expensive for the little money I made on my Paper Route so I figured I could take Computer Shop at Lane and make games in class. I was so excited I could not wait to start school that year.

Imagine my surprise when I walk into the Computer Lab at the number one High School in Chicago and find strange machines with dot matrix printers hooked up to them. No monitors, no computers but lots of strange looking cards with rectangle holes in them. As it turned out, Lane was still using old Punch-Card Readers that were connected to a main frame computer in another part of the city. To create a program you would type code into a special machine that would encode holes in the card. Each card equated to one line of code and a stack of cards with a rubber band around then was your program. You would feed the cards into a machine that would

read them and send them across the city to a large computer which would run the code and then send back the results to the school to be printed out on a printer. Needless to say, my excitement about computers quickly came to a halt.

So when TI ran a promotion to allow you to buy a computer much cheaper than they were selling, I was able to purchase my first computer and the next few years became a large blur as I took to computers to fill in all the free time I had. I really wanted an Atari 400 because it had all the hot games but the TI was cheaper and had real keys so that is what I ended up with.

**Chris:** What type of TI and/or Geneve systems did you have configured back in the day?

**John:** Back in the day, 1983, I had the TI-99/4a and if I remember correctly, you were able to send a coupon in for a free Speech Unit. When I did NOT have was a cassette cable to store games so each day I would spend hours typing in games and creating programs only to lose them all once I turned off the machine for the night. This cable was in short supply and it took a few weeks to obtain one.

**Chris:** What other systems did you work on and what is your favorite vintage system today?

**John:** In college I worked on a PDP-11 mini-computer but at home I grew my TI system and stayed with it for years. It was not until I built my first PC in the late 80's that I started moving away from the TI world.

**Chris:** What is your favorite memory around the TI and/or Geneve system?

**John:** Even though the TI was one of the most popular computers of the day, it used a non-standard form of Basic. What this meant is that you could not type in code from magazines and books without translating the code into the unique version that worked for the TI. Many of my earlier games started out as ports from other computers that I translated into TI and then enhanced using the special abilities that the TI offered over the other machines. Later I started to translate from scratch my favorite arcade games trying to push the envelope of what the little TI could do. One of the greatest compliments I ever received was when a magazine printed that they thought my game was coded in the much faster Assembler language because as fast as the TI "could" be, it was dog slow in running Basic due do some serious concessions TI used to cut costs on the machine.

#### **TOD Editor specific and other software:**

**Chris:** What was the key factor for you wanting to make a Tunnels of Doom editor for the TI?

**John:** Back then, everyone seemed to be playing DnD or Dungeons and Dragons. One of the coolest (we used cool back then LOL) games I had ever read about was a game called "The Proving Grounds of the Mad Overlord" which was a DnD RPG created for the very expensive Apple Computer. When TI came out with Tunnels of Doom, it used the same 3D type hallways that the Apple Game used and I quickly became hooked. Without question it was the very best game that TI ever released but it was very clear that it was designed for add-on games to come later.

Later, of course, never came as TI quit the computer business. I had joined a local TI Users Group which turned out to be the famous Chicago Group and was able to obtain a little program called a sector editor. This allowed you to look at things you were really not supposed to see and I spent many hours looking at programs and reading text within the code just because I could. I'm not sure exactly when it

clicked but somehow I got the idea that maybe I could change some of the text within Tunnels of Doom that was located on the disk or floppy and people would get a kick out of seeing "Welcome to John Behnke's Game" instead of the normal Tunnels of Doom.

Now let me backtrack a little and explain something about TI graphics. All the graphics are encoded in Hexadecimal and due to all the games I was writing, I actually started to memorize this special graphics code so when I started to look at the inside of the TOD game that came with the module, I could plainly see lines of graphics embedded in the code. Now a hex editor only allows you to see the raw code so you are not seeing traditional lines of computer code but just endless strings of hex code. This is when I figured out that I could change things in the enclosed game.

**Chris:** Did you collaborate with anyone when coding this editor, if so who and what contributions did they make?

**John:** One of the things I most regret about the TOD Editor is that the entire thing would never have been made possible if not for a close friend named Todd Kaplan. He was, without question, a far better programmer than I and a wiz with the very complicated Assembler Language needed to create things that were simply not possible with TI Basic or even X-Basic. Todd, however, did not create games, he created amazing utilities for the TI. Now it became quickly clear that I could hard code a new TOD game by spending endless hours with graph paper designing new graphics and then translating the graphics into Hex code then typing the code into a sector editor one character at a time. In a few hundred hours you would have a new TOD game every bit as good as one created with my Editor that came later.

The editor really only started as a set of small program shortcuts I used to try and simplify this task of hard coding a new game over the code of the old one. One day, while expressing my frustrations to Todd, he offered to modify one of his routines he created for his version of a sector editor to allow simple read/write capabilities for an X-Basic program. This would allow me to write a program in X-Basic that would read whatever sector I wanted from the TOD Disk and write anything I wanted back to the disk. To this very day I regret not giving Todd the credit he so richly deserves. I have lost touch with Todd but someday I hope to express my sincere thanks for making the TOD Editor possible.

**Chris:** Can you remember what key hurdles you had to overcome if any for your TOD editor?

**John:** Without question it was storage space which is why the Editor is split into two programs. I have always prided myself in creating tight code to conserve space having perfected this re-writing the Chicago Users Group BBS to add features. The real issue is that an editor, by nature, is a complicated program that requires extensive error checking and user prompts. Sure I could create an editor for experts but to create something anyone could pick up and play with required a ton of code that could otherwise have been used to create one program instead of two. Even with all of this the Editor is still not easy LOL.

**Chris:** Did you disassemble the original Tunnels of Doom GROM in order to be able to understand the data structure?

**John:** Never touched the GROM! Everything was done by reading data from the disk and then translating the hex code into graphics on a piece of graph paper. As a side note, I went through so much graph paper that I created a small program to create my own so I would not have to run to the store each week to buy more. It was also hard to find the special 8x8 graph paper needed to create the TI graphics.

So hundreds and hundreds of hours in the basement staring at code on my 12 inch green screen monitor and then drawing what I saw on paper. I would then write

down the raw addresses and what was stored there so I really decoded the Disk, not the GROM.

**Follow Up:** What tools did you use?

**John:** I used Todd's sector editor to read the disk data.

**Chris:** Was the data for the file structure readily available to you or did you have to decipher the required data as far as what variables needed to be saved where to work with the Tunnels of Doom cartridge and basically be a TOD game?

**John:** Everything was trial and error. Change this, load game, see what changed. It started out VERY slow but little by little I was able to see some structure and start to "guess" what came next.

**Chris:** How many estimated hours if you can remember did it take to research and program your TOD editor?

**John:** I never kept track but well in the hundreds. Remember I had all this time in my basement since there was nothing else to do but go to school, do homework and or watch TV.

**Chris:** Did you ever create and release any Tunnels of Doom games, if so what are their Titles?

**John:** Volcano Fortress I think was the first. I created a bunch more that Asgard compiled into some of the first Doom Games collections. I've really lost track of a good part of everything I did aside from a very small scrapbook.

**Chris:** Have you seen Fritz442's Tunnels of Doom Editor created for use with the PC? If so, what are your thoughts about it?

**John:** I have heard of it but have not used it. My thoughts are simple. Bravo! I am honored that someone would take the time to improve on something I did so long ago. I hope to try it out as soon as I have the time.

**Chris:** I know you coded Sky Rescue, Spider Bop, and Galaxy Lander and I believe they were all coded in XB. Were there any others?

**John:** Oh yes.... dozens and dozens. The problem in identifying some of my stuff is that I was very much against taking credit for the things I did. Only the later stuff mostly put out by Asgard actually had my name on it. Most of my stuff was published under JB Software or JB Freeware. Most of the games were either translations of games for other computers or arcade translations.

I had a few original games but since the TI back then was so starved for main stream games that were produced for Atari 400/800, the Vic 20 or C64, I made it my duty to try and fill the void by creating games I saw in the arcade into a TI like version. Some worked and some did not but I had a blast trying.

**Chris:** Out of all of your games you programmed, what was your favorite programming experience?

**John:** Two things come to mind. I had a blast re-writing the Chicago TI Users Group BBS. Butch and Carole Goldstein ran the BBS and were instrumental in the Chicago Group at the time. They welcomed me into their home, fed me and placed me in front of the BBS computer and said... "Program!" LOL and lock the door when you leave as they often went to bed hours before I was done late into the early morning hours. They are but a small example of all the wonderful people I met in the TI world!

The other was one of my few original games called Rat Race. Rat Race came in two versions, one for Basic and the other X-Basic. Basically you place bets on rats running in a race instead of horses. I loved creating the Haunted Mine and Missile Wars which came pretty close to Missile Command.

**Chris:** Which of your games, is your all-time favorite and why?

**John:** It's funny you ask that because as any programmer will tell you, after play testing code over and over as well as knowing all the secret code used, the games are really not that fun. I will say that I really loved Galaxy Lander and Rat Race. Haunted Mine was fun. My mother created the music for that one on the piano BTW.

#### **TI Community Questions:**

**Chris:** Are you surprised that the TI/Geneve community is still going strong and has many different avenues of support as well as new hardware being produced to this day?

**John:** Yes! What happened back in the day was that the TI Users Group split in two with one half staying true to the TI/Geneve and the other half moving more toward the PC. I was in the later group. We had separate meetings and still talked and used the TI but little by little the TI faded and the PC grew. I was but 20 years old at the time and having just got my first real job, I had very little time for anything so all those hours in the basement were over as in the ensuing years I got my own place, found and married the love of my life, and had two children I am most proud of.

**Chris:** Have you ever thought about getting back into the TI, even if it is at an emulator level to program again?

**John:** Very much so. I just recently attended the Chicago TI Faire and while only a few remembered me, I was shocked at seeing all the fresh blood and enthusiasm. What a wonderful and friendly group of people! They treated me like an honored guest and I was more than a little ashamed that I had abandoned them all so long ago.

## November Highlights from AtariAge

- Check out this month's AtariAge "TI-99 Hi Score Contest" game "**Never-Lander**". The winner takes home an Addition & Subtraction cartridge, a TI Pen/Pencil set (nice) and a TI calculator!
- Sending e-mails with TI-99 and Cortex Basic with UDS10! Why? Because we can!
- **3D Printing Needs** - Need a Nano PEB case then read this post.
- **2015 Holiday Demo Contest** message thread

## Software

### Bouncy

Yet another cool game by Rasmus! I have been working at playing this game, needless to say I am not very good but I like it. My 9 year old smokes me at it.

(Description borrowed from TI-Gameshelf)

Inspired by the Commodore 64 game Bounder, this game exquisitely leverages the color capabilities of the TI 99/4A computer to create a vibrant game with a superb soundtrack. The main gameplay has you guiding a bouncing ball through a scrolling terrain full of hazards and potential powerups while trying to collect rings for points. The action is a mix of pathfinding as well quick timing, particularly since the upcoming terrain is only revealed gradually as you progress. Hugely addictive game with a masterful execution. Very highly recommended.

**Requirements:** Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Download it at <http://tigameshelf.net/asm.htm>

### Minesweeper by Sometimes99er

I think most of us are familiar with this game as it was one of the favorites to be played as a default installed game on a Window PC years ago. I know I spent many hours to get a break from work to brush up on my MineSweeper skills!

(Description borrowed from TI-Gameshelf)

While quite a familiar game, this version is the best I have seen to date for the TI 99/4A computer. Use your deductive skills with the help of numeric clues to locate and mark the hidden bombs on the grid. There are 3 different levels with increasing grid size. Beautiful presentation with uncluttered animation. An instant classic.

**Requirements:** Editor/Assembler cartridge, 32K RAM, disk drive.

Download it at <http://tigameshelf.net/asm.htm>

## Calling All GAMERS!

Owen Brand (**Opry99er**) has started a TI Gaming competition on AtariAge where a TI-99/4A game is chosen every month and TI'ers can compete to see who can get the highest score. At the months end the person with the highest scores receives some type of prize.

If you want to read the message thread in its entirety and possibly participate in the friendly completion then click below:

<http://atariage.com/forums/topic/241547-official-ti-994a-hi-score-competition/page-1>

Last month's game was : **CROSSFIRE**  
Winner was: **IwantGames** with a score of **8,600** points

This month's game is : **Never-Lander**

**GOOD LUCK!**

## Coding

I decided for this section to do a little different piece around coding for this month. Not a tutorial but to highlight a couple of entries that were submitted for the 2015 Holiday Demo contest that I liked. The below entries that I highlighted are not winners as I do not make that decision but I liked them.

These entries as all of them show some need routines for sprite movement. Go read the message thread: <http://atariage.com/forums/topic/245440-2015-holiday-demo-contest-entries-only-thread/> to read them all and see the entries for yourself.

First one I noticed is the '**Traditional**' by Tursi



```

100 DIM NT(14)::CALL CLEAR::CALL
COLOR(1,13,5,2,16,1,3,9,1,4,12,1,5,16,5,6,16,5,7,16,5,8,2,2)::CALL
CHARPAT(89,Y$)
110 CALL COLOR(9,10,1,10,2,13,11,2,13,12,2,13,13,2,13)::CALL
CHAR(33,RPT$("F",16)&"80C0E0F0F8FCFEFF0103070F1F3F7FFF")::B$="183C3C18
"
120 CALL
CHAR(44,"00003C7EFFFF7E3C0F0F070703030101DBDBBDBDBD7E7E7EF0F0E0E0C
0C0808",88,"",96,"0000000001071F7F01071F7F"&RPT$("F",24)&"80E0F8FEFFFF
FF")
130 A$=RPT$("F",14)&"00"&RPT$("E7",8)::CALL
CHAR(100,"0000000080E0F8FE",48,A$,50,A$,56,A$,58,A$)::CALL
HCHAR(19,1,33,192)::CALL CHAR(104,B$,112,B$)
140 A$="00"&RPT$("F",14)&RPT$("E7",8)::CALL
CHAR(51,A$,53,A$,59,A$,61,A$)::A$="0000006699997E81"::CALL
CHAR(54,A$,62,A$)::CALL CHAR(120,B$,128,B$)
150 A$="BO,ACN-CQJ6ARI0CSI3CQT>ARS8CSS;CQOXARM`E"::FOR A=1 TO 39
STEP 4::R=ASC(SEG$(A$,A,1))-64::C=ASC(SEG$(A$,A+1,1))-
64::CH=ASC(SEG$(A$,A+2,1))::CN=ASC(SEG$(A$,A+3,1))-64
160 FOR B=0 TO CN-1::CALL HCHAR(R,C+B,CH+B)::NEXT B::NEXT
A::S$="DJJKJHFCAACHEF"::FOR A=1 TO 14::X=ASC(SEG$(S$,A,1))-
65::NT(A)=147*(1.059463^X)::NEXT A::CALL CHAR(66,Y$)
170 FOR A=1 TO 13::C=INT(A/2)::CALL HCHAR(3+A,14-C,35)::CALL
HCHAR(3+A,15-C,33,C*2+1)::CALL HCHAR(3+A,16+C,34)::NEXT A::CALL
SCREEN(5)
180 FOR A=1 TO 28::R=RND*16+1::C=RND*13+10::CALL GCHAR(R,C,X)::CALL
HCHAR(R,C,104+INT(RND*4)*8,-(X=33))::CALL SPRITE(#A,42,15,R*12,(C-
10)*19+1,4,1)::NEXT A
190 DISPLAY AT(1,6):"MERRB CHRISTMAS"::FOR A=1 TO 14::CALL
SOUND(300,NT(A),0)::NEXT A::FOR A=0 TO 1::CALL
KEY(0,K,S)::A=A+(S=0)::CALL COLOR(10+RND*3.1,RND*15+1,13)::NEXT A

```

The next one I liked is **'TI Snow Invaders'** by [sometimes99er](#)

```

1 CALL SCREEN(2)::CALL CLEAR::CALL
CHAR(33,"081C3E6B7F1422410",41,"63223E6BFFBEA2360000000080808",49,"3F
FFCCFFFF1221C000C0C0C0C00000C")
2 CALL
CHAR(56,"0000010703070100081CFFFFDEFFFF3E0000C0F0F0FC",64,"00080808
0808",97,"08081C7FFFFFFF63000000008080800000000000000000808")
3 CALL
COLOR(1,4,1,2,6,1,3,7,1,4,11,1,5,16,1,6,16,1,7,16,1,8,16,1,9,8,1,10,16,1)::DISP
LAY AT(5,14):"89:"
4 FOR I=0 TO 5::DISPLAY AT(I*2+8,13-
I):RPT$(CHR$(INT(I/2)*8+33)&CHR$(INT(I/2)*8+34),I+3)::NEXT I
5 DISPLAY AT(20,15):"@":DISPLAY AT(21,15):"c":DISPLAY
AT(22,15):"ab":DISPLAY AT(2,3):"MERRY CHRISTMAS EVERYBODY"
6 P$="10125256D6DEDFFF":DIM X(31)::FOR A=0 TO 7::CALL
CHAR(104+A,RPT$("0",14)&SEG$(P$,A*2+1,2))::NEXT A
7 FOR A=1 TO 28::CALL SPRITE(#A,104,16,250,RND*255+1,9,RND*2.5-
1.25)::NEXT A
8 R=INT(RND*32)::CALL
HCHAR(24,R+1,X(R)+104)::X(R)=X(R)+1+(X(R)>6)::GOTO 8

```

Another one by sometimes99er is '**TI Holy Moly**', the snowflakes are smooth to scroll through the screen and the Font is cool.

```
1 CALL CLEAR::CALL SCREEN(2)::FOR I=0 TO 3::CALL COLOR(5+I,16,1)::CALL
COLOR(9+I,9,1)::NEXT I::CALL CHAR(33,"2810AA44AA1028")
2 FOR I=1 TO 28::CALL SPRITE(#I,33,16,250,RND*255+1,9,RND*2.5-
1.25)::NEXT I
3 READ I,P$::CALL CHAR(I,P$)::IF I<121 THEN 3 ELSE P$="@SOMETIMES@
WISH YOU ALL A MERRY CHRISTMAS AND A HAPPY NEW YEAR"
4 Q$=" sometimes wish you all a merry christmas and a happy new
year"::P$=P$&RPT$(" ",14)&P$::Q$=Q$&RPT$(" ",14)&Q$
5 FOR I=1 TO 75::DISPLAY AT(9,1):SEG$(P$,I,28)&SEG$(Q$,I,28)::NEXT
I::GOTO 5
6 DATA
64,6C6C24,65,101010383838386C0000F86C66666C7804043C6CC4C4C0C,68,000
0F0786C6C66660000FE66626A6878,72,0F06F66666667E6600003C1818181818
7 DATA
76,0000F060606060600000E36276767E7E0602E26272727A5A000070D8CCCCC6
C6,80,0000F0786C6C6666,82,0000F0786C646666080878C8C0E07038
8 DATA
84,0000FCB4B43030300000F76262626262,87,0000F361616D6D7F,89,0703E6C6
6C6C3838,97,6C6C7CC6C6C6EF006C666666666CF800C0C0C06262361C
9 DATA
100,666666666646CF800786868626266FE,104,666666666666FF00181818181818
3C,108,606060626266FE007E5656464646EF005E4E4E464642E200C6C6C666663
61C
10 DATA
112,66666C786060F,114,667C786C6E66F7001CCC6E6666361C,116,3030303030
30780062626222361C,119,7F3E3E36363636,121,1818181818183C
```

The next one is by 'JediMatt42'. I did not see a title but looks to be using asteroid type graphics. Nicely done.

```

1 CALL CLEAR::CALL SCREEN(15)::CALL
COLOR(2,7,16,10,11,15,11,13,15,12,7,15)::G$="001C3E7F7F7F3E1C"::CALL
CHAR(104,G$,112,G$,120,G$)
2 K$=RPT$("03071CF0",3)::CALL
CHAR(42,"2854AA54AA5428",43,"2050A85020",44,"205020",45,K$)::FOR I=1 TO
8::C=INT(RND*226)+1
3 CALL
SPRITE(#I,42,16,3,C,9,3,#I+8,43,16,2,C+13,7,2,#I+16,44,16,1,C+27,5,1)::NEXT
I::CALL VCHAR(6,3,45,7)
4 CALL VCHAR(6,7,45,7)::READ M::FOR I=1 TO M::READ N::L=INT(N/256)::C=N-
L*256::FOR J=1 TO L::READ N::Y=INT(N/256)::X=N-Y*256::CALL
VCHAR(Y,X,C)::NEXT J::NEXT I
5 FOR I=1 TO 8 STEP 2::CALL CHAR(45,SEG$(K$,I,16))::CALL
COLOR(11,4+I,15,12,14-I,15)::NEXT I::GOTO 5
6 DATA
10,616,1283,1287,880,1796,2053,1798,2424,2569,2570,2571,2572,2315,2314,28
25,3082,3083,1904,2318,2574,2830,3086
7 DATA
2575,2320,2577,1912,2323,2579,2835,3091,2580,2325,2582,3184,2328,2584,28
40,3097,3098,2843,2587,2331,3099,3355
8 DATA
3610,3609,3440,3592,3849,4105,4362,4619,4875,5132,3596,3851,4107,4617,48
73,5128,3192,4366,4622,4878,5134,4367
9 DATA
4624,4880,5136,4369,4626,4882,5138,2672,4375,4631,4887,5143,4630,4373,46
28,4884,5141,4886,2680,4380,4379,4378
10 DATA 4633,4890,4891,5148,5403,5402,5401

```



## Resources

### Contact information

To contact me please feel free to visit my website and click on the 'Contact' tab.

<http://shift838.wix.com/shift838>

### Newsletter Topics

If you would like to participate in the writing of this newsletter or provide any topics for this newsletter please contact me via my web site.

### Sites

There are a few of sites that I think should get their own list below. These are for the TI Hall of Fame and TI-99ers Unsung website. Please visit these below sites as both have great information.

<http://www.ti99hof.org/index.html>

<http://www.ti99ers.org/unsung/>

## **Floppy Days**

Randall Kindig's Floppy Days: A great resource for PODCASTERS to listen about information about old computer systems!

These are just a few of the links available for '**Floppy Days Podcast**':

<http://www.facebook.com/groups/floppydays>

<https://twitter.com/floppydays>

## **Remembrance**

Also the below site has a list of all the TI-99ers that have passed. Please be sure to check them out.

<http://ti99ers.org/modules/Inspire/remember.htm>

Below resources are just a handful of sites that support the TI-99/4A and/or Geneve 9640 computers. It is in no way a full list. This section will be included in all future newsletters. If there is a site that you think should be mentioned then please contact me.

Web sites / FTP Sites

<http://www.99er.net>

<http://www.ninerpedia.org/>

<ftp://ftp.whitech.com>

<http://shift838.wix.com/shift838>

<http://www.ti99-geek.nl/>

<http://www.mainbyte.com>

<http://www.atariage.com>

<http://www.harmlesslion.com>

<http://www.ti99iuc.it>

<http://www.turboforth.net>

<http://www.ninerpedia.org/>

Yahoo List Groups:

<https://groups.yahoo.com/neo/groups/TI99-4A/info>

<https://groups.yahoo.com/neo/groups/TI994A/info>

<https://groups.yahoo.com/neo/groups/Geneve9640/info>

<https://groups.yahoo.com/neo/groups/turboforth/info>

## **Active BBS'**

### **HeatWave BBS**

Access: Dial-Up and Telnet

System: Geneve 9640

Software: S&T BBS Software

Location: Arizona

Content: TI and Geneve file libraries, message bases, door games and e-mail.

Telnet to: [www.heatwavebbs.com](http://www.heatwavebbs.com) port 9640 Dialup : **602-955-4491 @ 8-N-1**

### **The Hidden Reef**

Access: Dial-Up

System: TI-99/4a Modified

Software: S&T BBS Software

Location: New York

Content: TI and Geneve file libraries, message bases, door games and e-mail.

Dialup : **718-448-9402 @ 8-N-1**

### **The Keep**

Access: HTTP and Telnet

System: Pentium 4 running Windows 2000

Software: Worldgroup BBS Software (up to 256 user connections)

Location: Tigard, Oregon

Content: TI and Geneve file libraries, message bases, door games, multi-user and multiplayer games and e-mail.

Telnet : [www.thekeep.net](http://www.thekeep.net) port **23** Web browser to <http://www.thekeep.net>

The Keep has TI File libraries, Message bases, e-mail, door games, multi-user and multiplayer games. The keep also has a modem line connected for anyone that would like to contact The Hidden Reef BBS from the internet through The Keep.

Simply telnet to [www.thekeep.net](http://www.thekeep.net) on port 23, login to The KEEP and then type **/GO DIALOUT** at the main menu, then D1 to dial out to The Hidden Reef. It's that simple.

## **Vendors**

SHIFT838 – Provides used TI equipment as acquired. Check with me often. A lot of the items need rehoming from other TI Users.

Arcade Shopper – Provides old and new TI equipment, upgrades and new runs of PCBs at [www.arcadeshopper.com](http://www.arcadeshopper.com)

## **Repair Centers**

### **Richard Bell**

Repairs available on limited basis, please contact Richard at [swim4home@verizon.net](mailto:swim4home@verizon.net) for wait-time before sending any repairs

### **Tim**

Myarc-related hardware repairs on a limited, as-available basis. Contact Tim at [insane\\_m@hotmail.com](mailto:insane_m@hotmail.com) for wait times or to request service.