Steps to get pi guitar to work

1. take everything out of the guitar cavity

2. chisel away more space to make room for copper tape.

3. enclose the cavity with ply wood and metal so that the cavity is seperate from the pick up cavity and with only a small gap for the wires

4. line the internal cavity with copper tape and cover the tape with glue. this includes the speaker wells and button cavitys.

5. minimise as many wires as possible.

- replace big wire loom for buttons with a ribbon cable. (make the change in the speaker well that it goes through.

- replace all audio wires with multicore shielded wire.

- use smaller gauge power cables that are still suitable for max 5 amps at 18volts

- manage wires appropriately to save on space and hold wires down below the guitar back line

6. check if this is enough of a reduction to comfortably fit the back plate. if not use ball peen hammer and strech out back and make a curved back to fit wires.

7. line back plate appropriately with copper tape and glue to form somewhat of a seal for the guitar cavity.

8. find a quieter fan or heatsink thats not loud and replace fan.

9. insert gromits on cable exits and shield wires going between cavitys with copper lining and shielding.

10. ground the emi shielding to either the tremelo or to the 18v power

11. run all neccessary cables that go between the secured cavity through the grommet. ensure all shielding of these grommets is done. keep room for everything else.

12. slowly insert the dcdc converter, amplifier, speakers and wires for these whilst pinning wires to the side as much as possible to save space.

13. install the fx buttons plate and run the ribbon cable to the pi area and wire up the pi with ribbon cable, audio adapter, hdmi and usb correctly. fit hdmi and usb port on the back plate outside. (will make a rounded cover for these eventually.)

14. fit pi in and secure it

14. ensure a the shut down button works and make sure there is room to remove and enter the micro sd card without moving the pi at all

15. place on the back plate ensuring the cavity is isolated from the outside with copper and then start up the guitar and test the pick ups, checking that the pi, amp and dcdc dont make noise

16. if there is still noise then copper line the pick up cavity and control cavity from everywhere to protect itself.

17. if this still doesnt work then remove the dcdc, pi and amp and place them in their own box that could be on a guitar strap or a belt box or for the floor.