

PinballControllers.com Forum

Pinball => User Projects => Earthshaker Aftershock => Topic started by: ScottD on December 14, 2013, 11:01:16 AM

Title: **Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 14, 2013, 11:01:16 AM**

(<http://www.pinballcontrollers.com/forum/index.php?action=dlattach;topic=1001.0;attach=2112;image>)

Hey Everyone!

I finally got around to starting my Earthshaker Aftershock Project. Below are a few sections outlining the project.

Overall Goal:

The plan for this project is to redo the entire code for Earthshaker and take advantage of its great playfield layout. As we all know Earthshaker is a great game as it sits, but I feel it could be so much more.

Software:

I will be adding all new mini-modes along with new audio and display interaction. I will keep the game easy to understand for novice players and deep enough for the most experienced.

I have decided to share the code for this project in case anyone is interested.

You can find it at the code at the github repository below:

<https://github.com/scottdanesi/earthshaker-aftershock>
(<https://github.com/scottdanesi/earthshaker-aftershock>)

Hardware:

I have in my possession Earthshaker prototype #2 (at least most of it) and I will be using that machine for my software re-write. I do not plan on adding a DMD, I will be using the stock Alphanumeric displays (Thank you Jim). I have also acquired one of Mark's System 11 P-ROC interface boards! This project is going to be great.

Here is a checklist of hardware parts that I needed to install into my Earthshaker (estimated prices in USD):

- P-ROC - \$329
- Mark's System 11 Interface Board - \$225
- Jim's Alphanumeric Interface Board - \$80
- Computer - ~\$400
- Windows 7 OS - \$100
- Audio Amp - \$30
- Scott's CSSC - \$60
- Stern Autolaunch Mech - \$60
- Misc cables and wiring

Total - ~\$1,284

I will be posting updates here throughout the project and updating this first post with more info along the way. I hope to have something for Expo this year! Let me know if you guys have any questions or suggestions. I am always open to feedback (positive or negative).

Latest Gameplay Video:

<https://www.youtube.com/watch?v=4Bznd4Y4qIE> (<https://www.youtube.com/watch?v=4Bznd4Y4qIE>)

High Score Entry Demo:
<https://youtu.be/xjjRqHKQmxg> (<https://youtu.be/xjjRqHKQmxg>)

Special Thanks:

Mark S
Jim Askey
Koen Heltzel
Everyone on the PinballControllers Forum

Thank you,

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 14, 2013, 11:22:31 AM**

So here is the first update!

I have the hardware all squared away. I have installed Mark's System 11 Interface board and Jim's Alphanumeric display driver. The P-ROC is in place and the machine is happy.

I am currently working on getting the machine flipping, which should be very soon. I am just creating some test code to runt he hardware through it's paces to make sure everything is functioning the way it should. Then it is time to map out what the game structure will look like.

Talk to you guys soon!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **December 14, 2013, 12:27:56 PM**

Nice. Looking forward to watching your progress.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 14, 2013, 01:00:13 PM**

Quote from: bonnevil69 on December 14, 2013, 12:27:56 PM

Nice. Looking forward to watching your progress.

Thanks Matt! I actually have the game flipping and lighting up stuff now. I am just trying to get the display working correctly before I shoot a video of the progress. At this rate, I will definitely have something for Expo 2014. :)

Hope you will bring your machine again too as I want to see what you have done.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **December 15, 2013, 11:17:42 AM**

Nice. That was my favorite part. When i actually found that it wasnt an impossible feat. Lol. Is this your first P-roc project on your own?

Yes ive been working on tons of new stuff. Fixed just about all the problems i was having and added a few new problems. Lol. Yeah i will definitely take it to expo again as long as Gerry will have it again

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 15, 2013, 03:23:59 PM**

Hey Matt,

Yeah I definitely agree. Seeing the machine come to life is really a great feeling. This is my first solo "ground up" p-roc rewrite project. I am very excited to start sharing the code and getting this thing fully up and running.

Can't wait to see Deadpin at Expo 14! Seems like it is really coming along.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 15, 2013, 03:29:27 PM**

Hey Everyone! I have an official update on the Earthshker Aftershock project. I have successfully tested all the hardware with a very simple demo game. This game has just basic functionality and is able to test all the different parts of the hardware in the machine. I have also implimented a VERY basic attract mode lightshow which I will share at the end of this post.

Here is a video of the demo game in progress:

<https://www.youtube.com/watch?v=0QBQ4Bh6wDQ&feature=youtu.be>
(<https://www.youtube.com/watch?v=0QBQ4Bh6wDQ&feature=youtu.be>)

Here is the code that I wrote for my attract mode (only 11 lines!!!)

Code: [\[Select\]](#)

```
i = 0
for lamp in game.lamps:
    if i % 4 == 3:
        lamp.schedule(schedule=0xf000f000, cycle_seconds=0, now=False)
    elif i % 4 == 2:
        lamp.schedule(schedule=0xf000f000, cycle_seconds=0, now=False)
    elif i % 4 == 1:
        lamp.schedule(schedule=0x00f000f0, cycle_seconds=0, now=False)
    elif i % 4 == 0:
        lamp.schedule(schedule=0x000f000f, cycle_seconds=0, now=False)
    i = i + 1
```

Feel free to use this code if you want. I find it great for testing out my yaml file and to ensure all my lights are working properly.

Please let me know if you have any questions or feedback. Talk to you guys soon!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Snux** on **December 16, 2013, 03:04:28 AM**

Hi Scott,

Good to see you're up and running, welcome to the niche that is System 11 P-ROC!! I'll be keeping a keen eye on progress.

Mark

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 23, 2013, 09:04:10 AM**

Thanks Mark! I am currently restructuring how I organize my modes, but should have an update within the next week. The game is coming along nicely.

I have some basic code shared up on github at the moment. As it sits, it only plays 1 ball and 1 player. I have yet to write any of that stuff yet since I am still just trying to test everything out and get the hang of the AC relay and the Alpha Display.

Here is the link to the github repository:

<https://github.com/scottdanesi/earthshaker-aftershock>

If anyone has any suggestions for how I can better my code or structure, please let me know. I am very receptive to feedback, positive or negative. :)

Thank you!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **December 24, 2013, 05:39:04 PM**

Test looks good Scott. Coming along nicely. Great to see another alphy sys 11 project spring to life.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 24, 2013, 09:30:13 PM**

Thanks Jim,
I think we can eventually make these old alphanumeric displays do some pretty cool stuff. I am thinking about trying to make it do a pulse width modulation in order to fade the text on the display.

Thanks again!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Gerry Stellenberg** on **December 24, 2013, 09:38:56 PM**

Scott, alphanumeric.py
(<https://github.com/preble/pyprogame/blob/master/progame/alphanumeric.py#L80>) code supports an character intensities for brightness control of each digit. Does that work on the sys11 displays? If so, higher level fade routines should be pretty easy.

It's been a *very* long time since I wrote that code, but it looks like you send in lists of percentages ($0 \leq \% \leq 1$), where each item in the list corresponds to a display digit.

- Gerry

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 24, 2013, 09:48:05 PM**

Hey Gerry,
Thanks for the heads up on that! I was going to try and force a PWM, glad you responded before I went that route. :)

Side question: In your alphanumeric code, I noticed that a few key characters are not accounted for in the asciiSegments list (see below). I do not know too much about how this is handled yet, but is there an easy way to include characters like ">" and "|"? What about custom defined characters configured by segment?

Code: [\[Select\]](#)

```
asciiSegments = [0x0000, # ' '
                 0x0000, # '!'
                 0x0000, # '"'
                 0x0000, # '#'
                 0x0000, # '$'
                 0x0000, # '%'
                 0x0000, # '&'
                 0x0200, # '''
                 0x1400, # '('
                 0x4100, # ')'
```

```
0x7f40, # '*'
0x2a40, # '+'
0x8080, # ','
0x0840, # '-'
0x8000, # '.'
0x4400, # '/'

0x003f, # '0'
0x0006, # '1'
0x085b, # '2'
0x084f, # '3'
0x0866, # '4'
0x086d, # '5'
0x087d, # '6'
0x0007, # '7'
0x087f, # '8'
0x086f, # '9'

0x0000, # '1'
0x0000, # '1'
0x0000, # '1'
0x0000, # '1'
0x0000, # '1'
0x0000, # '1'
0x0000, # '1'

0x0877, # 'A'
0x2a4f, # 'B'
0x0039, # 'C'
0x220f, # 'D'
0x0879, # 'E'
0x0871, # 'F'
0x083d, # 'G'
0x0876, # 'H'
0x2209, # 'I'
0x001e, # 'J'
0x1470, # 'K'
0x0038, # 'L'
0x0536, # 'M'
0x1136, # 'N'
0x003f, # 'O'
0x0873, # 'P'
0x103f, # 'Q'
0x1873, # 'R'
0x086d, # 'S'
0x2201, # 'T'
0x003e, # 'U'
0x4430, # 'V'
0x5036, # 'W'
0x5500, # 'X'
0x2500, # 'Y'
0x4409, # 'Z'

]
```

Thanks Gerry,

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Gerry Stellenberg** on **December 24, 2013, 10:20:19 PM**

It's been forever since I've looked at that code; so I'll mostly leave it up to you to decipher. What I do remember after a brief look through it is...

The characters passed in through 'input_strings' are indexes into the asciiSegments list, which is simply ordered exactly like a standard ASCII table (search the internet for ASCII table). asciiSegments starts with ascii char 0x20 (space) because that's the first human readable char in the ASCII table. So any character not present can be added... just find your char in an ASCII table, and add it to the list in the right position.

The values in asciiSegments are such that each bit in the 16-bit value correspond to one line segment in the alpha display digit. With a bit of trial and error, or by deciphering the other characters, you should be able to figure out what you need.

- Gerry

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **December 25, 2013, 07:53:45 AM**

I wrote a simple spreadsheet for playing around with the segments. I actually did it for the 7 segment displays in my F14 but you could probably take the idea and expand it for the bigger displays.

You just put a 1 or a 0 in each of the "segments" in the spreadsheet, it'll then work out the appropriate hex value...

Mark

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 25, 2013, 01:59:34 PM**

Mark,

This is awesome! Thank you for sharing. I have recreated the spreadsheet into 2 new 14 segment reference documents. The first tab will allow you to create custom digits and convert them to Hex for us. The second tab will allow you to enter a Hex code and will create the digits for you to verify. Please see the attached document.

I am still having a problem with this doc as I think I have my segment mappings are incorrect. I have also attached a reference document that I started using for the segment mapping, but ended up changing it since G1 and G2 do not look to be handled the same way. I was entering in hex codes from Gerry's Alphanumeric display file and trying to ensure that they worked properly, so I had to reverse engineer the segment mappings to make them more accurate to what I was seeing in Gerrys hex codes, but cannot seem to figure it out completely.

Would you mind taking a look at the doc and seeing if there is anything obvious that I am missing here?

Code: [\[Select\]](#)

These Hex Codes Work:

```
0x0877, # 'A'  
0x0039, # 'C'  
0x220f, # 'D'
```

These Do Not Work:

```
0x2a4f, # 'B'  
0x5036, # 'W'  
0x5500, # 'X'
```

There looks to be a "segment P" that gerry's codes seem to be using instead of the segment that I have marked as "G". Very strange.

I do not have the machine with me as I am out of town at the moment, so I cannot test until I get home.

Thanks guys!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **December 25, 2013, 03:46:05 PM**

I didn't have time to check your spreadsheet yet, but I know about segment 'P'. Attached is a screen grab from the Sys11 manual showing how Williams labelled the segments... maybe that helps already?

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Gerry Stellenberg** on **December 25, 2013, 03:49:21 PM**

You can always edit alphanumeric.py temporarily, replace some of the entries with single bit entries, and see which segments light up. :)

Sorry I didn't document the segment map when I created it. :(

- Gerry

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 25, 2013, 04:21:00 PM**

Quote from: MarkS on December 25, 2013, 03:46:05 PM

I didn't have time to check your spreadsheet yet, but I know about segment 'P'. Attached is a screen grab from the Sys11 manual showing how Williams labelled the segments... maybe that helps already?

Thanks Mark! I will update my template with the proper labels and test each segment out manually once I get back home. Hopefully this tool will be helpful for others that are creating Alphanumeric P-ROC projects as well.

Thanks again guys,

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **December 26, 2013, 03:32:13 AM**

With a slightly longer term view, maybe hooking up with Mr WOOLY and extending what he's thinking about over here might be a better solution...

<http://www.pinballcontrollers.com/forum/index.php?topic=1004.0>
(<http://www.pinballcontrollers.com/forum/index.php?topic=1004.0>)

A tool for developing "graphics" more easily on these displays would save a lot of time I guess.

Mark

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 26, 2013, 10:57:54 AM**

Quote from: MarkS on December 26, 2013, 03:32:13 AM

With a slightly longer term view, maybe hooking up with Mr WOOLY and extending what he's thinking about over here might be a better solution...

[url]<http://www.pinballcontrollers.com/forum/index.php?topic=1004.0>[/url]
([url]<http://www.pinballcontrollers.com/forum/index.php?topic=1004.0>[/url])

A tool for developing "graphics" more easily on these displays would save a lot of time I guess.

Mark

That is too funny, I already started building this utility as well. I will reach out to him and see where he stands on the project. Thanks Mark,

Title: **Re: Earthshaker! Aftershock Project**
Post by: **s1500** on **December 26, 2013, 01:15:17 PM**

Hey that's me!

Yeah, work has been slow recently, and when it wasn't, I couldn't use my main computer. So I was able to do some more hacking on my alphanumeric editor app in C#. Learned a lesson that it was super-easy to break your app.

If you tell me what the segments translate to, I can have it spit out the appropriate string to copy & paste into your PROC code.

My next feature for the app is to have multiple frames.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 26, 2013, 05:47:21 PM**

Awesome! I will be mapping it all out within the next few days. Thanks Mr. Wooly!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 26, 2013, 06:10:54 PM**

Hey Everyone,
Jus tthought I would give you a little update as to where I am at on the project.

Hardware Update:

I just finished installing my audio amp and smart surge protector. But that is not too interesting. The most interesting thing that I figured out how to install was a Stern Autolauncher! I was able to make it fit pretty easily. Check out the attached pictures.

I now need to figure out how to connect it to the extra coil hookups I have on Mark's System 11 Interface Board. :)

I have also ordered my DS-61 dedicated computer for the machine. I will be installing that along with one of my CSSC controllers within the next few weeks. Good riddance development laptop!

Software Update:

I have successfully created some test code that allows me to just get the game up and running. I will be starting to make major updates as soon as I get all the hardware squared away.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Nelly** on **December 26, 2013, 08:23:32 PM**

Hey Scott, did you have to piece that auto launcher together, or were you able to find a complete assembly? I am looking to add one to the Buffy pinball.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **December 26, 2013, 08:52:58 PM**

Hey Dave,
I was able to find the whole autolaunch assembly from a nice guy from MN. It was the complete assembly from Stern. Marco has them in stock again, but they are pretty expensive...

<http://www.marcospecialties.com/pinball-parts/500-6091-00>

(<http://www.marcospecialties.com/pinball-parts/500-6091-00>)

Let me know if you have any other questions.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **bonnevil69** on **December 26, 2013, 10:43:46 PM**

If there is one thing i love on a pinball game its the autolauncher. Shooting out random crazy multiball modes. Just good fun. Nice job on your install Scott

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 26, 2013, 10:59:19 PM**

Quote from: [bonnevil69 on December 26, 2013, 10:43:46 PM](#)

If there is one thing i love on a pinball game its the autolauncher. Shooting out random crazy multiball modes. Just good fun. Nice job on your install Scott

Thanks Matt! I agree about the autolauncher, I am also very glad I can use physical locks combined with virtual locks now. Can't wait to show you guys this project at Expo next year. I am also looking forward to how Deadpin is coming along.

Talk soon,
--Scott

Title: **Re: Earthshaker! Aftershock Project**

Post by: **bonnevil69** on **December 27, 2013, 12:46:35 AM**

Yeah I need to get in the habit of keeping my progress up to date its not the same game that was at expo so many things have been changed

I am looking forward to seeing and playing your machine keep up the good work

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Snux** on **December 27, 2013, 02:20:51 AM**

Ooooooh. When I was looking at an autolaunch on my F14 I discounted the Stern assembly as part of the baseplate doesn't get attached, but my current solution isn't very pretty. But from your pictures it seems that having the bottom end of the baseplate just floating in the air doesn't really matter. Does the manual plunger still work OK? Do you get a real good strong kick from it? I see you need to get the ball to the top right of the playfield on Earthshaker. In F14 it needs to travel up a ramp all the way to top left of the playfield so needs quite a shove.

Regarding using the extra drivers I've replied to your email. I'll get the solution documented properly soon :)

Mark

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 30, 2013, 09:40:36 AM**

Hey Mark,
Sorry for the late reply. You are correct about the base plate on the autolauncher mech. Since I do not want to cut my playfield, I have to leave these 2 screws out. There are 3 screws in the front that hold this thing to the playfield and are definitely strong enough. The original shooter still works great the way it is. I am using a 23-800 coil on the shooter and it

has definitely enough power to kick the ball pretty hard. I am still working out if this is the best coil for my application, but am trying to figure out why I cannot get my extra solenoids to work on my Sys11 interface board. :) You should be able to kick the ball up a ramp and over with a 23-800 coil. But you could always modify it by removing some of the windings to make it much more powerful. :)

Talk soon!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 30, 2013, 09:45:00 AM**

UPDATE:

I have successfully configured my new Shuttle DS-61 v1.1 computer and converted my Earthshaker project over to Windows. I am much more in my element now with this OS. I got the computer mounted and PinMAME running!

Now onto creating real code for the Aftershock project!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **December 30, 2013, 02:52:33 PM**

Nice autolauncher. I think all games should have one of these!. Will be adding to my whirlwind project to. Its especially nice to add the one you have, as you can keep the game stock or enable the extra functions. Settings a-plenty!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **December 30, 2013, 03:10:22 PM**

[Quote from: myPinballs on December 30, 2013, 02:52:33 PM](#)

Nice autolauncher. I think all games should have one of these!. Will be adding to my whirlwind project to. Its especially nice to add the one you have, as you can keep the game stock or enable the extra functions. Settings a-plenty!

Thanks Jim! The Stern Autolauncher should fit just fine on your machine too. I had to move the bracket for the shooter lane switch to the other side as you can see in the picture. You will also need to obviously break off the tab from the shooter housing front so the autolauncher can actually launch the ball. :)

Let me know if you guys have any other questions.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **pimseb** on **January 09, 2014, 02:45:03 AM**

Hello,

As an Earthshaker owner, I'm very happy to see that you are working on this project. It will give a new life to my pinball :)

I don't know anything about coding so I'm gonna be only an end-user ...

Do you already have some ideas about the new rules you want to add to the game ? Do you think it would be possible to have more balls than 3 for multiball ? One thing I'd like to be added is to get a new ball when you lose it fast.

How long do you think it will take to achieve this project ? :D

Thank you

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **January 09, 2014, 08:50:33 AM**

Hello,
Welcome to the P-ROC forums!

Are you also planning on installing a P-ROC in your Earthshaker? I do offer my code for free for others to use, but I never thought of another person attempting to do exactly what I am doing to this machine. :) I feel like I am a little crazy for tackling this project. Both because of cost and complexity.

Before you begin, I would recommend taking a look through the Wiki here:
http://pinballcontrollers.com/wiki/Main_Page (http://pinballcontrollers.com/wiki/Main_Page)

This will get you familiar with how the P-ROC interfaces a computer to a pinball machine.

The next thing you will need to do is start acquiring parts to get your machine ready for the P-ROC.

Here is a checklist of hardware parts that you will need to install into your Earthshaker (estimated prices in USD):

- P-ROC - \$329
- Mark's System 11 Interface Board - \$225
- Jim'a Alphanumeric Interface Board - \$80
- Computer - ~\$400
- Windows 7 OS - \$100
- Audio Amp - \$30
- Scott's CSSC - \$60
- Stern Autolaunch Mech - \$60
- Misc cables and wiring

Total - ~\$1,284

I will not be creating any kits for Earthshaker as this is a hobby project of mine. My code is posted for others to read and use as they see fit.

I have not thought too deeply into what the different modes will be in my game yet as I am trying to ensure that everything is up and running properly in my machine. Currently I have a software shell built that provides the game basic functionality like flipping, scoring, ball saver :), and attract mode. Once all of my hardware is tested out and working great, I will be concentrating on more of the modes. I am not going to add more balls to the game than the 3 that are already in there. In my opinion, the playfield is too crowded for a 4 ball multiball anyway. :)

As for timeline, I will have something to show by Expo 2014, but I think the project will be ongoing for a long time after that since I already have a full time career and other projects going on. :)

Let me know if you have any questions. And again, welcome! Thank you,

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Nelly** on **January 09, 2014, 09:02:10 AM**

\$400 for a computer? Is W.O.P.R running the Aftershock project? ;)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 09, 2014, 09:14:13 AM**

HAHA! I am running a Shuttle DS-61. I chose that since it is pretty small, very powerful, and I can utilize it for other projects if I get something less powerful installed in Earthshaker. It is

the same computer that is running in my Bride 2.0. I have not experimented with smaller form factor computers at this time running Windows 7.

In fact, I am going to do a search now on the forums to see what you guys are using. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **myPinballs** on **January 09, 2014, 09:17:12 AM**

Quote from: ScottDanesi on January 09, 2014, 08:50:33 AM

I feel like I am a little crazy for tackling this project. Both because of cost and complexity.

Crazy projects are the best ones :) :) The more the merrier i say! Speaking of which i must have a go at p-roc ing an 80s Bally at some point to!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 09, 2014, 09:21:21 AM**

Quote from: myPinballs on January 09, 2014, 09:17:12 AM

Crazy projects are the best ones :) :) The more the merrier i say! Speaking of which i must have a go at p-roc ing an 80s Bally at some point to!

Give me time to finish up Earthshaker and I will join you. I have a Dolly Parton that is begging for a P-ROC. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Nelly** on **January 09, 2014, 09:29:21 AM**

Quote from: ScottDanesi on January 09, 2014, 09:14:13 AM

HAHA! I am running a Shuttle DS-61. I chose that since it is pretty small, very powerful, and I can utilize it for other projects if I get something less powerful installed in Earthshaker. It is the same computer that is running in my Bride 2.0. I have not experimented with smaller form factor computers at this time running Windows 7.

In fact, I am going to do a search now on the forums to see what you guys are using. :)

Scott,

I am running a DS61 V1.1 as well. I upgraded to it from my Foxconn nT-535 (because the requirements of the Buffy build demanded more). The nT-535 would work great for the Aftershock project. I am about to toss it up on ebay if you are interested. ;D

That said, I still have under \$300 into my DS61 set up (pentium G860 processor, 60GB SSD, 2G RAM) and I consider it to be a bit on the overkill side. I love this thing too! It is amazingly well built and runs great!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **myPinballs** on **January 09, 2014, 09:31:50 AM**

Quote from: ScottDanesi on January 09, 2014, 09:21:21 AM

Give me time to finish up Earthshaker and I will join you. I have a Dolly Parton that is begging for a P-ROC. :)

Sound! That's the next one queued up then!! I fancy having a go updating Centaur

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 09, 2014, 09:44:32 AM**

Quote from: Nelly on January 09, 2014, 09:29:21 AM

Quote from: ScottDanesi on January 09, 2014, 09:14:13 AM

HAHA! I am running a Shuttle DS-61. I chose that since it is pretty small, very powerful, and I can utilize it for other projects if I get something less powerful installed in Earthshaker. It is the same computer that is running in my Bride 2.0. I have not experimented with smaller form factor computers at this time running Windows 7.

In fact, I am going to do a search now on the forums to see what you guys are using. :)

Scott,

I am running a DS61 V1.1 as well. I upgraded to it from my Foxconn nT-535 (because the requirements of the Buffy build demanded more). The nT-535 would work great for the Aftershock project. I am about to toss it up on ebay if you are interested. ;D

That said, I still have under \$300 into my DS61 set up (pentium G860 processor, 60GB SSD, 2G RAM) and I consider it to be a bit on the overkill side. I love this thing too! It is amazingly well built and runs great!

Hey Dave,

Thanks for the offer, but I am going to stick with the DS-61 for now as I depleted my budget already for the project. :)

I agree about the DS-61. It really is well built for industrial applications. Couple it with a decent processor and an SSD and it flies. Definitely overkill for my project, but you cannot beat the reliability. Just be very careful not to enable quickboot as it will lock you out of the re-entering the bios. This is a known issue and I was told they are going to fix it soon.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Snux** on **January 09, 2014, 09:54:15 AM**

Dolly Parton ??? Centaur sounds better ;D Flight 2000 would use the same hardware too, that would be cool.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **January 09, 2014, 10:04:00 AM**

Quote from: MarkS on January 09, 2014, 09:54:15 AM

Dolly Parton ??? Centaur sounds better ;D Flight 2000 would use the same hardware too, that would be cool.

HAHA! Dolly Parton: 3 inline drops to a standup target, pops, awesome spinner, standup target bank, great 80's playfield layout. Needs: multiball, awesome sound, new artwork, and a P-ROC. :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **January 09, 2014, 10:40:46 AM**

Quote from: MarkS on January 09, 2014, 09:54:15 AM

Dolly Parton ??? Centaur sounds better ;D Flight 2000 would use the same hardware too, that would be cool.

All sound great to me. A lot of the early 80s games had great layouts and just need some more modern rules, sounds, and of course autolaunchers, multiballs ball saves etc :) Sorry to go off topic a little here. must move this to a different thread really :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Rosh** on **January 09, 2014, 11:27:20 AM**

Centaur would be cool, but really no place that ever locks a ball, so that makes expanding it a little harder, so, not sure there is enough upside to justify the cost. Curious as to what people would do to expand (other than add a skill shot and ball save)

Still waiting for someone to do an EM, the big problem is that hardware needed would cost two or three times more than the machine would. A four player would be expensive, if it had 6 score reels (ignoring the fake one), that is 24 solenoids you need to drive the reels (assuming you kept it with score reels). Gerry, you need to get your costs down so you can lower the prices :-)

I think my CPU set up (cpu/motherboard/power supply, Solid state drive, 4gig memory, case) was about \$250. So far it is running the color stuff okay, but if I was doing it again, knowing what I know now, as far as doing color and the larger screen, I would go slightly more powerful on the CPU, but that setup was more than fast enough running a standard DMD and would obviously be more than enough for a sys11.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **myPinballs** on **January 09, 2014, 12:03:46 PM**

Quote from: Rosh on January 09, 2014, 11:27:20 AM

Centaur would be cool, but really no place that ever locks a ball, so that makes expanding it a little harder, so, not sure there is enough upside to justify the cost. Curious as to what people would do to expand (other than add a skill shot and ball save)

I've got loads of ideas for this and would like to create a pcb to interface between the p-roc and stock lamp/sol driver boards. As with my other projects i like to recreate and then add to approach with rules. There's 5 balls in it and with one of the best ball launch mechanisms out there via a secret trap door. So you could easily do a few different quick two ball multiball starts and then have add a ball for completing various shots. There's also the magnet to hold the ball. My friend up the road has just completed a playfield swap and restore on one and has mentioned i can borrow it for a year or so if i want to start the p-roc-ing. And i thought doing 2 at once was tricky whilst also working full time. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Rosh** on **January 09, 2014, 12:35:24 PM**

the magnet is totally underutilized and I guess that is a place you can lock a ball, so I take back that part of my comment.

No doubt one of the coolest auto launch mechanisms. And the attract feature of it occasionally throwing all the balls out onto the playfield was probably pretty cool in an arcade (I have it turned off since it would just wear that crap out of that part of the playfield)

since Centaur is basically 'endless multiball' if you can hit the orb targets in sequence (so that is really an add-a-ball), I'm not sure it benefits from just more multiballs . I can see maybe locking the ball at that magnet, and then giving a 'timed window to make a shot' that increases bonus or multiplier, scores a jackpot (something the game does not really have), lights an orb or starts MB. You could add a timer so that once you hit the first orb target you have a limited time to get them all before they reset.

But give me more of your ideas on how you expand the rules? Centaur is one of my favorite games, but you have not yet excited me :-)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 09, 2014, 04:13:27 PM**

To me, Centaur is an amazing game that does not need much. Sure it has 1 or 2 things that could be improved, but this is the first time I have ever said out loud, "I don't think that game

needs a P-ROC". Whoh, that felt weird...

I just think you could take something more simple like Dolly Parton, add a multiball trough and an autolauncher and have a blast coding new stuff on it.

Jim, you need to get a Dolly Parton and basque in all of its glory. Except for the art... :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **January 09, 2014, 09:50:20 PM**

Hey Everyone,

I put together a quick video of my very basic attract mode animation. I think it is pretty cool so far. Let me know what you think of it.

<http://youtu.be/SOYcEHbIPQA> (<http://youtu.be/SOYcEHbIPQA>)

Thanks!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Snux** on **January 10, 2014, 01:17:16 AM**

Hey Jim - we got our names up in lights :)

Scott - looking good. When you watch an alphanumeric game being played (plenty of vids on youtube), it's surprising how many "effects" you can make just with segments. Even in Tomcat the

- tracking across the display then getting LOCKED ON is cool.

Enjoy

Title: **Re: Earthshaker! Aftershock Project**

Post by: **pimseb** on **January 10, 2014, 02:31:22 AM**

Very cool attract mode !

I didn't know I had to buy so much things for this aftershock project. I thought you would provide a kind of kit to change the rules and make them more attractive :) Like a plug and play thing that every Earthshaker owner could install. But if it's too much complicated I can't follow you :) Anyway I will take a look at your project which I find amazing !

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **January 10, 2014, 03:18:12 AM**

Quote from: ScottDanesi on January 09, 2014, 09:50:20 PM

Hey Everyone,
I put together a quick video of my very basic attract mode animation. I think it is pretty cool so far. Let me know what you think of it.

[url]<http://youtu.be/SOYcEHbIPQA>[/url] ([url]<http://youtu.be/SOYcEHbIPQA>[/url])

Thanks!

Looking good. Nice to see another attract mode running. Loving the Earthshaker 'shock' transition.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 10, 2014, 11:28:05 AM**

Thanks guys! Right now, this Earthshaker transition is actually a test animation that I sent to Jim's scoredisplay.py class. More cool stuff to come. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 10, 2014, 11:28:56 AM**

Forgot to add to the end of my post... "ALPHANUMERICS 4 LIFE!"

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **January 11, 2014, 12:46:35 AM**

Looks great Scott :D Coming along quickly it seems

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 11, 2014, 01:10:30 AM**

Hey Matt,
Thanks! I am actually in the process of starting my code over from scratch as I want to clean it up quite a bit. The code I have built now was just a proof of concept. :) Plus my code only currently works on 1 ball for 1 player. haha

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Mark Jarzewiak** on **January 15, 2014, 11:17:03 PM**

Just came across this, very excited as I am hoping to pick up an Earthshaker soon. Just have to see about getting one of Mark's Sys 11 boards!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Mark Jarzewiak** on **January 29, 2014, 01:04:22 PM**

Nevermind my silliness, found what I was looking for...

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **January 29, 2014, 01:40:46 PM**

HAHA, no worries. What is your plan with your Earthshaker? I would love to hear what you have going. Thanks!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Mark Jarzewiak** on **January 29, 2014, 07:50:19 PM**

[Quote from: ScottDanesi on January 29, 2014, 01:40:46 PM](#)

HAHA, no worries. What is your plan with your Earthshaker? I would love to hear what you have going. Thanks!

I was looking for the autolauncher parts list. After posting and going to the master subforum for this project, there it was!

I have a DW project I meant to start then started re-thinking it. As you know I have the board on the way from Mark so I plan to build it and see what comes of your project. I also figured I'd go ahead and try to learn some python, and maybe try my hand at re-writing the DW rules

to expand to more doctors, etc. I can move the P-ROC back and forth and if both projects work out I'll get another P-ROC. I've also thought about P-ROCIing Bad Cats so the Sys 11 board will be useful no matter what.

I'm hoping that by following the progress of code, as it develops, and by that I mean your project, I'll be able to better figure out how everything works. I've only done bits of coding in CS101 classes a couple of decades ago and while I enjoy coding, I don't really remember how and I'm not familiar with python! Looking forward to getting the Sys11 board and trying the game out with pinmame. I'm currently planning to try and get pinmame running DW tomorrow, just have to make a mount for my P-ROC.

Evening edit: This game could really use a ball saver - especially during multiball. While I kinda impulse grabbed this one, the layout is pretty good. Not the most flowy, but moreso than many games in my collection. Zipping the zone 6/spinner loop several times is a rush and especially cool when you quickly knock the ball in reverse when it comes toward the upper left flipper. Sometimes a crazy shot will be realized you didn't think possible, like going up the center ramp off the upper left flipper or a wild bank shot to the shelter from the right flipper. A lot to shoot on here if you are careful but man it can get out of hand. Seems like a theme well done here.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **February 15, 2014, 07:38:42 PM**

Hey Everyone,
I know it has been a while since I posted an update, so here it is! I am still in the process of hammering out my framework for there are not many modes in play for the gameplay video below. I have, however, figured out how I am going to integrate my tilt and ball saver modes.

Enjoy!

Earthshaker Aftershock Feb 2014 Gameplay (<http://www.youtube.com/watch?v=iLmXRdY8mjY#ws>)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Steven** on **February 16, 2014, 04:06:47 AM**

Nice! I like the superskillshot and the flashing-sequence of the centre ramp.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **myPinballs** on **February 16, 2014, 06:09:47 AM**

Man, it looks sweet already. I love the tilt speech ;)

And the display looks great to :D

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **February 16, 2014, 06:45:41 AM**

Looking good! As well as the cool display, that machine must have an awesome driver board in it to work that smoothly ;)

What's the music that's playing? I like how you get the initial bass line while waiting to shoot the ball and then it kicks into the main theme once you've launched it. Is that something you made up or downloaded from somewhere?

Nice :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Mark Jarzewiak** on **February 16, 2014, 08:22:22 AM**

I immediately had to get up and play ES while watching this. While the music I think would get to be too much, I'd tilt the game just to hear her say, "What the fuck?!?". I really need my orders to get in so I can get this running on my ES.

I want to P-ROC Bad Cats now! It'll either be Badder Cats or Battle Cats.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **February 16, 2014, 08:45:47 AM**

Thanks Guys!

The music is actually a breakbeat track by a talented electronic music producer named Lee Coombs. The song is titled "Lilly in the Sky". I originally had planned to create a track myself for the shooter lane and main theme, but I am pretty rusty in that department, so I just chopped up a song that I liked into 2 parts; a main loop and a shooter lane loop. I am actually just keeping it very simple and looping the shooter music until one of the skillshot switches is hit. It will then immediately switch over to the main loop. I will probably be adding more complexity to this in the future, but I think it is good for now. I am storing these files as wav files so that they can seamlessly loop.

The vocals were all done by my lovely wife, Sara Rose. Those also need some work as I think I compressed them too much and I probably should not have added a bit of reverb on them either.

The super skillshot is actually really cool. If you shoot the ball all the way up and around the regular skillshot, the super skillshot can be collected by hitting the captive ball. This is worth 250k and a skillshot multiplier on your next ball. I like the idea of the skillshot multiplier since it gives you a little more incentive to go big. But just keep in mind, you miss it, and you get nothing. The skillshot will also stay active as long as you do not hit any switch near the captive ball indicating a bricked attempt. So you do not have to make the shot on the fly.

Thanks again for the positive feedback! I will actually have a new update soon as I just got my bonus mode and drop target mode functioning. :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Mark Jarzewiak** on **February 16, 2014, 08:52:53 AM**

If you'd like help in the music/sound department, I'd be glad to throw in there. I've got plenty of tools for that. I'm familiar, a bit, with Lee Coombs. We can also take just about anything and warp it into the right sized chunks for this. Ableton does a great job of slicing into bits that can be used the way they need to be on a pinball table, ie. switching loops instantly.

ALSO: where are the sound files/where do they go for creating a game. I see that they are not in the git and have noticed that for other P-ROC projects.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **February 16, 2014, 08:56:13 AM**

Quote from: shimoda on February 16, 2014, 08:22:22 AM

I want to P-ROC Bad Cats now! It'll either be Badder Cats or Battle Cats.

That's sounds like a fun project to

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **February 16, 2014, 09:11:22 AM**

I've never heard of Lee Coombs (I guess I'm too old, early 1980s rock is what I grew up on) but I've just been over to his website and it's pretty good. Lots of free stuff to download and I'm sure the tempo of some it could match F14 quite well. I'm about as musical as a dead cat unfortunately but I can wield something like Audacity enough to chop clips up and convert to whatever format I might need.

And a P-ROC conversion for Bad Cats? BadAss Cats?

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **February 16, 2014, 09:22:55 AM**

Quote from: [shimoda](#) on [February 16, 2014, 08:52:53 AM](#)

If you'd like help in the music/sound department, I'd be glad to throw in there. I've got plenty of tools for that. I'm familiar, a bit, with Lee Coombs. We can also take just about anything and warp it into the right sized chunks for this. Ableton does a great job of slicing into bits that can be used the way they need to be on a pinball table, ie. switching loops instantly.

ALSO: where are the sound files/where do they go for creating a game. I see that they are not in the git and have noticed that for other P-ROC projects.

Appreciate the help Mark, but I am all setup here. I have a small studio in my house as I used to produce electronic music in the late 90s and 2000's. :) If you have any suggestions on other artists I should look at, I am all ears.

The sound files are in my assets folder and will not be pushed to Github. Github is used as a source code control tool and these items do not belong on there.

Quote from: [MarkS](#) on [February 16, 2014, 09:11:22 AM](#)

I've never heard of Lee Coombs (I guess I'm too old, early 1980s rock is what I grew up on) but I've just been over to his website and it's pretty good. Lots of free stuff to download and I'm sure the tempo of some it could match F14 quite well. I'm about as musical as a dead cat unfortunately but I can wield something like Audacity enough to chop clips up and convert to whatever format I might need.

And a P-ROC conversion for Bad Cats? BadAss Cats?

I also grew on on 1980's rock! I started getting really into electronic music in the 90's though. Chemical Brothers were my first favorite electronic music producers. :)

BadAss Cats or Battle Cats, either one would be great! Would love to see these built. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Mark Jarzewiak** on **February 16, 2014, 09:52:13 PM**

I should have known you'd have that setup going.

Thinking about what would work with ES, I'd say bits and pieces of RJD2 might work. I also love Holy Fuck and think snippets of their stuff could work. There are quite a few others, including some Shackleton tracks that I think would work good as background.

Thinking about Bad Ass Cats, I actually think doing the music would be one of the toughest parts. I'd love to add more cool call outs and possibly even MB the game, even with two-ball multiball.

I'll be drawing up some ideas. For now though I've been giving more and more thought to my DW rewrite. I really need to get the P-ROC in the machine, get pinmame going so I can still play, but also get to writing new rules.

I was partly wondering about sound because once my alpha board gets here, I'd like to start

using the ES rewrite you are doing. I plan to spend some time investigating that code among others in case I get an itch to implement a BC rewrite.

On another note, I was wondering if you'd be making the trek down to SPF (Southern Friend Pinball Expo) in Atlanta in June. I'd love to bring up one or two games and have them P-ROC'd as a setup to show the platform off. Perhaps compy will bring his DM2k as well. I could bring my ES and set it up to showcase your rewrite if you were interested. If I get to doing BC as a rewrite I might like to buy your version 2.1 interface board. Of course, I'll have to get another P-ROC board as well.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **February 18, 2014, 08:43:37 AM**

Thanks for the recommendation Mark, I will definitely check it out.

The first thing you will want to do is make sure that you can get PinMAME up and running on your earthshaker. Have you installed an autolauncher in your ES?

I never was planning on having anyone build another one of these machines, so there are probably some other things I did not document that need to be done as well. I just need to sort through it.

I will not be making it to SPF unfortunately. Be sure to let us know what you are bringing out there and take some pictures. :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **February 18, 2014, 08:49:40 AM**

Weekend Update!

Hey guys,

I made some serious changes and improvements to the code this weekend.

Improvements include:

- Game Over score display for up to 4 players (for dollar game purposes) :)
- Spinner Mode
- Multiball Mode (not completed)
- Drop Target Mode
- Collect zones now random and configurable
- Other various stuff

There are still a TON of things that need to be worked on. Lampshows, Display, Audio, Voice Calls, Modes, etc. I am just happy that the game is stable but incomplete. :)

Here is the latest gameplay video:

Earthshaker Aftershock Feb 2014 Gameplay Video 2 (<http://www.youtube.com/watch?v=qgZkOurUqoc#ws>)

Let me know what you think!

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Mark Jarzewiak** on **February 18, 2014, 11:00:36 AM**

Will watch later but wow! Wondering how you are moving so quickly. I'm actually looking at all these projects wondering how everyone goes through the process of developing and deciding how to add new modules/py files. I actually think a thread just about game

development would be great. I'm excited to get my Mouser order and get this running in my ES.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **February 18, 2014, 11:54:18 AM**

Scott - looking good!!

Mark - As you're finding, it's the initial setting up, getting config done and the base framework running that takes the time. Once that's done and you've started to dabble, things certainly go quicker. This is my only exposure to python, and having a read through everyone else's code certainly helps to clarify things. Lots of people on the forum have their code publicly available, take a mooch around!

Mark

Title: **Re: Earthshaker! Aftershock Project**
Post by: **myPinballs** on **February 19, 2014, 06:23:09 AM**

Quote from: MarkS on February 18, 2014, 11:54:18 AM

Lots of people on the forum have their code publicly available, take a mooch around!

Mark

That's defo one of the best things about the p-roc community and something that i try and do with my own projects. I currently release all my code under the GNU GENERAL PUBLIC LICENSE so that there's an evolution of projects

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **February 19, 2014, 09:40:47 AM**

I definitely agree. The community here is really open to knowledge sharing, which really helps. That is why my code is available for people to mooch as well. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **April 01, 2014, 08:30:10 AM**

Hey Everyone,
It is now official! I have my trough mode in place and basic multiball working great! I will make a video soon to show what I did.

This felt like a big step for me, but I still have a very long way to go. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **April 01, 2014, 08:54:38 AM**

Nice Scott. Keep up the momentum.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Mark Jarzewiak** on **April 01, 2014, 01:05:21 PM**

Quote from: ScottDanesi on April 01, 2014, 08:30:10 AM

Hey Everyone,
It is now official! I have my trough mode in place and basic multiball working great! I will make a video soon to show what I did.

This felt like a big step for me, but I still have a very long way to go. :)

Great news, I really need to get my Mouser order done and my interface board built.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **April 01, 2014, 01:09:07 PM**

I also need that part list to get my v2.2 board built. ;)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Mark Jarzewiak** on **April 01, 2014, 02:21:27 PM**

Since Jameco doesn't really beat Mouser on price, perhaps it makes sense to pool together a Mouser order and get the price break on IRL540s with 3 people buying. It would mean dropping from 1.05 each to .927 each. \$5.40 savings. I guess it balances out to a Priority mail package to each person so may or may not be worth it. I don't think the savings for the rest of the stuff comes out. I can try to get a BOM (or actually project up for Mouser though. Think I've found everything there that is necessary. I won't be ordering .156 headers there or ribbon cable assemblies since I got those from Great Plains Electronics.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **April 01, 2014, 03:02:10 PM**

Sounds like a good plan to me. I don't mind just ordering the parts individually since I don't think the savings will match that of splitting the shipping. This also keeps it simple. Thanks Mark,

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **April 24, 2014, 10:11:56 PM**

Hey Everyone,
I know it has been a while since my last update, but I promise I have been making progress.
:)

I got my multiball working for the most part, but it is still a long way off from being complete.

I am really starting to envy those of you that do not have to deal with the A/C relay that us System 11 lovers do...

Well, here is a gameplay video of my early multiball code. Enjoy!

<http://youtu.be/XmZAvtfPUXk> (<http://youtu.be/XmZAvtfPUXk>)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **April 25, 2014, 02:31:47 AM**

Nice progress, loving the end of ball bonus lighting to :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **bonnevil69** on **April 25, 2014, 03:37:44 PM**

Light shows are excellent. Looks like its coming along great Scott

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **April 25, 2014, 03:39:59 PM**

Thanks guys!!! I am still working on these things. :)

Will update soon.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **dave_h** on **June 03, 2014, 08:45:31 PM**

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Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **September 01, 2014, 09:36:38 AM**

Hey Guys,
Yes, I am alive!

The Earthshaker Aftershock project is still a go for Expo this year! I am making some slight tweaks to the code to ensure stability and cleaning up all the loose wiring. I have successfully upgraded to the v2.2 driver board that Mark S designed!

I am now debating on what to work on first from the software side. Should I add more fun to the gameplay or should I work on the boring stuff like high score initial entry? :)

I am leaning toward adding to the gameplay. I doubt people will notice if the game is missing high score entry. :)

--Scott

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Frank Gigliotti** on **September 01, 2014, 11:07:08 AM**

Scott,

The highscore code is already in the framework. Its maybe 20 lines of code that you can copy from the starter or judge dredd. You can move on to fun gameplay modes now!

Looking forward to meeting you at expo and playing your game!
Frank

Quote from: ScottDanesi on September 01, 2014, 09:36:38 AM

Hey Guys,
Yes, I am alive!

The Earthshaker Aftershock project is still a go for Expo this year! I am making some slight tweaks to the code to ensure stability and cleaning up all the loose wiring. I have successfully upgraded to the v2.2 driver board that Mark S designed!

I am now debating on what to work on first from the software side. Should I add more fun to the gameplay or should I work on the boring stuff like high score initial entry? :)

I am leaning toward adding to the gameplay. I doubt people will notice if the game is missing high score entry. :)

--Scott

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **September 01, 2014, 11:43:22 AM**

Hey Frank,
Unfortunately, I think I will need to re-write it since I am using an alphanumeric display. :(

I am not sure if Jim has written anything for his Whirlwind project yet, which is also an Alphanumeric game. I will probably end up collaborating with him on this code and post it for others to use.

Looking forward to meeting you as well Frank!

--Scott

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **September 01, 2014, 11:26:20 PM**

Yes Scott is back to working on his machine LOL ;)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **September 02, 2014, 11:28:56 AM**

I am back. I hope you guys end up liking what I did to the Earthshaker. :) The mini modes I think are going to be worth it.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **September 30, 2014, 12:28:57 PM**

Hey Everyone,
I have been doing some massive work on Earthshaker to get it ready for Expo in a few weeks.

I will be uploading a new Attract mode video tonight with some really cool new lampshows!

Stay tuned. :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **September 30, 2014, 11:13:01 PM**

As promised, here is the latest and greatest Attract Mode! Sorry for the vertical video...

<https://www.youtube.com/watch?v=bzEK7qWxclA> (<https://www.youtube.com/watch?v=bzEK7qWxclA>)

All new lampshows!!!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Nelly** on **September 30, 2014, 11:21:30 PM**

That looks awesome Scott! Did you get to use Koen's lampshow generator to help you achieve these or did you create these the old fashion way?

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **October 01, 2014, 12:22:33 AM**

WOW Scott that looks amazing i was expecting more flashers LOL :)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Snux** on **October 01, 2014, 01:20:14 AM**

Tell me you wrote a nice Windows based lamp show builder? Please?

One other thing you can do though, which I'm surprised you didn't spot given my outstanding documentation, is to blink one more lamp :)

Put this in your YAML file, in the coils section :

```
diagLED:  
  number: C24
```

That's the little diagnostics LED on the combo-board, you can drive it on and off like anything else. Maybe just schedule it 0xFF00FF00 so it blinks. Normally not worth bothering with, but given you have that plexi backglass you'll see it.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Steven** on **October 01, 2014, 03:55:49 AM**

Looks great!
(Indeed you could use the Flashers as well, but I'm not sure how they're wired in EarthShaker... in some games you can only light 2 flashers at the same time, and that might look 'off' in your lampshow).

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **October 01, 2014, 08:31:02 AM**

Guys, thank you very much for the outstanding feedback. I appreciate it!

Quote from: Nelly on September 30, 2014, 11:21:30 PM

That looks awesome Scott! Did you get to use Koen's lampshow generator to help you achieve these or did you create these the old fashion way?

Thanks Dave! I did use the Dutch Pinball Suite to generate my lampshows. Honestly, these are not that complicated though and could have been done by hand. In some cases, I actually did modify them by hand.

Quote from: bonnevil69 on October 01, 2014, 12:22:33 AM

WOW Scott that looks amazing i was expecting more flashers LOL :)

Hey Matt, Thank you! Duly noted. Just wait until you actually play the game... :) I will add in some more goodies before expo.

Quote from: Snux on October 01, 2014, 01:20:14 AM

Tell me you wrote a nice Windows based lamp show builder? Please?

One other thing you can do though, which I'm surprised you didn't spot given my outstanding documentation, is to blink one more lamp :)

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That's the little diagnostics LED on the combo-board, you can drive it on and off like anything else. Maybe just schedule it 0xFF00FF00 so it blinks. Normally not worth bothering with, but given you have that plexi backglass you'll see it.

Hey Mark, unfortunately, no, I did not write a tool to create lampshows. This does need to get created though. Was there another guy (not Koen) that was working on something like this?

HAHA! I had no idea I could use the diagnostic LED. I will add that in tonight. I could make it flash for which player is currently playing I suppose.

Guys,

Thank you again for the positive feedback, it really means a lot! I cannot wait to hang out at Expo.

Thanks,

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Nelly** on **October 01, 2014, 08:36:39 AM**

Quote from: ScottDanesi on October 01, 2014, 08:31:02 AM

Hey Dave, I did use the Dutch Pinball Suite to generate my lampshows. Honestly, these are not that complicated though and could have been done by hand. In some cases, I actually did modify them by hand.

You lucky SOB! ;D Sure, anything can be done by hand, but I am betting it would have taken you 10 times longer. ;)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **October 01, 2014, 08:40:15 AM**

Quote from: Steven on October 01, 2014, 03:55:49 AM

Looks great!
(Indeed you could use the Flashers as well, but I'm not sure how they're wired in EarthShaker... in some games you can only light 2 flashers at the same time, and that might look 'off' in your lampshow).

Hey Steven,

You know, I am actually not sure about that. I usually do not pulse more than 2 at a time. I did however attempt to pulse them all at once very quickly in a lampshow and only 1 actually pulsed. I just took that as a sign that I should not be going that route and decided not to investigate why that was happening.

Flashers in Earthshaker are a real pain since I have to deal with the A/C relay. There is extensive A/C handling functions and checkers in my code to deal with this, but once in a while, usually during multiball, I get a conflict. Fortunately, I programmed for the conflicts and the coils will override any flasher lampshows or schedules that would interfere with the actual gameplay.

I should probably take my A/C relay ramblings over to a different topic. ;)

Thanks again,

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Snux** on **October 01, 2014, 08:56:02 AM**

Quote from: ScottDanesi on October 01, 2014, 08:40:15 AM

Flashers in Earthshaker are a real pain since I have to deal with the A/C relay.

Fun :) On the first go-around on my F14 code I put the flashers in a lampshow but forgot to adjust the A/C relay first. So I got a "solenoid show" instead of a "lamp show" and managed to blow more than one fuse whilst almost having a heart attack with all the noise that came out of my machine :)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **October 01, 2014, 09:27:21 AM**

Quote from: Snux on October 01, 2014, 08:56:02 AM

Fun :) On the first go-around on my F14 code I put the flashers in a lampshow but forgot to adjust the A/C relay first. So I got a "solenoid show" instead of a "lamp show" and managed to blow more than one fuse whilst almost having a heart attack with all the noise that came out of my machine :)

I am not going to lie and pretend this has never happened to me... :D

The scariest thing that ever happened on this machine was when I put capacitors on the IC latches on the System11 Driver board for testing. Remember this event? :)

Story Below:

All was well in the Gameroom, the games were all on, emitting a nice warm light into the room, except for Earthshaker. When I powered the machine on everything was still all good, so I calmly sat back down at my desk. It was then that the code initialized the P-ROC came to life! ALL lamps, non A/C Solenoids, and Flashers, locked on along with a loud terrible noise from my amp. Instantly full of adrenaline, I fell out of my chair to run to over to switch the machine off. I was about 10 feet from the machine and running in what seemed like slow motion while I could see the fuses heating up and popping. By the time I reached the machine, which felt like an eternity, my heart was racing and I feared the worst. At this point most of the fuses had popped, but the loud screeching noise of the amp has not given up. I quickly powered off the machine and tried to regain my composure as I reassured myself that everything was OK and the fuses did what they were supposed to do. It was then I looked up and noticed my wife, Sara Rose, has just witnessed the whole hilarious event.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **October 05, 2014, 08:27:39 PM**

Hey Guys,

Back hard at work this weekend and have finally got my "mini-mode" selector code working properly.

Below is the latest gameplay video. Please excuse my poor playing as I am not good at pinball. :)

<https://www.youtube.com/watch?v=4Bznd4Y4qIE> (<https://www.youtube.com/watch?v=4Bznd4Y4qIE>)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **bonnevil69** on **October 05, 2014, 11:24:53 PM**

Looks great Scott Great use of the crazy flasher setup that game has

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **October 06, 2014, 08:33:38 AM**

Thanks Matt,

The only problem is that the game uses an A/C relay on the coils, so it is actually pretty tough to get the flashers working in conjunction with the coils. :(I am thinking I may use the extra coil drive outputs that I have to eliminate the A/C relay completely... Maybe next year... haha

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Nelly** on **October 06, 2014, 08:38:22 AM**

Quote from: ScottDanesi on October 06, 2014, 08:33:38 AM

I am thinking I may use the extra coil drive outputs that I have to eliminate the A/C relay completely...

Ding ding ding ding!!!

How thoughtful of Mark to add those extra outputs in there for us! 8)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **October 06, 2014, 08:45:16 AM**

Quote from: Nelly on October 06, 2014, 08:38:22 AM

How thoughtful of Mark to add those extra outputs in there for us! 8)

Indeed! I just wish I had 8 more. :) I know... greedy. haha! I just have an RGB LED Flasher strip in my backbox using 3 of the extra 8 that I currently have.

I believe there may be 8 more that the P-ROC is capable of, but I would have to check into that.

Dave, did you eliminate the A/C relay on Buffy?

Title: **Re: Earthshaker! Aftershock Project**

Post by: **Nelly** on **October 06, 2014, 09:09:04 AM**

Quote from: ScottDanesi on October 06, 2014, 08:45:16 AM

Indeed! I just wish I had 8 more. :) I know... greedy. haha! I just have an RGB LED Flasher strip in my backbox using 3 of the extra 8 that I currently have.

I believe there may be 8 more that the P-ROC is capable of, but I would have to check into that.

Dave, did you eliminate the A/C relay on Buffy?

Haha, not greedy at all! You can never have too many options. :)

We have not eliminated it yet, but it is on our To Do list. It is going to make Mocean's life so much easier once we do.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **October 06, 2014, 09:37:13 AM**

If it makes your life easier, feel free to steal the A/C relay code from my project, it seems to work pretty well. I can walk you through it if you need as well. Just let me know.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **MOcean** on **October 06, 2014, 05:51:47 PM**

Oh, don't worry, I did. :). Thank you!!

I had to make a number of changes to suit our needs including a coil-side lock/unlock feature and a flag to check to see if the relay is already on the coil side (because, if so, a call for a second acCoilPulse could theoretically disable the previously pulsed coil).

The way SoF is laid out, there are sections of the playfield that make the ACRelay start clicking like its the double bass in a Metallica track. To reduce this (and reduce the visible delay of having a bank of 5 drop targets where 2 are on the relay and 3 aren't) it's easier to "lock" the relay to the coil side for a while then unlock when the ball leaves the area. So, the modified version of your ACRelay works but having no flashers when the ball is in these regions is a drag...

Wait, I forgot what this thread was about...

Aftershock looks awesome and I'm totally looking forward to playing it :)

Quote from: ScottDanesi on October 06, 2014, 09:37:13 AM

If it makes your life easier, feel free to steal the A/C relay code from my project, it seems to work pretty well. I can walk you through it if you need as well. Just let me know.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **myPinballs** on **October 17, 2014, 04:05:09 PM**

Quote from: ScottDanesi on October 06, 2014, 08:45:16 AM

Indeed! I just wish I had 8 more. :) I know... greedy. haha! I just have an RGB LED Flasher strip in my backbox using 3 of the extra 8 that I currently have.

I believe there may be 8 more that the P-ROC is capable of, but I would have to check into that

Yeah there's another 8 available in theory from enable line 5 (gi on wpc). For me though I'd like to keep refining the ac coil thing on whirlwind (see GitHub area). Partly as whirlwind already used up the extra 8 drives and partly as I'd like to keep the Playfield and wiring stock.

Updates on earthshaker looking amazing as normal matey :) like we spoke about before, next earthshaker game in the UK that comes up for sale is coming here and getting this put in it

Title: **Re: Earthshaker! Aftershock Project**

Post by: **bonnevil69** on **October 22, 2014, 02:57:13 PM**

Hey Scott. Just wanted to say that your machine was excellent. I played it a bunch of times when things were slow. My wife also made a comment that she really liked it. I also had a few people say that they liked your use of the shaker motor. Very nice touch.

-Matt

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **April 25, 2015, 02:12:13 PM**

Hey Matt! Thanks man!

I am still alive and getting back into making more enhancements to my code. :) I gathered a ton of info from Expo last year and the machine actually did pretty well in terms of crashes and lockups.

Matt, thanks again for tending to her while I was working!

Talk to you guys soon.

Title: **Re: Earthshaker! Aftershock Project**

Post by: **bonnevil69** on **April 27, 2015, 01:37:55 AM**

Wow Scott it only takes you 6 months to respond LOL So does that mean a P-roc meet-up is going to be announced soon ;)

Title: **Re: Earthshaker! Aftershock Project**

Post by: **ScottD** on **April 27, 2015, 08:34:48 AM**

Hey Matt,
Yeah 6 month, give or take a few. ;) Yeah, we definitely need to get together soon. Let's get the conversation flowing. I can host again if you guys are down for that. I really would like to push for everyone to bring their machines to Expo this year as well. :)
Thank soon (much sooner than 6 months), ;)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **April 28, 2015, 01:18:46 AM**

I am going to try and get both of my machines to expo this year :) That is if i can get doom done in time If you want to host im cool with that I would host but i only have 1 machine unless you guys want to get crazy and build stuff lol im basicly down for anything Your house or Josh's works either way lets start a chicago area meetup #3 post and tell Dave he isnt allowed to be sick this time ;D

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Rosh** on **April 28, 2015, 11:21:56 AM**

Quote from: ScottDanesi on April 27, 2015, 08:34:48 AM

Hey Matt,
Yeah 6 month, give or take a few. ;) Yeah, we definitely need to get together soon. Let's get the conversation flowing. I can host again if you guys are down for that. I really would like to push for everyone to bring their machines to Expo this year as well. :)
Thank soon (much sooner than 6 months), ;)

I am hosting the Pinball Mafia in May, so that is an option, Eric will likely be there, as will Scott, and as hosts I can invite some guests, so Matt and Nelly are certainly welcome to come, not sure who else is a chicago p-roc person. Plus, maybe this way I'll convince Scott to bring over Earthshaker -- we can leave it on the first floor, and skip the stairs :-)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **April 29, 2015, 12:01:35 PM**

That is not a bad idea Josh! Yeah, if we could leave it upstairs that would be ideal.

Oh and as an update, I just added custom High Score framework to Earthshaker Aftershock!!!!
<https://youtu.be/xjjRqHKQmxg>

Talk soon guys,

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Rosh** on **April 29, 2015, 02:52:32 PM**

Quote from: ScottDanesi on April 29, 2015, 12:01:35 PM

That is not a bad idea Josh! Yeah, if we could leave it upstairs that would be ideal.

Oh and as an update, I just added custom High Score framework to Earthshaker Aftershock!!!!
<https://youtu.be/xjjRqHKQmxg>

Talk soon guys,

I would see no reason we would need to move it downstairs -- I'll take with my better half to see if she has any concerns with it.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **April 29, 2015, 03:03:01 PM**

Sounds good. I am in if she approves! We can use it for league as long as the board members are ok with it.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **May 02, 2015, 07:54:15 PM**

Quote from: Rosh on April 28, 2015, 11:21:56 AM

Quote from: ScottDanesi on April 27, 2015, 08:34:48 AM

Hey Matt,
Yeah 6 month, give or take a few. ;) Yeah, we definitely need to get together soon. Let's get the conversation flowing. I can host again if you guys are down for that. I really would like to push for everyone to bring their machines to Expo this year as well. :)
Thank soon (much sooner than 6 months), ;)

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Send the date and such Wouldnt turn down such an event ;)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **May 03, 2015, 10:52:16 AM**

OK, Earthshaker is ready for the 16th! No crashes and many new features. In fact, I would like to consider this project finally at a version 1.0!

I also worked on the sound system a bit too, hope you don't have any fine china near by. ;)

Also, tell the boss that it is on family mode and the worst thing it says is "bitchin".

Talk soon!

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Rosh** on **May 04, 2015, 10:59:23 AM**

but it will be ready on the 9th, which is when I am hosting :-)

Was thinking about putting in the living room, but was already concerned about vibration with all the china in there, and now that you brought it up as well, not going there. Probably put it in the hall or the family room. I'd consider putting it in the garage, but my garage does not exactly smell like roses, but if the weather is real nice, that might not be a bad idea.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **May 04, 2015, 12:47:27 PM**

Oh yeah, the 9th... It is ready. :)

I am down for whatever you decide.

Thanks man,

Title: **Re: Earthshaker! Aftershock Project**
Post by: **Rosh** on **May 11, 2015, 06:01:48 PM**

Wanted to let folks know that Scott did bring his Aftershock game over to my house for the Pinball Mafia event. I'm sure Scott could share the stats on how many games were played on it and any other stats. Game played great and I know everyone enjoyed getting a chance to play it. In fact, when folks were arriving they seemed to hang out upstairs watching it be played vs heading down to where the other dozen machines were in the game room. I don't know the original game well enough to understand all of the changes he made, but I could certainly recognize some of the new callouts (and they are not all PG)

As far as I know it played without any issues, of course I now need to bring in a contractor to patch the walls from where the games vibrations caused cracking in the dry wall, I may have to have the joists checked as well ;-). At one point when playing I500, which was right below it, with the tilt set way too tight by one of the judges, I was concerned that if someone started multiball on Earthshaker while I was playing the vibrations would tilt me out.

The machine was used for official league play, since we had already established precedent that P-roc games could be used when the league had once played on a CCC. The Kugler's was not eligible for league play since I don't view it as rock solid yet (a "load sound file" bug keeps cropping up).

Matt made the long journey up from his house to join us, so maybe he will post his thoughts on it.

Scott, thanks again (and best part was I did not really have to help much at all in moving it)

Title: **Re: Earthshaker! Aftershock Project**
Post by: **bonnevil69** on **May 14, 2015, 10:29:25 PM**

Im pretty sure your Joists have been put through some serious testing having earthshaker shaking the entire room. They are good trust me lol. sadly i didnt play it but i did watch a bunch of games and didnt get tired of it. great job Scott

Title: **Re: Earthshaker! Aftershock Project**
Post by: **syco54645** on **April 28, 2016, 04:07:49 PM**

So should we consider this project complete? Also is it possible for it to run the original Earthshaker code much like BOP2.0 does with the original BOP code? If so I can see this as being a no brainer for me. Under \$500 to add another game to my collection. It looks great btw.

Title: **Re: Earthshaker! Aftershock Project**
Post by: **ScottD** on **April 28, 2016, 04:11:21 PM**

Hey there,
Well, complete, not totally. I never planned to release this as an upgrade for anyone's machine. I did it as an open source project so people could use my code to program their own machines. I can switch between the games, but it is done through the PC interface. If you are interested in creating a version of this for your game, hit me up and I can help walk you through what I did.
Thanks,
--Scott

Title: **Re: Earthshaker! Aftershock Project**
Post by: **syco54645** on **April 30, 2016, 02:44:56 PM**

Sent you a PM Scott.

