

About the Author: Robert Townsley (MegaHurts)

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I got bitten by the love of **Electronics** at a very young age of **5** or **6** years old when my grandfather showed me how to make a crystal radio. That was in **1965** or **1966**. After that, I took anything I owned (*and my siblings*), that had a motor or electricity used in it, apart to see how it worked. I also got spanked a lot for destroying my little brothers toys when I did not get them put back together before anyone found out, or they discovered after the fact I had taken them apart. Sometimes they just would not work ever again and once discovered, there was only one person to blame – **me**. I also got spanked and blamed for a lot of household gadgets or appliances that **I had no part in** of its untimely death. But no one believed me most times and I got my butt heated up pretty good a lot. You would think the recurring pain associated with disassembling something electromechanical would cancel the joy of discovery I got each time I did it. But the joy I got of seeing how something new worked fueled my imagination of what would the next thing reveal upon its dissection. It still does to this day. But I have gotten **a lot better** at putting something I took apart back together. More and more times they still work too. ;^)

My programming skill level is hard for me to define in this day and age though. I have never been employed as a “programmer” but started learning programming in **BASIC** (*used a Run-Time Compiler*), in **1977** while in High School. I had **2** years of it then, but got advanced from the **1st** year classes to the **3rd** year classes before the **1st** year was done. *(The system administrator (*and 3rd year class instructor*) had discovered my “**Hacking**” the system (*a Digital Equipment Corporation DEC PDP11-8E Main Frame*), and wanted to keep an eye on me and a couple of my classmates and put our skills and “**extra energy**” or “**curiosity**” to work making sure **no one else** could do what we had done. We didn't think of our activities as “**Hacking**” or malicious, we were just teaching ourselves how the system worked and found ways around restrictions that we were told are “**absolute**”) After I had to quit High School in senior year (**1978**), I joined the **Army** (*back then, they were more interested in my skills test scores than having a HS diploma*), and while I was in, I got my GED and I took college classes in programming in **RPG2**, **FORTTRAN4**, **FORTH**, **PASCAL**, **PROMAL**, **COMAL**, **COBAL** and **LOGO**. The **FORTTRAN4** class was the **hardest** and one I got the **least usable** knowledge from because the **University of Maryland satellite** school I attended for it did **not** have any machines to run the programs on. The programs were done on **punch cards** and we had to have them sent from **Germany** to the **University** to be **run**, then the cards and results (*printed out on printer paper*), would be sent back to us. This took **7** to **9** days to submit and see run results of a program no matter how complex or simple it was. So we **ran** most of the courses language examples in our **heads** or on **notebook paper** with the course instructor **acting** as the “**computer**” and scoring our submissions. I passed the course with high scores, but **very** suspicious of the **accuracy** the “**computer**” had with “**running**” the programs. But a **college credit** is a **college credit** – **on paper**.

I also took the **NRI McGraw-Hill School @ Home: Computer Repair Course** while in I was stationed in **Germany**. I had to build my first **PC** from individual components in that course. It did not have a keyboard or screen, just **LED's** and **8** toggle switches for setting/clearing bits in a register, and push buttons to control Run/Stop, program, step up/down address and power on/off, (*it only had RAM memory so program/data was lost on power off*). Programming it was done in machine language (*Binary*) and output was **12 LED's**. **Good stuff**.

I then bought an **AMIGA 1000 PC** and used its *AmigaBASIC* that came with it a lot and started learning how to program its **Motorola 68000 CPU** in **assembler**. Yippee,.. a keyboard, mouse and **color screen**. A **BIG** improvement, but I mostly used it for programming games (*no reason to write serious programs when I wasn't getting paid to do so, and back then there WAS the potential to get very rich making a popular game*). **Then I got married** (*divorced after 3 years*), and a big stretch of time then of no programming (*about 8 years*), then got back into it teaching myself **VB3**, and *I think* then is also when I got my first look at a programming language called “**C**”. What a funny name I thought but what the heck, lets check it out, lots of talk about it. *All I can remember thinking is, “See? What am I Seeing?”* Then **Blackness**.

OK, it wasn't *quite* that **bad**, but I still do not like what I **SEE** when I look at “**C**”. I think maybe because **C** does not look like a “**Language**” like conventional ones do, and more like some alien script crossed with **Hex**, I have never found it appealing to try and learn. Some of the Keywords there are in it do not make sense as words in their usage.

So, as long as there is **BASIC** or **PASCAL** to use, I'll have to pass on it (*but there always is the possibility a "switch" is stuck in my head and a good impact could knock it loose?*). Also at this time, I am greatly more productive using a programming language I (*mostly*) know than trying to learn one while building a custom electrical design that is unproven yet. Pretty much impossible to do in a self teaching/learning circumstance and have any idea how long the project would take to finish.

GAME CONTENT EDITING:

In the late '90's I got a good boost in interest in game editing due to the Unreal game by Epic. It came with the full blown game engine editor. And 3D content editing was all I did in my spare time. I progressed through quite a few different 3D editors...3D-Max, Multigen Creator and a lot of the open source platforms. I started racing online in a few different leagues and gave track editing a pretty serious go.

I made quite a few tracks for NASCAR Heat from scratch using a method I developed making V.I.R. International Raceway for using Topographical maps to accurately make the terrain with elevations and merge the road way polygons (*which had to be done separately from a spline extrusion at super high polygon count for Heats Engine to have cars drive smoothly on any road curvature*), and did a few conversions from other games. My VIR track got popular enough that I gave the source files to other newer games editing groups to convert it to their simulators engines. This got me an offer to do tracks and stuff at a big game company but declined because I could not relocate at that time and they would not do out-of-house @ Home workers.

Around **2005** a friend and I wanted to build our own line of Hi-Performance driving controllers for the PC online racing simulations enthusiast. After some research, that is when I found **PIC**. We were using **PAL**'s to embed some gear shifting and **LED** displays logic control. But so called "friend" ruined business we started before we could really call it a business (*my email address is a left over from that*). In **2009**, I finally got tired of building my own **PIC** programmers and trying a lot of "Free" compilers with marginal successes and I found **MikroElektronika** and **MikroBASIC** and bought a **EasyPIC4** board (*but received a EasyPIC5*). Still at it so far.

So I have to classify myself as "*Knowing Enough to be a Danger to Myself and those around Me*" (*C above. Do You think all those different programming languages live and cooperate peacefully in my head?*).

As long as I have some good days where things run like "*I wanted*", I keep at it and I still have fun learning new stuff daily. So I do not have a *Degree* in programming (*a conviction (Joke) pending maybe, everybody knows/thinks programmers are crazy*).

I do have **40+** years of fascination (*36+ years of which is working on electronic equipment*), with Electronics in general and Digital Electronics more so since I discovered the **PIC** (*and more than equivalent of an associates degree in electronics*). I think they remind me of that **NRI** computer I built, *but a lot cooler*. I have kept at it and growing my choices of tools to use. I am constantly *amazed* at how modular and *easy* it is to make very complex systems and designs today. The components and tools are far beyond what we use to wish existed back in the early **1980**'s. I envy you younger people getting into this stuff now. I would love to see what becomes available to you when you get to my age.

Why MegaHurts for my user handle:

If you ever wondered about my forum user name and why is it spelled that way, here it is, one-time-only story of how it came about and why the spelling.

(actually, this is the first forum I have joined that I have not gotten at least 1 person asking why its spelled like that)

1st it is pronounced the same as Megahertz.

2nd it is not a variation I had to use because Megahertz was taken already.

The handle got assigned (*literally*), to me while I was in the Army. One of my job titles was Radio Repairman and I was assigned (*signed for @ around \$10 Million+*), a 5-Ton, 6-wheel-drive truck and repair shop (*35 ft trailer*).

I can not say what equipment I had to maintain or what testing and repair equipment I had and used in the shop van, but I can say I was more than a little nervous about how much money in equipment I had to be responsible for and sign for.

So because I was,,, *lets say "diligent"*, in my duties to protect "*my*" property and equipment, like having some things connected to a *few thousand volts*. No one dared to touch, anything of mine, so I was given the nickname and call sign of **MegaHurts**. "*Touch my stuff, it will Mega Hurts*".

I had the call sign across the top of the trucks windshield in 2" black vinyl lettering.

Electronics

I still like making High Power coils and keep a few around, just in case.

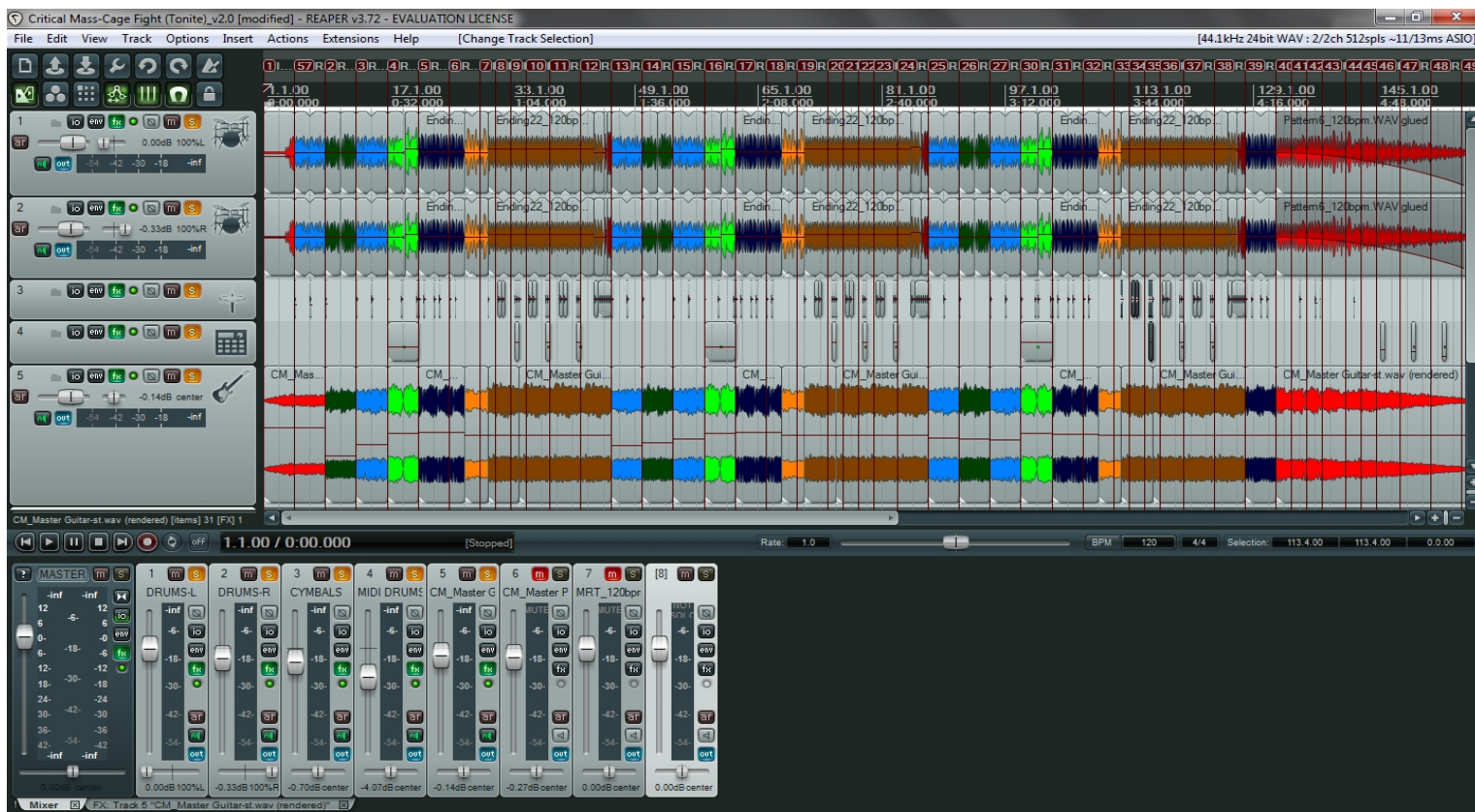
I also like making magnetic pulse motor/generators and **HHO** powered devices.

I have one pulse motor using 2ppr (Pulses Per Revolution), on 2 180 offset North faced super magnets and super magnet bearings doing 10,000 RPM's on 18Vdc and taking 8 minutes to stop after powered off, to test energy recapture configurations.

Music

I play electric guitar whenever I can get the time in, and sometimes my friends and I can take time to record some tracks. I use a **TASCAM DP-02 8-Ch.** portable digital studio to record with and a **Zoom MRT-3b** Drum Machine to program rhythm tracks and **REAPER** software to do the final editing, effects and track mix downs.

Screen capture of one of our song's being edited in my REAPER DAW Software. 1 stereo Guitar track + 1 midi percussion track + 1 cymbal track + 2 mono Drum tracks. Color coded clip loops used to create the songs progression from one verse to the next. Still teaching myself about DAW productions. Very challenging to get the results desired, as I expected when I started doing this years ago. I am probably only using 1-20% of the capabilities the software has. So Many Ways to mess things up, less ways to get it making something usable it seems most days. Some days, amazed at what comes out.



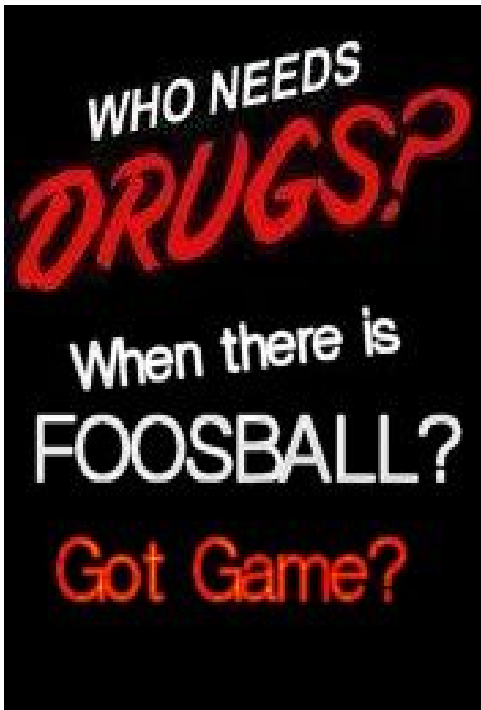
Foosball

I am an avid **Foosball** player (*table soccer*), and have been since my first game played when I was a preteen (early '70s). played in 2 Las Vegas tournaments (*2 different years*). 1st time I went (*2004*), I entered the first nights draw partner doubles tournament, and we won it. I had a great partner with great skills at forward, I played goalie and made my share of points from there and blocked enough for my partner to score if he got possession of the ball. We synchronized as a team right off. We did not lose a single match (*best 2 of 3 games to 7 points*). Then a lot of playing Foosball and waiting. Repeat and done after 2 days (*for me, had to wait 3 more days for friends to finish*). I must have used up most of my *adrenalin* that first night playing with Marty, because I did not go more than 7 “Games” played and out (*Double Out brackets*) in any event I was entered in afterward. That and there were a lot more players in the actual tournaments the following days that were not there the first night for the draw partners games. But it was still the *Best Foosball* experience I have ever had while losing. I still play two nights a week with the local talent at a bar downtown, popular for live bands and lively players.

I hope you reading this found it entertaining at least. These are not my only interests, but they are the ones that have the most special places in my life. I wish for all to have such things that are special to them also. I thank you for any comments and the assistance on the forums, Robert Townsley. 2013 |MegaHurts|

Short Photo Album:

Foosball cell phone wallpaper I made.



My Best playing Guitar, Not Best Looking - Wired my way.



Recent custom customer Media/Game PC build for \$1450 ASUS *SaberTooth* R.O.G. MB AMD 8xCore@5.0Ghz 32GB DDR3 RAM 1.5TB Raid .5TB Sata 2x2GB Gforce SLI

One night this last summer, this Thunderstorm Boomed and Rolled over us and gave us a scary good light show. Set my GoPro for 2sec. interval time-lapse photos, went out and put on truck bed cover and after push shutter button, ran for cover! 1 of 6 nice shots of 472 taken



GoPro Hero2 time-lapse shot of our bird feeder and some customers in flight. How many birds can you find?



Me (left) and my friend Scott (Right) after winning the Foosball Leagues end of season tournament. (about 10 years ago, I think)

Goalie view on my Brothers no-coin model Valley Tornado Foosball Table with the Forwards Bars removed to Play Goalie Wars. (or sometimes called "Bank n Gun" by the Locals)

(sometimes called #\$&%! Ball too) ;)*

Over 2600 Gut Ball Games played recorded in less than 2 years. * (4 to 4 score one goal to win)*



The Schwinn Stingray Chopper Bicycle to get the ESC prototype motor controller and DC Brushed motor to beta, then a future proto Brushless Air-Core Halbach magnet array Hub motor. (still a work in progress)

B^) Mhz.