

Repair it, Restore it, Don't
spend your money on it –

Spend Brent's Instead!



The dilemma of arcade collecting today...

- ❑ The beginning collector

- ❑ Where do you start and how do you find your games?
 - ❑ How are you approaching managing budget for this hobby?

- ❑ The seasoned collector

- ❑ CL
 - ❑ eBay
 - ❑ KLOV
 - ❑ Facebook
 - ❑ CoinOp Warehouse

- ❑ The veteran collector

- ❑ Network of other collectors
 - ❑ Facebook
 - ❑ Arcade Exchange
 - ❑ Local Groups

What's making this so tough?

- ❑ Good games are getting harder and harder to find
- ❑ For what is out there, the pricing is steady going up
- ❑ What do you contribute to the uptick in game value?
 - ❑ Increased collector interest
 - ❑ Movies
 - ❑ Public craving for 80's/90's nostalgia
 - ❑ 'Barcade' explosion
 - ❑ Full-on restorations (more on that later)

The problem(s) we face...

- ☐ Not only do you need to acquire the games, but you need to fix and maintain the games
- ☐ Where do you find reproduction parts?
- ☐ If you don't fix your own games, you're on track to spend even more money over the long haul
- ☐ If you can't locate reproduction parts, you're on track to never finish projects or not own games that you otherwise would enjoy.

The MemeGens nailed it...

**The easiest way to become a
millionaire in this hobby**



Is to start out as a billionaire

#SFGE2016



Let's fix that (as much as we can)...

- ❑ The crux of all of this is that it takes money to keep your interest level in the hobby (and owning the games) viable.
- ❑ Let's help you be as successful as you can – while spending EITHER as little as possible on repairs or by finding the right part (Ideally both)
- ❑ What do you spend the most money on for repairs?
 - ❖ Game board / PCB?
 - ❖ Monitors?
 - ❖ General fix-ups (cosmetics, artwork)?
 - ❖ Time and effort (opportunity cost)?

My dirty little secrets, all out in the open...

- ☐ I would move games around just to get access to a working monitor
- ☐ I would move games around just to get access to a working power supply
- ☐ I would break games down just to get access to a control panel setup
- ☐ I would do things that are semi-dangerous (moving games alone, not discharging when I should, etc.) all in the sake of trying to 'save time'
- ☐ Games are/were down much longer than they should be due to the fact that I wasn't really stepping back and tackling the bigger problem at hand.

How I helped myself out

- ❑ Stop paying for monitor repairs and enable some self-sufficiency
- ❑ Make a test-rig that would work across a wide variety of monitors and games
- ❑ What do you think the final cost (BOM) was for this setup?
- ❑ Some reflections
 - ❖ Need to have access to JAMMA adapters for different boards
 - ❖ Need to have a need for this setup (Nintendo)
 - ❖ Need to have some additional tools in order for this to really be of use
 - ❖ CraftyMech Test Pattern Generator (TPG) -
 - ❖ Buffett CraftyMech TPG cable set - <http://forums.arcade-museum.com/showthread.php?t=311759>

Building the 'BT Beast'

- ❑ Took several iterations to find the best layout
- ❑ Nothing here is really original thought on my part – I cabbaged some ideas from KLOV, put in a few 'nice-to-haves' and based the switching idea on the sheer fact that I'm a big Nintendo collector, but I still have Atari, Bally/Midway, Williams, etc. games.
- ❑ I wanted to have a single board that I could do “everything” with
- ❑ I wanted something that is “bench friendly” but also able to go on trips and help diagnose games on the fly.

The thing I absolutely cannot stand...



Insufficient Data

Bill of Materials

Baseboard and electrical Items

- ❑ Terminal Strips are from eBay (\$8)
- ❑ Barrier Strips are from eBay (\$11)
- ❑ Electrical boxes and switches are from Lowes (\$25)
- ❑ Electrical + RF filter receptacle is from DigiKey (\$7)

Switching power supply - Heavy-duty 15 Amp from Arcadeshop (\$29)

JAMMA harness – “Fully loaded” from Bob Roberts (\$36)

ISO Power supply (\$20??) – Ravenswood from a Centuri Cabinet

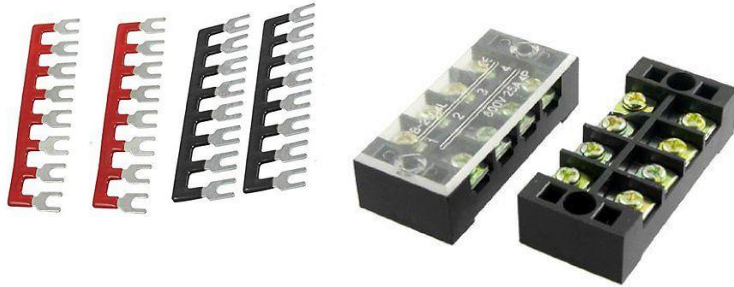
Displays and connectors (\$12)

- ❑ 0-30 DC Voltage Meters (\$10.98)
- ❑ 2-pos / 3-pos 9.93 Molex connectors for monitor power (\$1 per power cord)

Wire, connectors and Heatshrink (\$53)

- ❑ Wires came from 16ga power cords that I cut apart (free for this project, but \$8-\$11 per 8ft to buy)
- ❑ Spade Terminals – Utilitech #0423953 (20ct) from Lowes (\$6 @ 2)
- ❑ Heatshrink is from eBay – Hickory Tube Works (\$12)
- ❑ Monitor Power cord
 - ❖ 16AWG 2-conductor black lamp cord (\$10.44)
 - ❖ Project Source 15-AMP black (\$1.97)

Some of the more interesting parts



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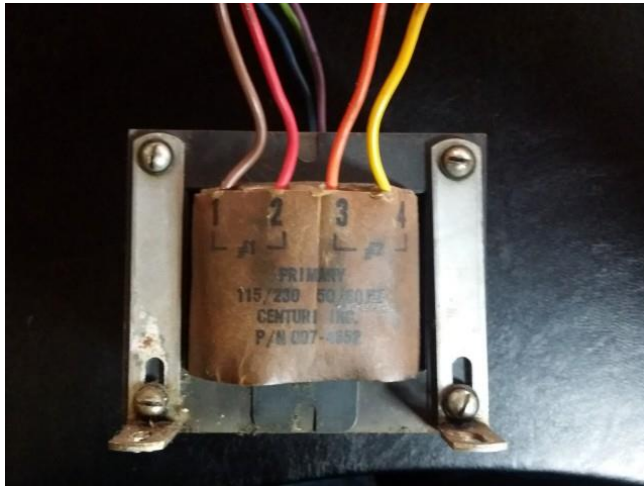


Switches and Stuff (1)

❑ On the primary (Input) side

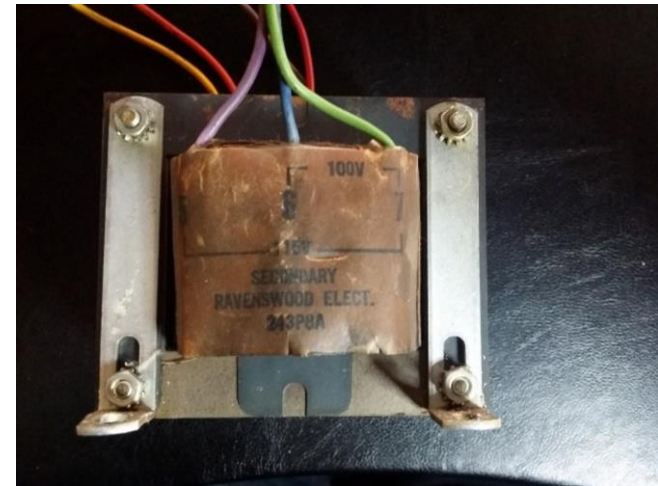
assumes you only intend to use this connected to 115VAC power (I.e. in the US):

- ❖ Connect #1 and #3 together, and to one leg of incoming power.
- ❖ Connect #2 and #4 together, and to the other leg of incoming power.



❑ On the secondary (Output) side

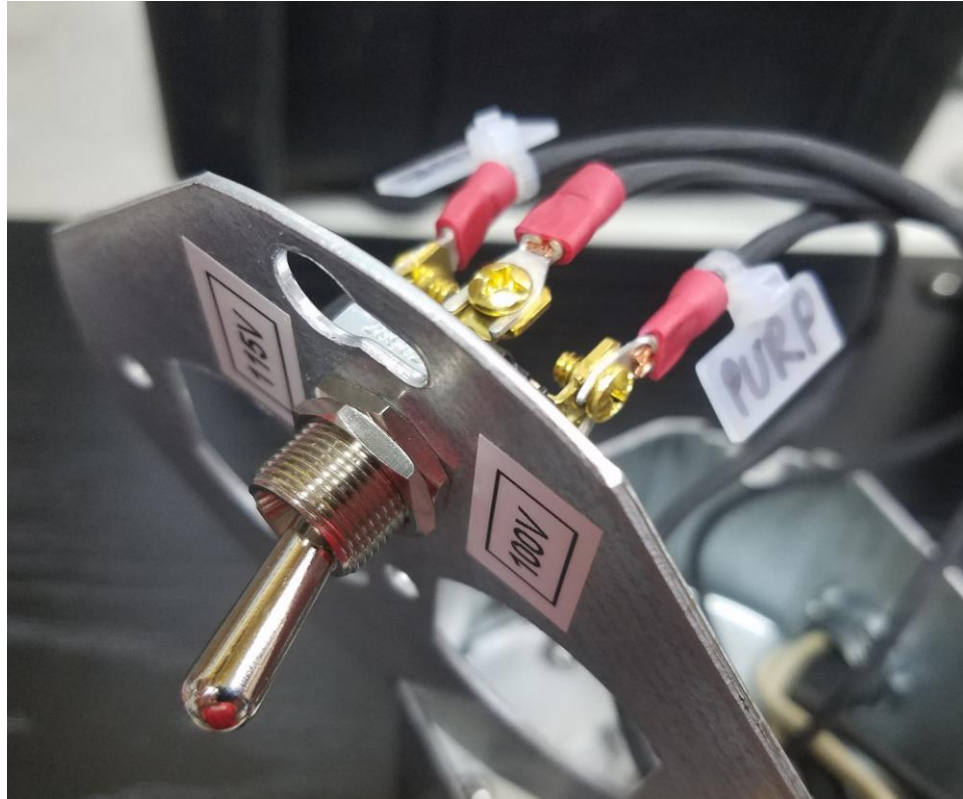
- ❖ Connect #7 (Green) to one leg of your monitor power
 - ❖ consider this the Neutral
- ❖ Connect #5 and #6 (Blue and Purple) to the two throws of a SPDT switch.
 - ❖ Consider this the Line
- ❖ Connect the common terminal of the switch to the other leg of your monitor power.



Switches and Stuff (2)

❑ Wiring the switch is now easy peasy...

- ❖ Purple on one side (100v)
- ❖ Blue on the other (115v)
- ❖ Output from switch middle terminal to the electrical receptacle input (brass)



Reproduction Parts (#SPENDBRENTSMONEY)

- ❑ If there's one thing we are good at on our show it is locating parts for the hobby
- ❑ We take it seriously. So much so, we gave it a hashtag
- ❑ Brent doesn't mind... if he does it's already too late
- ❑ Started this on episode 5 of the show
- ❑ To date, I have spent right at \$14,000 (\$13,960 to be exact) of Brent's Money on new reproduction parts and artwork.
- ❑ I was shocked it wasn't more

What about building a brand new game – can you guess which one?

- ❑ PCB = \$1200
- ❑ Repro Cabinet = \$600
- ❑ WG6100 Monitor \$500 (Amp Monitor \$800)*
- ❑ Side Art Kit = \$250
- ❑ Marquee Translite = \$24
- ❑ Wire Harness = \$150
- ❑ Power Supply = \$50
- ❑ Speakers (three) = \$70
- ❑ Marquee Light Fixture = \$20
- ❑ Tempered Smoked Glass = \$90
- ❑ Repro Roller Controller = \$245
- ❑ Coin Box Complete = \$70
- ❑ T-molding = \$12
- ❑ Base T-molding = \$50
- ❑ Clear Glass for Marquee = \$20
- ❑ Leaf Buttons w/leaf contacts = \$15
- ❑ Metal Parts Cab Kit = \$245
- ❑ Bezel = \$40
- ❑ Metal speaker grilles = ??

Estimate Totals \$3686 (\$3986 w/amp monitor)

A few words of (expensive) advice...

❑ So many things are being reproduced today – and at an extremely high degree of precision and quality:

- ❖ Nintendo Coin Doors
- ❖ Complete Metal Kits
 - ❖ Warlords cocktail
 - ❖ Quantum
 - ❖ Major Havoc
- ❖ Gottlieb, Taito and Nintendo control panels
- ❖ Custom controllers
 - ❖ Roller controller for Major Havoc
- ❖ High Score / Multigame kits
 - ❖ Donkey Kong Remix
 - ❖ D2K
 - ❖ Braze High Score kits for Atari, Bally and Nintendo games
- ❖ FPGA Boards
 - ❖ Pole Position
 - ❖ Taito
 - ❖ Mylstar / Gottlieb

- ❑ Buy in where it makes sense, but look for ways to make it as cost-neutral as possible.
- ❑ Take advantage of the pre-orders on KLOV and Pinside
- ❑ Make it a marathon, not a race, and you'll continue to stay in the game.

So – Did this help?

- ❑ We showed how to spend some money to save some money to spend some money (but have something to show for it!)
- ❑ It's all about being self-sufficient and fixing your own games
- ❑ It's all about being safe while doing it
- ❑ It's all about equipping yourself with the right tools to not be afraid to make that big grail buy (that may not be working – but you can fix it!)
- ❑ It's all about having fun, and that's a lot easier when you have options
- ❑ Presentation and BT Beast Board BOM will be available on our website

Disclaimers Apply:

- ☐ Try not to kill yourself- we're not liable. However, If you do, tweet about it @brokentoken so that we know what happened.
- ☐ There is no right of refusal – it's yours!
- ☐ If it shows up on eBay, we get 50%
- ☐ Create a cool product, sell it on KLOV and we'll put you on the show!

Time for some giveaways!



Get our stuff
and help
support the
show!

☐ T-shirts for
sale

☐ Take a card

☐ Get a sticker

Thank you for
attending!

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AOL Keyword – BrokentokenRocks

Our BBS now support 56 Kbps!!!

