

How to be a Guitar Hero, IRL
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Hello, World (I just love having an audience knows that reference!). I will attempt to make this article brief, informative, & fun. We will be discussing the electric guitar (a musical instrument device), software called "Rocksmith 2014®" by Ubisoft® ("Rocksmith 2014" henceforth shall be referred to as just plain old "Rocksmith®" for the remainder of this document), applications used to enhance the Rocksmith experience, & an online community called CustomsForge (I would say a "fantastic" community, but that judgement is for the readers to make).

Anyone familiar with the movie "Sneakers (1992)" might recall a character named "Whistler" that can do fun, & amazing things with sounds (he's the blind hacker/phreak). Phone Phreaks in particular appreciate sound manipulation the most (ever play tunes using DTMF?), but, it's tough to find a living human that doesn't have a novahot rocker star inside their soul, waiting to be unleashed (yes that was a Shadowrun® reference).

You may hear the words "Smith", & "Forge", & "Rock" & assume that heavy metal music is the focus of this article, but that it certainly is not the case. All genres of music can be played on the electric guitar, & utilizing Rocksmith. The acoustic guitar is confined to one particular sound, but the electric guitar can sound like anything one can imagine. Through the use of sonic effects (digital, & analog), MIDI (Musical Instrument Digital Interface) pickup interfaces, & software/apps (including plug-ins) are now more commonly used.

The guitar, invented blah blah blah (go look it up on Wikipedia :P) is akin to coding in Assembly, or rather, a 2nd generation computer programming language, especially when compared to other stringed musical instruments. Take a piano for instance (yes there are strings inside of a piano), the piano player, interfaces with the strings through a series of "keys", & "pedals" used to generate certain specific "notes", & combinations of notes ("chords"). This interface, acts as a layer, preventing the player from directly manipulating, or programming the strings. Whereas the guitar player has direct access to the strings that generate sound, giving them ability to pick, pluck, strike, bend, slide, & mute the strings, etcetera & so forth. This is the kind of minute detail an Assembly hacker can, & should appreciate (how does a programmer access CPU registers directly in a 3rd generation or higher language? Don't ask me!).

By this point, if we haven't appealed to the inquisitive hacker side of your personality, perhaps the social, & emotional benefits will persuade you to the rock-side (Star Wars® analogy? Yes? No? Whatever!). Guitar players perform at gigs/shows. This is a social activity. Most social activities are dull wastes of time, but any

DefCon speaker will probably tell you, being the center of attention in a peer group setting... IS PRETTY AWESOME! Praise, admiration, acceptance, chicks/dudes, booze/drugs, parties, are all there waiting for you (even maybe true friends! those are rare tho), if you are willing to "grab the brass ring" so to speak. Partying is a devotion to pursue, sometimes a lifelong devotion. Especially when the weight of intelligence, becomes too much to bare (I'm saying extra brain cells are a burden, yes).

So now that I have hopefully convinced you that the electric guitar is the superior instrument to spend one's time with, where do we go from here? Now that you've acquired an electric guitar, what now? Get yourself a "Realtone®" cable, & a copy of Rocksmith 2014 for Windows, OS X, Xbox 360/One, or PS3/4. A real tone cable is merely a quarter-inch (1/4") left channel monaural (mono) phone jack connector (commonly referred to as a "guitar cable") on one end, & a male USB 2.0 connector plug on the other. Plug the guitar cable into your guitar, plug the USB end into the female receptacle on your Rocksmith compatible system of preference (I like to call this "jacking in"), & boot up Rocksmith. A Realtone cable is essentially a USB guitar cable (a readily available 3rd party item), but there is a proprietary copy protection type box device, that prevents Rocksmith from functioning without an authentic Realtone cable. I have heard about custom hacked dynamically loadable library files (.DLL files) that allow the use of USB guitar cables in Rocksmith, but I use an authentic Realtone cable.

In the newest version of Rocksmith there are many modules to keep a guitar player (or bass guitar player) busy for the rest of their life. "Amp" mode, where one can experiment like a rock'n'roll mad scientist, configuring combinations of amps, pedals, even virtual speaker emulation (a 15" speaker has more bass frequency than a 10" speaker, & Rocksmith knows this). Once a compelling filter for the guitar to sound like has been achieved, one could venture into "Session" mode, where a virtual jam session can be started up, allowing for drums, bass guitar, & even another guitar player to provide a platform for one to "noodle around" on top of. Perhaps after this, "Lesson" mode could be activated, where videos describing various techniques can be watched. One could sit back & "load a bowl" at this point, & "zone out"..... But rather than grabbing the bong, I would recommend to continue holding onto that guitar, & following along with the lesson vids, attempting the methods performed before you. After learning a few techniques, one could attempt to perfect those techniques in the many "Arcade" games Rocksmith has to offer. Games that focus on "chords", "volume control", "fret" & "string" accuracy, "scales", & "slides", are a very rewarding, & perhaps overlooked feature, that can actually contribute to a guitar players skill level (games get you XP, IRL. Quickly. Whoa!).

ATTENTION PLEASE: Now we shall talk about "Learn A Song" mode. This mode appears like a Guitar Hero®/Rockband® session at first glance. On

second glance, it's is easy to ascertain that right before your eyes is actually a moving digital representation of guitar "tablature", flying towards you like a speeding train (just like Guitar Hero/Rockband!). Rocksmith comes with a library of songs built in, that can be played at varying skill levels represented by percentages. With the "auto-level up" setting bit flipped, one can start at 0%, & after several play throughs, be at 100%. (& then she started playing "Blitzkrieg Bop" all the time, joined a band, & we never heard from her again.")

A Rocksmither could even raise there awareness to 200% once the song has been memorized, & played with minimal assistance/cues in "Master Mode". I would recommend doing this before playing a cover song at a gig, but that's just a recommendation, not a requirement (maybe play it for grandma first?).

After a satisfying score has been thrown down, an insecure/competitive gamer could put their chops to the test by comparing their score to others on the online "Leaderboard" through a round of "Score Attack", available in easy, moderate, hard, & master modes. This is not necessary, as guitar playing does not need to be competitive to be enjoyed. In fact, many guitar players refuse to judge guitar mastery through any kind of measurement system. With that said, the gamer in me is never satisfied until I achieve the #1 spot on the leaderboard (foamyandsmokey on Xbox Live!) so I don't even bother unless confident I can wail. Perhaps I have an unfair advantage, in that I have experimented with various pickup switch settings (there a 5 selections on my American Standard Fender® Stratocaster®), & various tone/volume knob settings, & have gained acute awareness of preferred combinations to utilize, achieving maximum points for note accuracy (I noticed sometimes I did not get credit/score points for hitting the correct notes, & that pissed me off so bad I went OCD). Now that I have shared that knowledge, my conscience is clear. Be sure to figure out your tones before you compete against me. One could also cheat, by using a digital audio workstation (DAW) such as Audacity, & create a perfectly sequenced track to play through the Realtone cable (just like holding up a microphone to the speaker during karaoke mode on Guitar Hero or RockBand), but I have never, EVER! ranked on an online leaderboard through cheating. (one time in typing class I wrote a macro in Windows Recorder to type the alphabet backwards in < 2 seconds to impress chicks, but that's it! I don't cheat!) & I recommend you never cheat. Because once a person cheats, any achievement they make in life will be assumed by others to be fake. Cheating is easy to detect, by people, & algorithms. Whoa, it's dizzying up on that soapbox, where was I? Oh yeah! Learn A Song mode.

Let's assume, for the sake of continuing the pace of this primer, that after a span of time has passed, that our hypothetical Rocksmither has exhausted the library of songs provided with the retail copy of Rocksmith. Every song is at 200% completion, photographically memorized note for note, chord for chord. What now? Well, all versions of Rocksmith have DLC (downloadable content) available for a fair

price (usually \$2.99 USD per song) through the usual online software dispensaries (Valve® Software's Steam®, Xbox Live®, PSN®). One particularly well priced option is the "Compatibility Kit" that imports all of the original songs from the first Rocksmith, released in 2012. The songs in this package, & all available DLC, is well indexed online, including on Wikipedia. Obviously, the online leaderboards are not as populated with other players scores, since not every player bothers with DLC, but aside from that, everything is the same as the built in songs. I have purchased hundreds of dollars worth of DLC for my Xbox 360, which I started to regret. Whenever a "Red Ring of Death" claims the life of one of my 360s, I rip it apart & attempt to fix things, but most of the time I fail. The few times I succeed in resuscitation, it's usually just a matter of time before the red lights come back, or something else like a laser pot needs tweeking, & I end up just getting a new 360. When this happens, a license transfer must occur, in order to use all content purchased, or licensed to the previous console. License transfers have a limit on how many times a year they can be issued (I think it's every 6 months) so if a few systems die on you during a year (happens a lot to used/ refurbished systems) things can get complicated (you can start to feel very ripped off). If the "new" console is always connected to Xbox Live, this is not an issue (the DLC can be authenticated). But during periods of no internet access (times when you really NEED things like DLC to pass the time, waiting to save enough money to pay the internet bill) you're just totally screwed. SOL. Up the creek. Taking it in the...

Anyways! It was during a period of time like this, that I learned I could play Rocksmith on my mid 2014 MacBook Pro 13" Retina running OS X Mavericks release, using the Realtone cable I already owned (the breakaway Xbox adapter, didn't matter, much like the way an Xbox controller can connect to any computer). After obtaining a code from MacGameStore for \$12.00 USD (\$48.00 dollars less than the retail price, & the price Steam wanted) I started the download from my temporary public WiFi connection. While the bits trickled down the invisible wire, I investigated the differences between the console versions, & the computer versions. I quickly found out that the Mac version of Rocksmith, & the Windows version were easily modifiable, offering a whole new World of possibilities to a broke ass like me. Having already spent a small fortune on Xbox DLC, I felt completely justified in fooling around with copyrighted materials, knowing full well that recording artists, record labels, Ubisoft programmers, & even Microsoft, had been compensated already (sorry Valve! But hey, I didn't use Steam's bandwidth for the DLC, so no harm no foul). Apparently, purchasing Rocksmith on Steam (and just about any game) grants access to both Mac & Windows version of titles, but at the time, I didn't have a license for Windows, so I didn't have Bootcamp® installed, so I completely focused on Mac. My girlfriend at the time was annoyed by my lack of attention/conversation, but I asked her to chill & go BitTorrent some videos to watch while we actually had

internet access (I only suggested it cuz she already had the habit), & I'd give her all the attention she needed later (she new she was hooking up with a rocker nerd when before we even banged, & having a hacker babydaddy ex, she knew what she was getting into). All I had to do was 1) purchase one song, in order to have a valid license that could be spoofed from now on by other content, 2) obtain & run a program called "RSInjector". This application contains a dynamic library file called "RSBypass.dylib" that in a nutshell, acts as a man in the middle allowing "Rocksmith 2014.app" to run & load any ".m_psarc" files (instead of ".p_psarc files" which operate in Windows) contained in a directory stored in the "~/Library/Application Support/Steam/SteamApps/common/Rocksmith2014/dlc" folder, 3) & finally just obtain some songs to copy into said dlc folder. The instructions for Windows are even easier. All that is required is obtaining a file called "D3DX9_42.dll" (merely a special DirectX 9 library modified to allow the loading of CDLC, with spoofed license data), copy it to the folder containing Rocksmith 2014.exe & it's ready to go. The following are the instructions most people go by to do what was just described:

How to Use Custom DLC (cDLC) on Mac

Here are all the steps:

- 1 Your user account needs to be an Administrator account.
- 2 You need to enable third-party apps. Open System Preferences, click on "Security & Privacy", and on the General tab under "Allow apps downloaded from", choose "Anywhere"
- 3 Download and install Steam. It must be installed in the default location.
- 4 Purchase and download Rocksmith 2014.
- 5 Purchase the Smashing Pumpkins "Cherub Rock" DLC for Rocksmith 2014. You must buy it, so that it is licensed to you. You can purchase a different RS2014 DLC if you want, but using Cherub Rock is the easiest as that is the default AppID used by most cDLC's here. If you choose to purchase dlc other than Cherub Rock, it must be RS2014 dlc. Purchasing original Rocksmith 1 dlc will not work. You will also have to use the RS Toolkit to change the AppID of each cDLC that you download to match the official DLC that you purchased. This is why buying Cherub Rock is recommended.
- 6 Download RSInjector from this site (here is the link: <https://www.dropbox.com/s/.../jector.zip?dl=0>)
- 7 Place RSInjector in your Apps folder (it can actually be anywhere, but you might as well keep all your apps in one place)
- 8 Download the customs you want. Make sure they end in ".m.psarc". If they end in ".p.psarc" they are PC only versions and will need to be converted with the Toolkit. I'll put instructions for that down below.
- 9 Place the customs in the dlc folder. The location is: ~/Library/Application Support/Steam/SteamApps/common/Rocksmith2014
 - It is a hidden folder, so the easiest way to find it

is to open Finder, and using the "Go" menu, select "Go To Folder" and paste the location in there. You can then drag the dlc folder to your sidebar to create a permanent link.

- You can also find the folder by opening Steam and going to your games library and right-clicking on Rocksmith 2014, and choosing "Properties". Select the "Local Files" tab and click on "Browse Local Files"

10 Open Steam, but DO NOT launch Rocksmith 2014.

11 Launch RSInjector, which will automatically launch Rocksmith 2014.

12 Say goodbye to your family, friends, and free time. You won't be seeing any of them for a while.

These CDLC cracks can be performed on console gaming systems as well, but due to the fact that jail breaking techniques must be used in order to achieve what has been described, I will leave it up to you to investigate these methods, as I do not personally condone jail breaking, not do I want to be blamed for the repercussions one could face as a result of doing so (bricking your system, getting banned from online services, etc). DO AT YOUR OWN RISK! (plus that would be beyond the scope of this tutorial).

I personally do not feel like a genius computer whiz for having accomplished this trivial hack. On the contrary, I feel like an idiot for not having done it sooner. But, if I had done this sooner, I might have been tempted to never purchase any DLC, which is a total dick move. I still purchase DLC for my Xbox, especially for recording artists I truly appreciate, & support. I like to believe, that Ubisoft could fix this crack at any point, by implementing a "phone home" method, or any number of copy protection schemes. But rather than using intrusive countermeasures to limit their faithful users, they allow a modding community to exist, & thrive (that & they probably continue to sell more copies & make even more money allowing us to continue). They can also see what is, & what's going to be popular DLC to offer. I played CDLC for Bad Religion, way before I purchased their songs legitimately in Rocksmith (just recently became available). Of course these are just my speculations. I have attempted to get opinions from Ubisoft programmers on the subject, using social media, but they usually stop replying to me after such inquisitions (LOL).

So now that we have a fairly complete understanding of the offerings Ubisoft has supplied the guitar playing World, let's speak about the offerings that the CustomsForge community has offered to the Rocksmith World. Currently there are 22,708 downloadable .psarc files indexed on <http://ignition.CustomsForge.com>

The site has grown by at least 5,000 songs since I joined, & continues to grow. Before CustomsForge was established, psarc files were already being exchanged through the traditional underground means of transmission (still are, & still would be if CustomsForge went away). In fact, CustomsForge does not literally store any files of a

copywrited/copy-written nature, merely pointers (hypertext URL links) to web based file-sharing sites that contain them. CustomsForge does store/host/contain a social network of Rocksmith enthusiasts that participate in various ways such as forums, tutorials, psarc file creation, psarc file leeching, etc. I am primarily a leech, & a lurker. I live an unstable lifestyle, that could be easily taken away from me at any point, if I were to get into trouble. Some folks can afford lawyers, I cannot. Some people are good at crowdsourcing/fundraising (for lawyer support) I am not. Some people feel they have nothing to lose. Also, I say crazy things! So when I do communicate, I try to be meaningful, & with thoughtout ideas/questions. Usually my questions either get answered, or haved already been answered (learned this 20 years ago in the alt.2600 FAQ! Asking stupid questions like "How do I hack?" is for n00bs, lamers, posers, & narcs). Sometimes I attempt to solve unanswered questions for people, when all replies have been from know-it-all d*cks, & as*h*les, proclaiming "that's impossible!". Luckily however, those types of people are slowly becoming extinct (accept on microsoft.com forums) & virtually do not exist on CustomsForge. Whatever the case may be, the guitar wielding Bodhisattvas of the World have decided to contribute, & devote, their skills, & time, to converting sheet music/tablatore to psarc files, or even figuring songs out manually through "playing by ear". As a result, these friggin' geniuses provide leeches like me a few minutes of nirvana, figuratively, & sometimes literally (RIP Kurt!) by letting me experience my favorite art-form firsthand. Tho I am capable of playing rhythm guitar, & bass by ear, detecting the minute intricacies of fast tempo leads & fills is a real challenge, & sometimes impossible for me to figure out by ear. Plus, having a guide to follow gives me confidence (even if the guide is incorrect).

Guitar playing (like many things) is about confidence. When a person performs a task with confidence, the task will usually, more than likely, get executed smoothly. Confidence helps to free one of jitters, stutters, hiccups, flubs, blunders, bumbles, etc, & other such side effects of insecurity. That's why they say chicks dig confident guys, & can tell the difference. Now tho, people have learned being quirky gives people character. Quirks make the World interesting, & people more relatable. If you see me on stage, "butchering" a song, I'm probably doing it on purpose. Confidently! When I butcher a song, it's either because I'm drunk (got that way on purpose!), or because I haven't devoted my entire life to perfecting that song. Just like at a karaoke bar. At a karaoke bar, people have fun wether they can sing perfect pitch in seven octaves, or not. I give people props for picking good songs, for having "tastes". I also give people props for good energy/vibes. If somebody gets up & sings some opera song perfectly while just standing there, I might say to myself "Wow, that person must be classically trained." but I will probably not talk to them, & probably forget about them tomorrow when I wake up sober. But! I will remember the black chick that sang Radiohead's "Creep" amazingly, as well as the white hesher dude that

rocked the house on Rage Against the Machine's "Bulls On Parade" at the top of his drunken lungs the next day, & maybe the rest of my life (at least as long as this article reminds me of them!)

Developing personal style makes life funner, easier, & more memorable, & playing the guitar totally helps, pretty much forces one build style. Do you strum your strings? Or do you perform Pete Townshend style windmills? Do you stand there? Or do you kick around the stage like Chuck Berry? Do you hold your axe up high to jam? Or do you let it hang like Joan Jett? Do you hack with perfect posture & spastic keystrokes? Or do you hunch over like a predator, blasting out characters to the rhythm of your earbuds? You tell me Brah. Bruh. Bro. Brother.

So now that we have gone over some business, social, & personal discussion, let's get back to some technical data.