



SHIFT838 Newsletter

OCTOBER 16, 2016

VOLUME 2, NO 4

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.

Welcome to Volume 2 Issue #4 of the SHIFT838 Newsletter!

If you have not subscribed to the newsletter yet please go to the below link to subscribe. This is the first newsletter edition that I have sent out via the new site, hosted by 99er.net!

If you have not yet subscribed to the newsletter, follow the links below to register:

For the Italian version: <http://www.ti99iuc.it/web/go?TE27BR>

For the English version: <http://shift838.99er.net>

I have been working with **Ciro Barile** so that the newsletter can be released at the same time in Italian for the Italian TI users. If you have not visited his site please do so at <http://www.ti99iuc.it> .Ciro also created some of the graphics used in my PDF newsletters!

In this issue I wanted to cover a couple of different hardware upgrades to the TI-99/4A console to power the NanoPEB / CF7+, JediMatt42 new 32k sidecar, VGA to HDMI converter and even charging a smart device!

Anyone wanting to submit a TI/Geneve article for publishing within the newsletter please send me an email.

Monthly Highlights

- Passing of a great TI'er, Mr. Bud Mills passed away on September 15, 2016 at the age of 80. Most of us remember Bud from his great work with the Horizon RAM Disk! Rest in Peace my friend!



If you want to read the obituary please go to:

<http://www.legacy.com/obituaries/toledoblade/obituary.aspx?pid=181426907>

- Heatwave BBS was taken down in Arizona because of hardware stability issues. The BBS was transferred to Insane Multitasker (Developer of the software) and he is testing some things to see if he will be able to put it back up here in Houston! If so that will make 2 TI/Geneve supported BBS' in the same city!

Currently it is running on a trial basis. Check the '**Resources**' section for connection information.

Heatwave BBS became very popular as most are aware, especially in the TI/Geneve community. When it was announced that after a 5 year run it was being taken offline many of us hated the thought of it as it was a standard BBS to dial into.

So here's a thought, a challenge if you will!

With quite a few of us TI'ers and Geneve'rs dedicated to our little machines.

How many of you would like to run a TI/Geneve supported BBS?

There are quite a few BBS' programs to choose from. S&T is one of the best BBS programs coded then FuSiON BBS alongside of it as it uses the same assembly code and can even be ran on an emulated system.

I would like to challenge to see how many new TI/Geneve BBS' we can get online. Let's give some of these other retro systems like the Atari and Commodore a run for their money. There are a lot of those BBS' and not enough for our beloved systems.

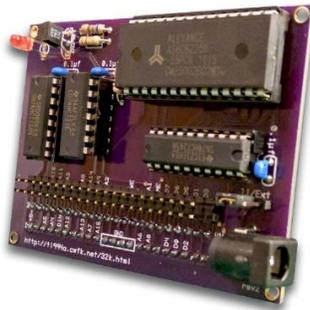
Who has it in them to take on the task?

Contact me privately if you are interested.

- A lot more cartridge images are being submitted by AtariAge users for use with the FlashRom 99! Now we have more than ever to choose from.

<http://atariage.com/forums/topic/253095-flashrom-99-image-repository-9192016/#entry3518743>

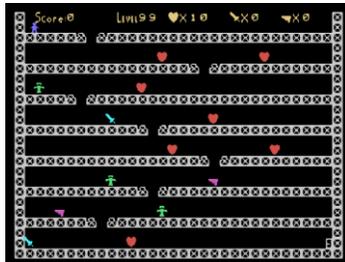
- New 32k sidecar expansion being developed by 'JediMatt42'. JediMatt42 is the developer for the latest USB keyboard interface for the TI and Geneve, so we know it will be a great product and offer an easy memory upgrade especially for the TI users that do not have it currently!



<http://atariage.com/forums/topic/254502-32k-expansion-for-the-side-port-work-in-progress/#entry3545303>

- New ZOMBi 32k Extended Basic game in the works by 'Sinphaltimus' on AtariAge. (Currently In Progress)

This game is a zombie survival game for a player to escape a skyscraper. Keep an eye on this one it looks very promising!



<http://atariage.com/forums/topic/255837-new-32k-xb-gametzombi-work-in-progress/#entry3570558>

- Wizard's Doom by 'Adamantyr' being programmed in Extended Basic. If you like Tunnels of Doom or any other RPG then watch for this one. It's already in BETA! He is definitely stepping up his game on this one!



<http://atariage.com/forums/topic/253486-new-xb-game-wizards-doom-in-progress/page-1#entry3526213>

TI STARTER

Hardware

Powering the NanoPEB or CF7+ via the TI-99/4A

First Up! The modification to steal power from the speech synthesizer to power your NanoPEB or CF7+!

Developed by **SparkDrummer**

Disclaimer: If you attempt this modification and screw up your machine then **SparkDrummer** or **SHIFT838** is **NOT** responsible for your failed hardware! If your machine becomes AWARE of itself and takes over the world you are responsible for the fall of the human race! If you believe you have experienced your TI to be '**self-aware**' please call **1-800-JUDGEMENT-DAY** and ask to speak to **John Connor** and report your issue and he will personally take care of it! If you smell smoke or this modification causes any damage, loss of property or life then we are not responsible. **DON'T COME CRYING TO US!**

So with the disclaimer out of the way let's get to it!

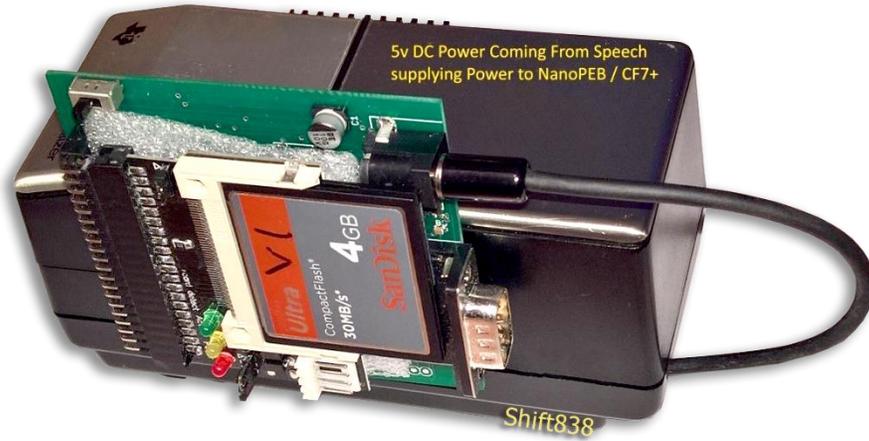
Items Needed:

- TI-99/4A
- Speech Synthesizer
- NanoPEB or CF7+
- Soldering Iron and Solder
- 5.5mm x 2.1mm DC Power Barrel Adapter
- Wire
- Drill and Drill bits
- Phillips Screw Driver
- Dremel or File if you have patience.

Key benefits:

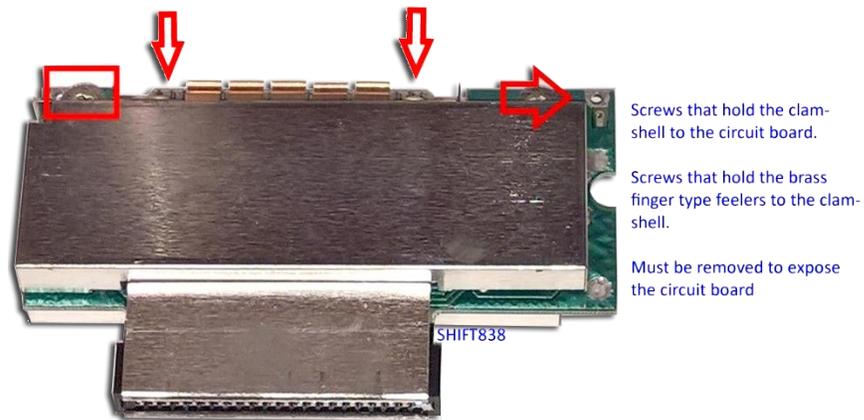
- Very easy upgrade!
- No need to disassemble the Console
- Provides power directly from the speech synthesizer
- Can move speech to any unit and still achieve power without any modifications.
- Less wear and tear on your NanoPEB / CF7+
- One less power adapter you have to use!

If you follow all instructions correctly your modified speech synthesizer (PHP1500) will look something like the photo below when you are finished.



Step 1: Disassembly the TI Speech Synthesizer

Step 2: Remove the speech from the plastic housing ; it will be in a protective clam shell

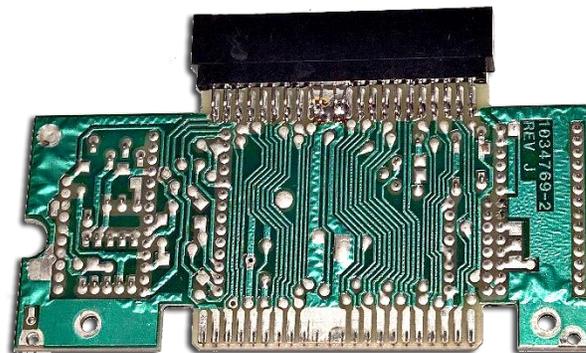


Screws that hold the clamshell to the circuit board.

Screws that hold the brass finger type feelers to the clamshell.

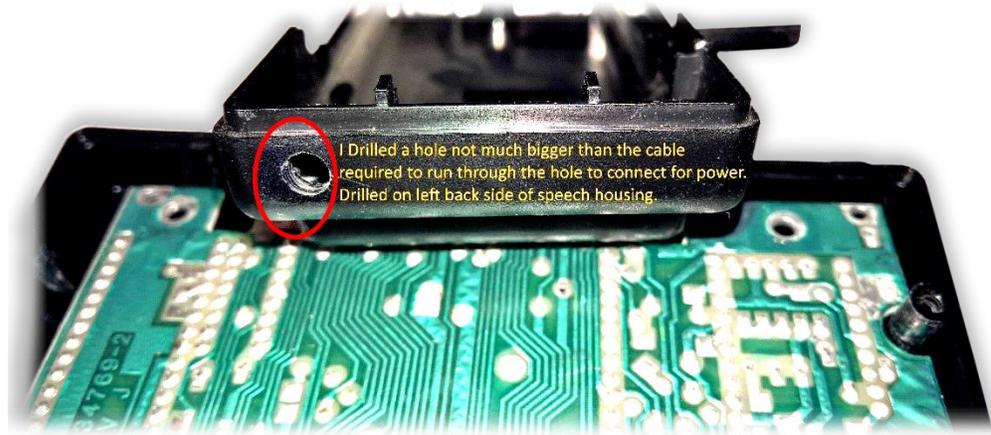
Must be removed to expose the circuit board

Step 3: Remove the metal clamshell from the board to gain access to the PCB contact points.



Once the speech synthesizer is out of its clamshell it look like the below.

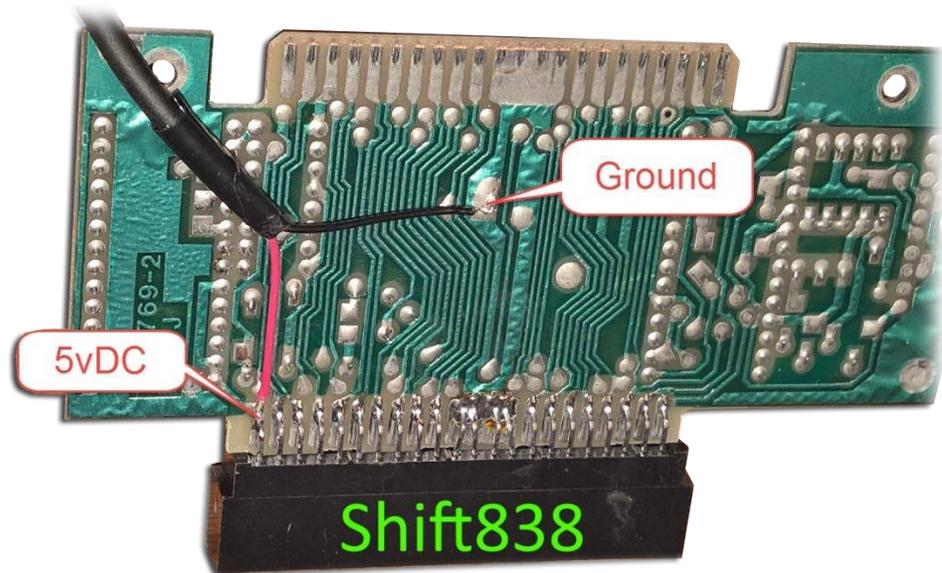
Step 4: Drill a hole of appropriate size on the bottom left side of speech housing just big enough for the power cable to be snaked in.



Step 5: Snake cable through the hole drilled in the previous step.

- Solder wires for cable to DC Barrel Power connector
 - Positive to center Pole
 - Negative to external housing

Step 6: Solder positive and negative wires onto the positive and negative points shown on the speech synthesizer unit as shown below.



Step 7: Plug in the speech synthesizer and use your voltmeter to ensure the voltage being supplied to the power cable that plugs into the NanoPEB/CF7+ is now +5v or a little over.

Step 8: Put it all back together and enjoy.

Next Up! The modification to steal power from TI-99/4A PSU in the console for both 12v and 5v depending on your needs to power NanoPEB, CF7+,VGA to HDMI converter or JediMatt42's new 32k Sidecar!

Developed by **Shift838** with some suggestions from **Ω**, Arcade Shopper and a few others from AtariAge!

Disclaimer: If you attempt this modification and screw up your machine then **SHIFT838** is **NOT** responsible for your failed hardware! If your machine becomes AWARE of itself and takes over the world you are responsible for the fall of the human race! If you believe you have experienced your TI to be '**self-aware**' please call **1-800-JUDGEMENT-DAY** and ask to speak to **John Connor** and report your issue and he will personally take care of it! If you smell smoke or this modification causes any damage, loss of property or life then we are not responsible. **DON'T COME CRYING TO US!**

So with the disclaimer out of the way let's get to it!

Let's give **Ω** a shout-out for finding the 12v to 5v DC stepdown power regulator for use in this project. Great find and it works great!

Key benefits:

- No need to disassemble speech synthesizer
- Provides power directly from TI PSU on 5v or 12v lines
- USB Port also provides charging capabilities for smart devices like phones, etc. (TI is definitely in the modern age now!)
- Less wear and tear on your NanoPEB / CF7+, VGA to HDMI converter or other used device.
- USB Just looks cool on an 80's era machine!
- One less power adapter you have to use!
- USB port could be used with later projects, maybe?

Items Needed:

- TI-99/4A
- Speech Synthesizer
- NanoPEB or CF7+
- 2 x 4 Position 90 degree angle headers 2.54mm pitch
- 1 x USB 2.0 Type A Female Breakout Board 2.54mm Pitch
<https://www.amazon.com/Female-Breakout-Board-2-54mm-Header/dp/B01K42V2S2>
- 1 x 12v to 5v Stepdown Voltage Regulator
<http://www.getfpv.com/5v-step-down-voltage-regulator.html>

Please note I myself did this upgrade to use the 12v to 5v stepdown regulator as I already use the USB keyboard which borrows power already and felt like I should just take it from the power supply.

I will point out the differences to hook directly up to the 5v line and not to have to worry about the 12v stepdown regulator.

- Soldering Iron and Solder
- USB to 5.5mm x 2.1mm DC Power Barrel Adapter
<https://www.amazon.com/Generic-Volt-Barrel-Power-Cable/dp/B00304DZ7I>
- Wire
- Female to Female Header Wires (**Length** is determined by USB and/or Voltage Regulator Stepdown location; similar to below link)
<https://www.amazon.com/40pcs-Female-2-54mm-Jumper-Wires/dp/B007MRQC1K>
These make for quick connecting/disconnecting.
- Dremel with correct bits for grinding plastic.
- Phillips Screw Driver
- File to finish up Dremel work

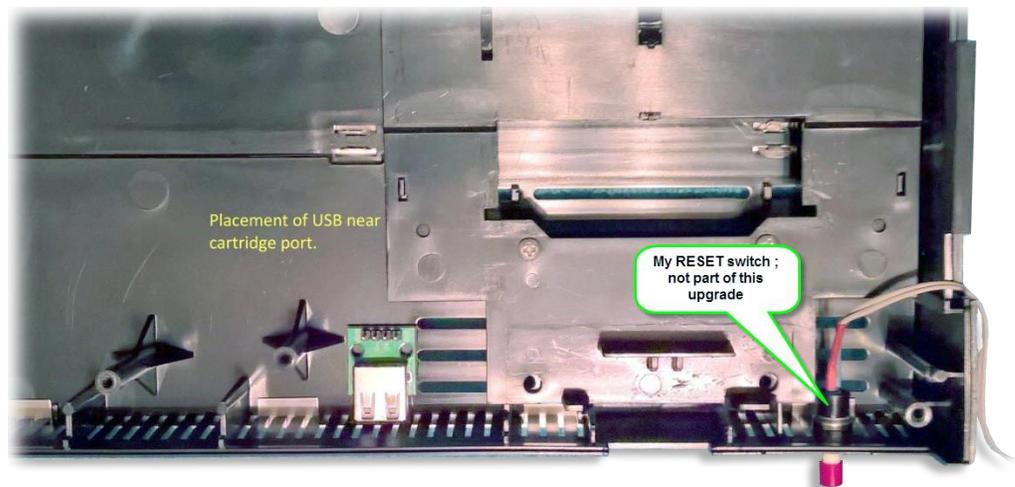
Step 1: Unplug and Disassemble your TI-99/4A console, taking careful note of all components, screws and springs (especially that little spring that holds the cartridge door shut! I myself lost one so I had to order new ones.)

You will need to remove the power supply and main motherboard for this modification.

This would be a great time to perform additional upgrades such as the LED modification, F18A, Reset Button and the USB Keyboard!

Once the Power Supply and main motherboard are out go to **Step #2.**

Step 2: Find a placement location for the USB Female Type A connector in the back of the TI that will not interfere with any mounting hardware or boards inside the unit as shown below.

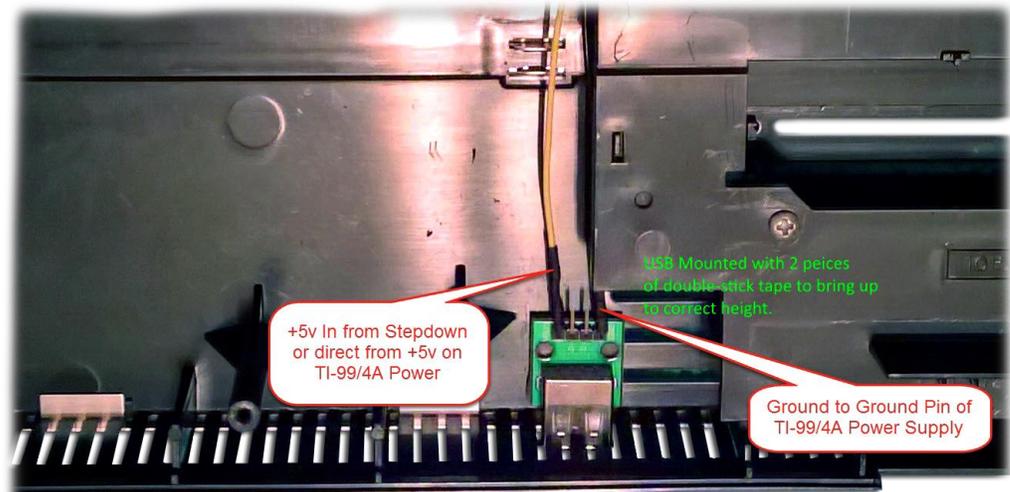


Step 3: Cut 3 vents to expose where the USB connector will reside. You will be using 2 pieces of double stick tape on top of each other to obtain the required height needed for clearance when the USB port is installed.

Step 4: Solder 90 degree angle headers on to the USB connector.

Step 5: if using 12v stepdown then solder on 90 degree angle headers on to voltage regulator (**Skip this step if connecting USB directly to 5v**)

Step 6: Ensure both +5v and Ground are hooked up accordingly (2 outside pins for the one I purchased) Middle pins are used for Data Transfer; no use for them as of yet.

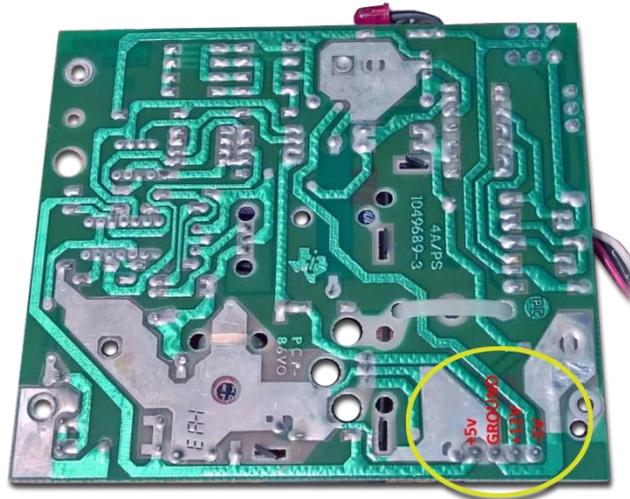


- Step 7:** Add (2 pieces) double stick tape to the PCB of the USB board.
Step 8: Install USB in location chosen with double-stick tape (2 pieces on top of one another) and mount the USB
Step 9: Snake your wires to the location of either where the 12v Stepdown voltage regulator or directly over to the power supply PCB. (Depending on which method you have chosen.)

Note: If using 12v Stepdown both GROUND wires on 12v Stepdown module and USB connector will be connected to the TI-99/4A Power Supply ground!

SKIP Step #10 if you are using the 12v Stepdown and go to Step #11

Step 10: Connect the appropriate pins with header wires on the USB connector for 'Voltage In' and solder the ends to the +5v side to the TI-99/4A power supply board.



SKIP Steps 11-13 if you are NOT using the 12v Stepdown and go to Step #14

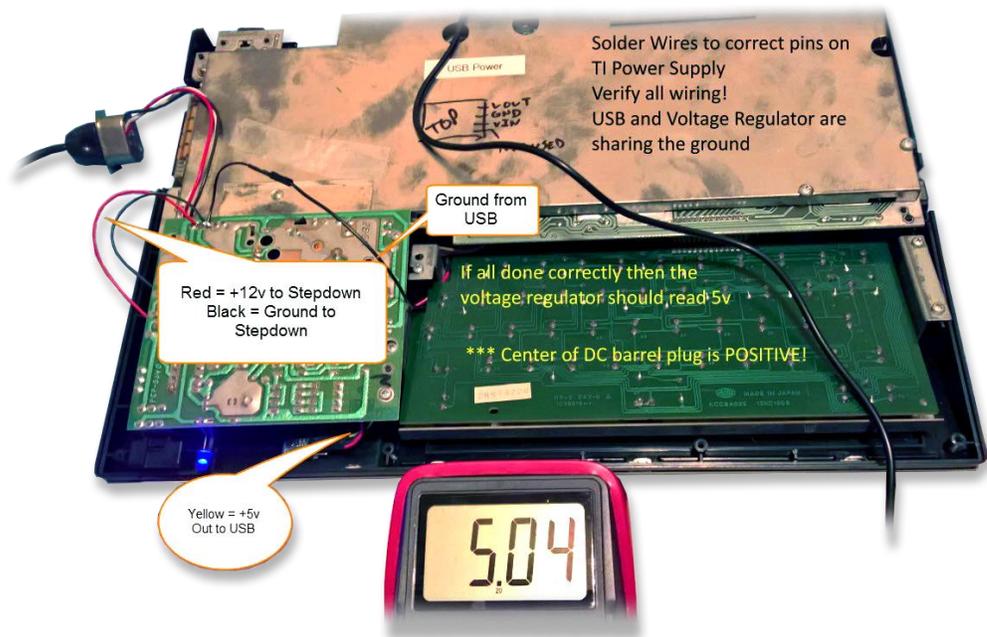
- Step 11:** Connect 12v stepdown 'Voltage In' pin to the 12v+ and 'GROUND' pin to the TI-99/4A Power supply board pins as shown above by soldering one end of a header wire but leave the header connector on the other end for easy connection.
Step 12: Connect the 'Voltage Out' (+5v) from the 12v Stepdown module to the 'Voltage In' pin of the USB connector via a Header wire.
Step 13: Mount Stepdown module with double-stick tape in the desired location

Step 14: Connect Ground wire from USB adapter to Ground of the TI-99/4A power supply PCB using the same method in **Step 11**.

If you are made it this far and are using the 12v to 5v stepdown regulator method, then your TI should something like the below photos:



Close up photo of 12v to 5v Stepdown:



Notice the small 12v to 5v stepdown is hidden nicely under the power supply board.

Step 14: Double-check all wiring and connections.

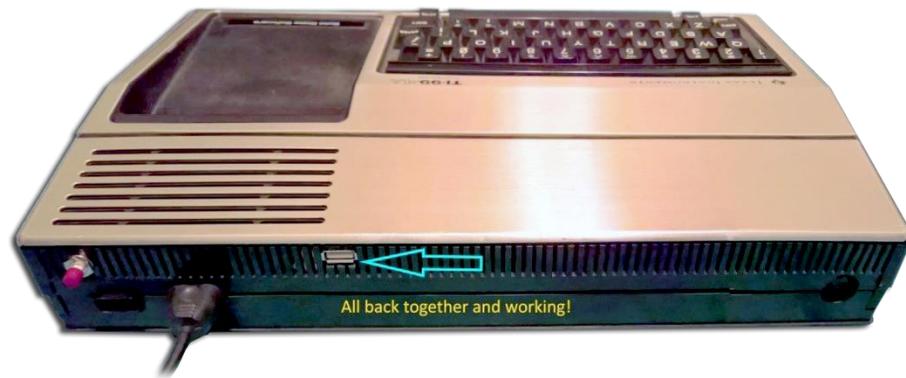
Step 15: Plug in USB to DC adapter plug in newly mounted USB

Step 16: Power up and test voltage with volt meter. It should register with center of the DC barrel connector as positive to be at least +5vDC. Mine registered 5.09vDC.

If you follow all instructions correctly you will be able to power the NanoPEB and CF7+ or use JediMatt42's new 32k sidecar upgrade with the installed USB port. The new USB port will also act as a USB Device charger.

Step 17: Unhook power and hide all your wires as best you can and put the system back together.

Should look something like:



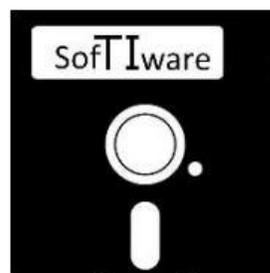
Step 18: Retest Power voltage

Step 19: Mount your Nano/CF7 and test!





All working as expected. ENJOY!



Tunnels of Doom Reboot
(by Dream Codex)



For all your Tunnels of Doom lovers out there if you want you can go to the below site and download the Tunnels of Doom Reboot along with various other reboots like Hunt the Wumpus. All playable via the PC, not through an emulator but actual PC code whether it's an executable or online like Hunt The Wumpus.

The graphics on this reboot are amazing. This reboot comes with various utilities to create new Tunnels of Doom games for use with this engine as well as convert existing Tunnels of Doom games. I have already converted a couple of mine just to see. Now when converting it will use the old retro-style TI-99/4A TOD graphics and sounds.

I plan on myself maybe making a few for this engine (when and if time permits).

<http://www.dreamcodex.com/todr.php>

Medieval Games I, II & III

I have quite a few Tunnels of Doom games that I have created for the TI over the years that I sell from time to time. I am going to use these hopefully to generate some interest in my FuSiON BBS. So, participation is key to being put in the hat to win a one of the game disk. Each disk image contains 5 Tunnels of Doom games and the game list along with screen captures can be found on the FTP site.

ftp://ftp.whitech.com/Users/Chris_Schneider/TOD

A user must login to the BBS and leave me feedback as well as post messages and become an active member of the BBS. In the feedback the user must state that they want to participate in the monthly drawing for the disk image.

So let's get the BBS hopping! Pass the connection information off to friends and your friends do not have to have TI or Geneve computers, any computer!

You never know maybe we can inspire a few new TI'ers or bring back some past TI'ers back into the fold!

Highlighted User System



For 2016 I want to highlight a system for every newsletter. Once a system has been submitted the TI'er does not have to submit again. To submit your system for consideration please send me a PM on AtariAge or direct email with a subject of '**Submission for TI Highlighted System**'.

The system does not have to be a completely decked out or an expanded system. It's really about the story of how the fellow TI'er came into the TI fold and why they like the machine so much. I want to include a personal story from each TI'er chosen to help the rest of us learn a bit about them.

This editions chosen system is Arnuphis' TI-99/4A system.



My TI-99/4A system consists of a black and silver console with the F18A upgrade, Speech Synthesizer and a Peripheral Expansion box. In the PEB is an unmodified TI RS-232 card, TI Disk Controller Card with the 80 track upgrade and the latest 1MB Super AMS memory card.

The system is connected to a router by means of a UDS-10. Fitted in the floppy bay are a Lotharek HxC Rev F SD card reader configured as DSK1 and an Epson 3.5" Floppy drive as DSK2.

My favorite piece of hardware has to be the F18A. I have several retro systems and the quality of the video output on the F18A makes the system stand head and shoulders above the rest. It really has to be seen to be believed. It also opens up a world of monitor options which is important since the old CRT screens these systems were designed for are slowly dying out. Hopefully more programs come along that take advantage of its features. I would say that if you have a TI-99/4A then this is probably the first thing you should get for it. It has the additional benefit of being easy to install. I really need to buy a backup one as I can't imagine life without it now.

I really can't live without my TI as it is a link to the past. I have had the system twice before and have sold it and then some time later regretted not having it around. There is a just a lot of joy with using the old hardware that you just don't get with emulation. Plus the exciting things that have been and are being developed mean that it's more exciting now than when the plug was pulled by TI back in 1983.

The TI was not my first computer. That was a VIC-20. When Commodore announced the C64 in 1982 I was dismayed and realized that I probably needed to unload my VIC. I sold it to a friend and went looking for a new machine. Since the C64 was more than I could afford, I looked at the existing computers on sale at the time. I looked at the Colour Genie, The Dragon32 and even the Newbrain. At the time the TI dropped to 199 pounds and after reading several reviews I decided to take the plunge as it was a 16 bit machine! I was happy with my purchase as after wrestling with the VIC-20's BASIC (all Poke commands!) the TI was easier to learn to program and before long I was writing games on it. After much time and saving, I got the Extended Basic and Speech Synthesizer for it. Everything was saved on tape as the Disk option was way too costly. The machine became very popular in the UK when the price was slashed to 99 pounds but then TI pulled out of the market and it all came crashing down. I actually swapped my TI in late 1984 for a bass guitar and Marshall amp. Not too shabby really but by 1989 I had the chance to pick up another one and thanks to a firm called Parco Electrics in Devon, I was able to get a stocked PEB and printer. For a couple of years I enjoyed learning the assembly language and playing Infocom adventures. After that I got into my first serious relationship and since the machine was gathering dust, sold it on. Regretted that

over the years and finally got back into the scene here back in the late 2000s after picking up a console on Ebay. Thanks to *Texin Treasures* I then got the PEB system which I still use here today. Yes there are '*better*' retro machines out there like the Amiga, Archimedes and ST but those were closer to the modern machines of today where a lot of things are running when you turn them on. The TI harkens back to the day when all you had was a '*Ready*' message, a flashing cursor and the question of '*What program should I try and write today?*'.

Of all the machines I have owned, there is just something special about the TI-99/4A. It doesn't have the open architecture of a Sinclair or Commodore machine out of the box or the software love that those machines got from the game companies but back in 1983 *Parsec* made it the envy of all my friends. Long live the TI!

Calling All GAMERS!

**GAME OVER YOU GOT A
HIGH SCORE
ENTER YOUR INITIALS**

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 competition then click below:

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

Please join me in congratulating the last few month's winners.

Month	Game Title	Winner (AtariAge User Names)	Score
July 2016	Barrage	InfernalKeith	666,090
August 2016	TI Scramble	DJugel	86,610
September 2016	Protector II	Game continues for October!	

I find it odd that no one participated in the September High Score completion. Hopefully it was because everyone was busy.



The last edition had the below for a Brain T.I. aser:

You must replace a letter in each step from the below word to produce the direct opposite word in the last step and every word produced in each step must have the same number of characters (4 in this case).

The word is "COLD"

You have 4 steps to produce the opposite word.

So I had a few of people get it correct. Now with as many words as there are in the English language there can be multiple correct answers. The winners are as follows:

- Joel Gerdeen**
- Lee Stewart**
- Ronald van Kleunen (Globeron)**

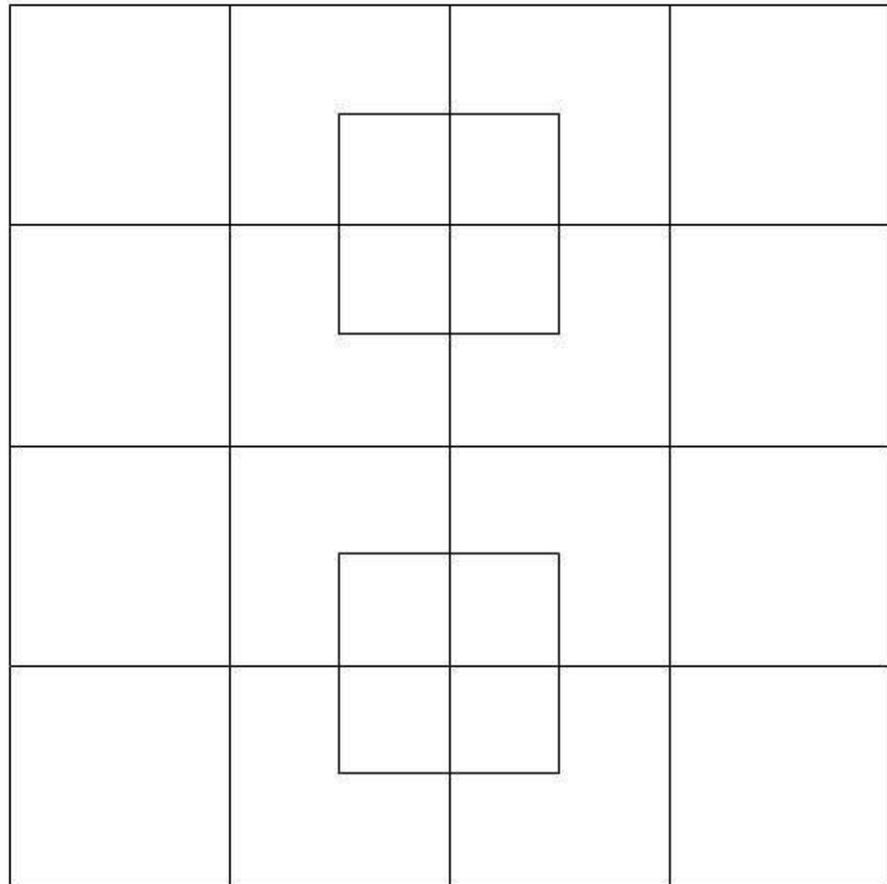
Here are a couple of postings of correct answer possibilities.

Solution #1	Solution #2
COLD	COLD
CORD	CORD
CARD	WORD
WARD	WORM
WARM	WARM

This edition for the Brain T.I. aser I wanted to put in 2:

Teaser #1:

How many squares do you see in the picture below?



Teaser #2:

What is the next letter to appear in the below series?

WITNLTAITB

If you figure it out send me an email at shift838@att.net with the solution. If I do not receive a solution from anyone by the time I publish the next newsletter I will publish it then.

Sorry, no prizes, but the first one to figure it out gets bragging rights and will be mentioned in the next edition of the newsletter along with how they figured it out.

I also am still waiting for someone to find my Easter egg in my adventure, '**The Stafford Predicament**' that is used with the Adventure module. This adventure game can be downloaded off the FTP site, FuSiON BBS and soon will be offered on my website.



Resources

Contact information

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

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

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 the links available for '**Floppy Days Podcast**' covering the TI-99/4A that have been done over the last few months.

Episode #49 : <http://floppydays.libsyn.com/webpage/2015/11>

Episode #50: <http://floppydays.libsyn.com/webpage/2015/12>

Episode #51: <http://floppydays.libsyn.com/webpage/2016/01>

Episode #52: <http://floppydays.libsyn.com/webpage/2016/02>

Episode #56: <http://floppydays.libsyn.com/webpage/2016/03>

The main web site to Floppy Days:

<http://floppydays.libsyn.com/>

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'

FuSiON BBS

Access: Telnet

System: Emulated Geneve 9640 via MESS

Software: FuSiON BBS Software powered by S&T Assembly code

Location: Texas

Content: TI and Geneve file libraries, message bases. Full ANSI support, Text 40 and 80 Column modes and BBS E-mail.

Telnet to: **fusionbbs.ddns.net** port **9640**

HeatWave BBS

Access: Telnet

System: Geneve 9640

Software: S&T BBS Software

Location: Houston

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

Telnet to: **heatwave.ddns.net** port **9640**

Being run on a trial basis right now by Insane Multitasker

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 port **23** Web browser to <http://www.thekeep.net>

The Keep can now be connected to via telnet directly from the web page!

<http://web2.thekeep.net/telnetme.html>

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 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 rehomeing from other TI Users.

Arcade Shopper – Provides old and new TI equipment, upgrades and new runs of PCBs at www.arcadeshopper.com

Hummingbird EPROMS – Provides EPROM burning services for various TI/Geneve related EPROMS for original code and modified code. Contact Bob Carmany at Rmcarmany@aol.com for pricing and availability.

Repair Centers

Richard Bell

Repairs available on limited basis, please contact Richard at 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 for wait times or to request service.