How to ground a guitar

Our Lead Times are slightly extended. Please give us extra time to complete your order. Thank you for your understanding. Practicing your guitar makes you a better guitar player. Understanding guitar wiring makes you a better Tone Wizard. A Ground or Earth connection is a term that relates to a multitude of topics related to electrical engineering. A Ground Connection connects every piece of metal on your guitar and acts as a return path to the amp. Your guitar is surrounded by many things that emit or produce EMI, or electromagnetic interference. These are all sources of EMI, and there are thousands of them all around us. Your guitar will pick up a multitude of these. However, if you properly ground your guitar, you can get your guitar as quiet as it can be single coils will still hum , and not introduce sound via improper grounding. Definitely not. Proper grounding means it only needs to connect correctly to the ground once. Grounding items multiple times creates a few problems. For one, using wire to ground a series of pots in a circle creates a one-turn coil. Creating a loop of ground connections will introduce noise into your signal. Take a look at the following images. Grounding your strings is essential for having a quieter guitar. Your body is an antenna for all sorts of EMI, so when you touch your guitar strings, the guitar is grounding you! Pretty cool, right? Star Grounding refers to the method of grounding that connects all grounds to a Single Point. For example, think of the back of a Strat Volume Pot: It tends to be a central hub for ground connections. His reasoning? All ground connections connect to the output jack sleeve anyway. Take a look at the following image of a Strat â€" notice how each part connects to ground once. Notice any jumpers? The Shielding on the back of the pickguard is connecting everything. You can see that the Volume Pot is more or less a central hub for all points of ground contact. Adding more ground jumpers to the parts will create more ground paths, and introduce noise. Design your own with the finest-quality materials in the industry. A lot of grounding mistakes come from not checking your surroundings. If your parts mount to a metal plate or shielding, chances are, they are already connected electronically. In this situation, running extra jumper wires would only over-ground your electronics. The Telecaster Control Plate pictured below is connecting all electronics. By connecting only one ground wire from the Volume Pot to the Output Jack , you ground your parts thoroughly. Furthermore, double-check to make sure there are no stray ground wires wedged under the Saddle Plate. Installation involves soldering a few wires into place. As always, we only use the finest-quality USA-Made parts we can find. Follow the following steps here:. Note 2: If everything checks out in your guitar, start looking at your cable. Lastly, Note 3: If you have Shielding or Conductive Paint, make sure that there is a connection to ground. That should just about do it for now! Grounding is very simple: make sure everything is grounded, but only once. Most good electrical engineers would advocate star grounding to a single point. This is a great article. I never knew multiple grounds could produce noise. When I re-wire my Telecaster, I will definitely rely on the component plate to ground pots. A number of years back I shielded all the cavities, then grounded each in piggy-back fashion to the control cavity, then to the rear of one of the pots. I never heard a single-coil guitar sound less quite. I suggest this for any player looking to reduce extraneous noise. However, with no experience and only a very basic understanding of grounds, I worry about what happens when the properly grounded components come in contact with the cavities shielding tape â€" will this cause multi-grounding, noise spikes, etc? Right now, when I touch the pots I get noise spikes. Do you think this is because the pots are coming into contact with the shielding tape? After I initially left a comment I appear to have clicked on the -Notify me when new comments are added- checkbox and from now on each time a comment is added I recieve four emails with the same comment. Is there a means you are able to remove me from that service? I have no schematic but they sent a wiring diagram. Hi there, really interesting read, thanks. Would a guitar and a wired IEM be able to share the ground in the same lead? For example if I made a dual purpose lead with one ground but three cores â€¦1 core for the guitar and two cores for the headphones and then share the ground. Would that be asking for trouble? Many thanks. But everytime I stop touching a metal part, it hums. My other guitars plugged into the same rig are dead quiet included an i35 with exactly the same wiring. Thank you for your help! I have a relatively complex tele control plate: stacked volume and tone for each humbucker, and a master volume control that is also a push pull coil split. Now the guitar is quiet and I am very happy. Thank you. All my guitars humbuckers and single-coils, both factory setup and replaced-pickups have a hum problem with all my amps until I touch the stringsâ€¦ all amps are grounded properly. What could the cause be? I have an Epiphone electro acoustic, with an active pickup, I run it through a Marshall AS50D amp, trouble is I get a most annoying hum, Marshall say it is a guitar grounding problem. Any suggestions. Sorry for the delay. Honestly, take your guitar to a luthier to have it checked out! They should be able to fix the issue relatively quickly. My wife bought me a Strat when I bought her an engagement ring. It developed a godawful buzz hum thing and got sidelined. I decided to try and sort it out and read this â€" the 80s engineers had soldered a

wire joining all the pots and shielded it. Desoldered it just now and it is a miracle. Hi, to extend this theory â€" The Telecaster Control Plate pictured below is connecting all electronics. By connecting only one ground wire from the Volume Pot to the Output Jack, you ground your parts thoroughly. BAM electricity flows right across your heart and you dead. I am about to wire a telecaster project, composed as follows: â€" 2 single coils coil tapped â€" 1 vol pushpull â€" 1 tone â€" 3 way switch â€" shielded cavities. Bridge pickup has a copper base and the bridge pickup cavity is just a tiny bit wider than the copper plate. Will this be a source of problems? If the above a would not be an issue, guitar bridge would be grounded enoug via the copper foil coming out from the bridge cavity? I apologize for the late reply to this question very late! The Steel Plate it looks copper actually helps ground the bridge assembly together. It does so by the pickup itself â€" take a look underneath the Bridge Pickup. You should see a jumper wire from the Steel Plate to the black lead eyelet. When you solder the black lead from the Bridge Pickup to ground, the Steel Plate gets grounded as well. So do the mounting screws that thread into it. And thus the entire bridge assembly, including the saddles and strings becomes grounded together. Hey Fabrizio. I would try bypassing all the pots on your Tele and going straight from the 3 way to the stereo jack. Ground the pickups straight to the sleeve on the jack. If you now have no bleed, start adding pots back to the circuit until you find the culprit. Good luck. When I touch the outside poles of the top pickup I hear a very noticeable buzz. I have a custom Jazzmaster that I just got and decided to add a copper pickguard shield to help with static buildup on the pickguard. So far so good-next, I decided to shield all the cavities with copper foil tape to get things as quiet as possible. However, when I loosen the screws near it, the signal comes back but then shuts off if you press down on the pickguard and make contact with the pickguard and the body again. This could be a few things, but due to special wiring, its hard to diagnose it over email. I would start with the neck circuit. As always, if all else fails, please take the guitar to a wiring specialist for a quick diagnosis. If you look at vintage telecasters, Leo Fender era, pre cbs guitars, the output ground is hooked from tone pot, but ground wires from pickups is solder to volume pots. What can you say about that? It seems like everything is grounded once, which is the goal. I have a strat american deluxe with N3 pickups and s1 switch. My S1 switch is broken and my neck pickup also. I replace them with standard k volume pot and put N4 at the neck position and make a standard wiring. But I have a strange problem. When i put only the neck pickup at the pickguard sometimes getting quieterand after I pressed it it starrt working. After I screw the bickguard to body only the neck pickup cuts out. One volume and one Tone pot. My question is is it ok to do it. On a 4 way switch tele, should the bridge plate on be grounded to the volume pot? I know the neck pickup cover must be grounded separately. The Pickup has a steel plate underneath that the screws thread into that is connected to ground. No additional grounding is required. I hope that helps! What do you think about the vintage style grounding plates on a Les Paul? Since those plates touch all pots, does that sometimes cause issues? My 84 with a plate has a very noisy buzz unless I touch the pickup cover. Wiring appears to be the same on both. If anyone else could comment, that would be nice. That pickup cover has a broken ground somewhere in the chain. You can find it by holding the cover with a multimeter, and begin by touching all other metal down the chain to find the broken link. Buzz that reduces when he touches the pickup cover actually indicates that the cover ground is fine. Just diagnosed and fixed a buzz on the neck pickup of my les Paul thanks to this article. Sounds soooooo incredibly good now. Thanks so much! First with the loop in place, and then with it cut? Otherwise, there are electrical engineers who argue that you cannot get a hum-producing ground loop in a guitar not just a physical loop. I wanted to modify my guitar so that I can make it sound like a normal guitar and a bass at the same time. This solution works fine, but I can hear a little bit of the bridge pickup sound on the bass amp and a little bit of the neck pickup sound on the guitar amp. Do this happen because the ground is common for both pickups? I have split rails in 2 of my guitars, they sound great except for this Sparkle when I touch certain spots around the pickups or pick guards. My Tele you just have to tap the pick guard. Very frustrating. Sounds frustrating. Definitely sounds like something is not grounded properly â€" do you happen to have a metal pickguard, or conductive paint? The first time this occurred I got the guitar to my bench and tried every way I could think of to properly ground the guitar. The pickguard would still make a crackling sound through the pickups when rubbed on a certain spot. His suggestion? Rub the pickguard with a dryer sheet! I rolled my eyes but I went ahead and tried it because he was serious. So, the dryer sheet did temporarily eliminate the static sound. At that point I knew that the pickguard had some weird way of making static, probably by being delaminated internally at the problem area. The long term fix was to put a new pickguard on the guitar. I advised the guy to swap the pickguard which he did and the problem was solved. So, Steve, I recommend that you change out your pickguards. I hope this helps. I know it sounds crazy! I thought about it for a long time before I posted this. I installed a

lace sensor gold in my acoustic. Single volume to jack. Easy right? Well there is a buzz that will not go away no matter what i try. Properly wired and grounded. White green tied and grounded and orange to hot. All good but still a buzz. Any ideas? Ive done this many times and never had this problem. Your email address will not be published. Previous Next. Shop now. Tone-Talk, Ep. Hey Chris, Sorry for the delay. Any advice would be gratefully appreciated! Hey Francois, I apologize for the late reply to this question very late! Hope that helps! Hi There, I have a custom Jazzmaster that I just got and decided to add a copper pickguard shield to help with static buildup on the pickguard. Hey Jamey, Thanks for writing in. Hope that helps, Tyler. Hey TB, This would be a task for someone else to do! Thanx in advance! Steve, Sounds frustrating. Hi, Steve and Tyler. Leave a Reply Cancel reply Your email address will not be published. Poor grounding can cause noise and shocks, while improper shielding will allow radio frequency interference RF and electromagnetic interference EMI to penetrate your signal. These are a few techniques you can use to provide additional shielding and better ground for your guitar. The primary reason to make sure your guitar is well-grounded is safety. Incorrect grounding can create a shocking hazard, especially in a humid or wet environment. It can also lead to shocks to your lips and face if you use a microphone with an improperly grounded guitar. Improper grounding can also create a ground loop, which will allow noise from RF and EMI to enter your signal. Any electric motor or fluorescent light can create interference, as can light dimmers, microwaves, CB radios, and power transformers. This interference can bleed into your signal through unshielded sections of your guitar wiring and create a static or buzzing sound. Shielding is an extension of the grounding system, and it connects directly to the ground. As the name suggests, shielding surrounds your electronics to prevent the interference from reaching your signal. A single-coil guitar pickup is an efficient RF antenna, so it will always pick up noise by design. The only way to remove the noise from a single-coil is to use a second coil to cancel out the sound, as the humbucker pickup does. However, proper grounding can significantly reduce the amount of noise that enters your signal. One of the most common grounding problems has to do with the output jack. This component is easy to wire backward, and it often happens after replacing a faulty jack. The ground loop is another common cause of excessive noise. Similar to how old-fashioned television antennas were made, any wire connected to itself in a circle can pick up electromagnetic fields. The reason it acts as an antenna is that a single-coil pickup contains hundreds of these loops of wire. If one of our components connects to ground more than once, we can accidentally create a ground loop that also acts as an EMI antenna. There are two common ways that we create a ground loop. We expect to ground all of our pots by soldering a wire to the back of each one, but we can accidentally create a ground loop if we do. Take a look at Fig 1. Figure 1 shows a standard way to wire a double-humbucker guitar, such as the Gibson Les Paul. If you look at the image, you will likely notice the backward C created by the ground wires connecting the four pots. After all, there is already a direct connection between the two. If you wire your guitar this way, it would work just fine, but you would notice an increase in static. The reason for the rise in static is that you have inadvertently created a loop as you can see in Fig 2. You might not notice the increase in static immediately, so might not attribute it to the added wire. Even when wired correctly, the backward C created is very close to a functioning antenna and could be close enough to allow noise to enter the signal. You can create a star ground by choosing one point to connect all of the ground wires to in a central location. The cluster of ground wires will form the image of a star, instead of a circle, shown here on Fig 3. The star ground will resist EMI and prevent you from accidentally creating a ground loop later if you perform other modifications. The second most common way we accidentally create a ground loop is by using a metal control cavity cover. The Fender Telecaster is one of the better-known guitars to use a metal control cavity cover, but there are plenty of others. A steel or aluminum pickguard is another example. When you attach your volume and tone controls to a metal cover, that cover becomes the ground wire for those components. You no longer need the wires, and if you add them, you will create a ground loop. The electricity can pass through the wires, then through the cover, the wires, cover, and on. This type of ground loop is worse than the first, because it creates multiple loops between the components and the cover. If you were to use a metal shield on a guitar that used the wiring from Fig 1, you would need to remove the ground wires. The result would look like Fig 4. If you wired your guitar the way it is in Fig 4, it would work correctly, and there would be no ground loop to act as an antenna for noise. Stratocasters can also make use of the star grounding technique, and any guitar with more than two knobs should use it. We only want to talk a little bit about shielding because it deserves a separate article, but it is also part of the grounding system and is the chief cause of noise in the guitar. A shield is an antenna that attracts and traps the noise created by electromagnetics and radio frequencies. Not many pickups have metal covers, but the ones that do get an added benefit of shielding. A wire connects the metal

cover to the ground, and the cover protects the coils from electromagnetic interference. Shielded wire is also known as insulated wire. If you cut one of these wires open you will see a braided wire with another wire inside it. If you use your guitar in an environment that has a lot of electromagnetic interference, it might be worth the effort to switch to shielded wires. You will only need to replace the wires that do not connect to ground, but you will need to solder both ends of the shield to ground for each wire. Grounding can be challenging, and much of the wire may still be exposed if this is not carefully done. Your guitar cable is an excellent example of shielded wire, and it is often the culprit when noise suddenly increases. The shield can often break at one of the ends, but leave the cord operating correctly, except for the noticeable increase in noise. The final shielding technique we want to look at is the shielded control compartment. This technique requires you to cover the entire cavity, cover and all, with an aluminum or copper tape. Once the tape is in place, solder a wire from the tape to ground. Compartment shielding provides an effective buffer because it protects all of the electronic components. When you use compartment shielding, you must take care not to create a ground loop, as outlined in Ground Loop 2. This modification is a popular way to create a ground loop, but it causes your guitar to be noisier than when you started. Hopefully, this helps you understand the wiring inside your guitar a little better. For more articles on guitar electronics, please be sure to visit us at humbuckersoup. In an electric guitar or bass, it's usually necessary to 'ground' the strings. By this, I mean that all the strings should have a path to ground â€" a wire that connects them to a ground point inside the instrument. Usually that ground point will be the back of a pot or the sleeve of the output jack. When it's properly grounded, you can touch the strings of your guitar and you'll usually hear the background hiss reduce. You see, a human-being actually makes a pretty good antenna. And the guitar is picking some of it up from you. We need to run a wire from one of the common ground points inside the guitar to the metal bridge or tailpiece. Because each of the strings touches the bridge or tailpiece, each one gets grounded. A Strat is a bit more complicated but here's how not to do it. An effective, although not the most aesthetically pleasing way, to ground a Strat. Well, it's certainly effective. It does the job of connecting the bridge to the grounded metal plate around the output jack. Jury-rigging like this can certainly get you out of a hole if its needed. It will have the benefit of not affecting the bridge movement. I'd go for that. Soldering a wire to the tremolo claw is a more 'traditional' way to ground a Strat's strings. This article written by Gerry Hayes and first published at hazeguitars. Thanks a lot. Check your inbox for an email for meâ€"you'll need to confirm your subscription there. It might take a few minutes to come through so, don't worry if it's not there immediately. Blue Collar. Sketchy Setups. Solving Intonation Problems. Truss Rods Made Easy. Complete Guitar Wiring. How To Set Intonation. Make Appointment. Location - Find Haze. How to ground your guitar's stings We need to run a wire from one of the common ground points inside the guitar to the metal bridge or tailpiece. View fullsize. Neck Resets - Steaming out the neck. Neck Resets - Beginning to remove the neck. Neck Resets - Introduction. Haze Guitars status update. Free Social Distancing for Musicians Sign. Strat Elite - Jammed Tremolo Arm. Repairing a damaged acoustic guitar bridge plate. Straightening a bowed neck: Correction and Reassembly. First Name. You are signing up for my email newsletter so the understanding that you'll receive emails is pretty explicit. However, in order to comply with privacy regulations, I also need you to provide consent to store and process the information you've entered. I don't do spam and you can unsubscribe at any time. You can read more in my Privacy Policy. I consent to having this data stored and used to personalise newsletter emails. Is your guitar making an annoying buzzing sound? And it very well might be just that. But other issues can cause humming or buzzing , too. And if it turns out your guitar needs to be grounded, we also tell you how to properly ground your guitar. The main reason to ground your electric guitar is to get rid of unnecessary noise caused by the electronics. This sound, however small, is caused by a ground loop, and is actually quite easily taken care of. To find out, plug your guitar into your amp. Touch the strings. This happens because the guitar actually grounds you. You are, in effect, a big electrical antenna. You attract EMI, which is then transmitted into the signal chain of your guitar. When you touch the strings and are grounded by the guitar, the hum stops. Beyond the hum and buzz, there is also an element of safety to grounding your guitar. Something to consider, is whether your guitar has active or passive pickups. No grounding is needed â€" It has got a ground that is activated when the lead is plugged into the jack. Single coils will always buzz, unless you modify your guitar and add another pickup much like with humbuckers. The potentiometers are the bottoms of the volume pots on the face of the guitar. It gets extremely hot. In fact, solder melts at twice the temperature of boiling water. You do not want to take this process lightly. Measure out and cut a piece of wire long enough to link the top left potentiometer to the top right one. Solder one end of the wire to the top left potentiometer, and the other end to the top right to connect them. Repeat this

with a piece of wire from the top right potentiometer to the bottom right one, and then again from the bottom right one to the bottom left one. Because this wire is there, it might lead you to think that you can connect the bottom potentiometer to the top one in the same way that you created the backward C. But this would not do you any good. This will create an even worse ground loop, since the static just continuously cycles through the circle. But there is another method that can prevent this. Instead of connecting the wires as in the above method to create a backward C, dedicate a central potentiometer to connect all the others to. Start at the top left potentiometer, and measure and cut a wire long enough to connect it to the bottom right one. Then solder that wire to connect the two potentiometers. Now, measure, cut, and solder a wire from the top right potentiometer to the bottom right one. And repeat this for the bottom left potentiometer to connect it to the bottom right one as well. This method is definitely the better of the two detailed here to avoid ground loop and hum for guitars with two humbuckers. It resists EMI and is also a foolproof way of preventing yourself, or anyone else who might service your guitar in the future, from accidentally creating a ground loop. This kind of ground loop is actually far worse than the ground loop you might create or hear in guitars without a metal covering. You would actually create a ground loop rather than getting rid of it. To do this, solder a wire to the bridge pickup, and then connect that wire to the potentiometer. Repeat this for the middle pickup, and then again for the bottom pickup. As with the star grounding method for humbuckers, the star shape is created by these three wires being connected to the potentiometer, and the claw and output jack wires that come from that potentiometer. As you saw in the backwards C shape method, adding too many wires actually causes ground loop, or makes it worse. Another common mistake is to not ground everything. Most people will not need to ground their guitar. Whether it is a baritone guitar or one with a standard scale length, it should already be grounded when you buy it. If it turns out that you do have a ground loop, follow the instructions in this post to properly ground your guitar. Your email address will not be published. Some recommended products may use affiliate links. As an Amazon Associate I earn from qualifying purchases. Like this? Please share You Might Also Like. Leave a Reply Cancel reply Your email address will not be published. Search Search the site Disclosure Some recommended products may use affiliate links. Shielding allows you to substantially reduce all unwanted interference and hum. This kit is even beneficial for most production instruments as it lets you completely encase all of the pickups and controls with a grounded foil. Also included is a special wire for shielding non-shielded pickup leads. This allows you to eliminate unnecessary interference, as well as being able to switch the phase of a shielded pickup independently from its grounded shield. Unless you feel completely competent in soldering, desoldering, and a basic understanding of guitar wiring, you should take your instrument to a qualified luthier or repairperson. There is no warranty extended to cover damage caused during the installation of this product. Any shop doing guitar wiring and setup should have these books in its reference library. In order to completely shield your guitar you will have to dismantle and desolder a majority of the guitar's components. It is highly recommended that you make detailed notes on how every component was wired, as well as marking specific wires and solder points with tape labels to help in rewiring the instrument. Be very thorough. One mislabeled or unlabeled wire could cause a great deal of confusion when you are rewiring the system. All of the shielding must be in contact with ground. There are several ways to apply a ground to a shielding network; when dealing with copper shielding foils, the ground wire can be soldered directly to it. If your volume pot housing is in contact with the foil, a ground jumper is not necessary. Shielding paint , not included with the Self-adhesive Shielding Kit is also very good for shielding control cavities, pickup routs, and drilled holes. The paint is very easy to apply in small, tight areas. Applying ground to a Strat type guitar is very simple. Bring the foil over the top of the body in the area that would be under the pickguard and around the pickguard screw below the bottom tone pot. The foil on the pickguard should surround this screw hole so, when the pickguard is screwed into place, the grounded foil on the pickguard will come in contact with the cavity shielding. Another method is using a solder lug screwed into the cavity's side wall. Make the solder lug out of a scrap of brass and use a small wood screw to affix it to a cavity's side wall. Just solder a wire from the volume pot's casing to this lug for a good ground. This is not recommended on vintage or rare pickups. This is a delicate job that may be better left up to a professional. This may also reduce some high end frequency from the pickup. A great deal of the hum and buzz associated with single coil pickups can be eliminated by using this shielding kit as you will shield the coil as well as the output wire. The shielding of the output wire also allows you to switch the phase of the pickup swap hot for ground while still maintaining your shielding network. Remove the pickups from the pickguard assembly and make note of which lug is hot and which is connected to ground. Be sure not to damage the two fine copper wires that exit the windings and are soldered to the wire lugs on the

base of the bobbin. If the cover appears to be glued to the lower bobbin plate, stop and consult with an expert. Wrap the coil with a strip of black electrician's tape. Wrap the tape around the bobbin and overlap it over the part that still has the paper backing. From outside to inside in the area of the wire lugs you have the following layers: foil, foil, paper backing, black tape, black tape, windings. The paper is left in the area of the overlap because it reduces the risk of getting the area too hot when soldering and shorting out the windings. Before soldering you will want to check to be sure the cover can still be installed. Cut a piece of the two conductor plus shield wire included the same length as the pickup's lead wires. Carefully tin these wires by coating the tips with a small amount of solder. Very carefully desolder the two pickup lead wires from their lugs. Be sure that you made notes as to which lug was attached to ground and which was hot. Now solder the blue wire to the ground lug and the white wire to the hot lug. The outer braid is soldered to the copper foil where you overlapped the paper backing to protect the windings. It is also recommended to solder the point where the foil overlaps itself. This will ensure that the foil will not loosen with age and makes for a better shield. To hook up the pickup: solder the white wire to the selector switch; the blue and outer braid to the back of the volume pot unless you are using a phase switch. Check your shielding for continuity with your VOM and make sure that the hot wires are not shorted to ground. Depending upon the type of humbucker s in the instrument, you may not need to do any additional shielding. For example, Gibson-type humbuckers with their metal covers in place do not require any extra shielding. A Precision bass which uses a split humbucker and plastic covers could benefit from additional shielding. P-bass pickups generally do not have a shielded output wire, so you will want to replace it the same as outlined in the single coil instructions. If you have a Gibson type humbucker without a cover, you may want to obtain metal or plastic covers for them. The metal covers are soldered in place to the frame or base plate of the humbucker. Plastic covers require the same treatment a Strat type single cover would get. Before shielding the instrument's cavities, remove all of the electrical components, pickups, pots, switches, jacks, etc. Be sure to make notes on how these parts were oriented and hooked up. Start by applying some of the copper foil to the bottom of the cavity. To size the piece, lay the foil on top of the cavity and drag your finger around the edge of the rout. This will crease the foil and give you a guideline for cutting a properly sized piece. This will give you some foil that will extend up the sides of the cavity and will be overlapped by the foil applied to the sidewalls. Make several cuts from the outside edge of the foil to the crease mark in the areas that will be in corners or curved portions of the rout. They will allow the foil to go down smoothly on both the bottom and the sidewalls. After you apply the bottom foil, you are ready to affix foil to the sidewalls. Three strips is usually enough to cover the sidewalls and be sure to slightly overlap the strips so that the shield is complete. Lightly solder the overlapped areas at a few points to ensure a total shield. We also carry a 2' wide copper foil , sold separately that is very useful for shielding. Check for continuity between the copper and the copper when you have finished. If you do not get a good reading, press the copper down against the copper again to make the contact complete. If the shielding is in a pickup rout, be sure to connect it with ground. Use the self-adhesive copper foil on the back of control cavity covers and pickguards. Be sure the foil on your cover plate or pickguard will come in contact with the shielding applied in the cavity it covers. When shielding pickguards, the foil only needs to be applied in the area of the control cavity. Check your notes frequently so that everything gets wired correctly and use caution when soldering to pots and switches. It is easy to get them too hot which would cause a malfunction. Be sure that no hot connections come in contact with your shielding as this would cause a short circuit and there would be no output. Heat-shrink tubing or black tape will protect hot connections from touching the shielding. Rout and solder the hookup wires neatly as this will aid in replacing pickguards or tracing faults. Do not make the wires too short. A little slack aids in making other connections and troubleshooting. Run a string ground unless you are using active pickups. Pickups shouldn't be adjusted too close to the strings. Adjusting pickups any closer especially with single-coils can cause false notes or "wolf-tones. It is most often referred to as "Strat-itis" and can cause a lot of head scratching unless you know what is happening. To cure the problem, simply back the bass-side of the neck and middle pickups further away from the strings. We Ship Worldwide! Related Items. Our mobile site is new, Give Feedback X. Mobile Feedback. Please leave your feedback below Your Name. Your Email Invalid. GetSearchUrl document. Whenever you're mixing sound, whether in a studio or a live environment, grounding the mixer is among the most fundamental and easy things you must do. Ground-induced hum can be introduced throughout the signal chain and is one of the most distracting and annoying mishaps that can occur, virtually ruining the resulting sound output. Most every audio mixer, from rack mounts to state-of-the-art studio and concert mixing consoles, have a connection to ground the mixer. Locate the ground terminal on your sound mixer. If there is no terminal,

attaching a grounding wire securely to a metal part of the board chassis will also ground the mixer. Connect the grounding fork, a U-shaped metal connection on an RCA cable, to the grounding post on the mixer. The grounding post is most often positioned on the back panel of the sound mixer. Loosen the grounding screw, if the grounding post on the sound mixer is a screw, and slide the grounding fork beneath the screw shaft. A bare wire wrapped around the post will also suffice for grounding purposes if you don't have a particular cable. Tighten the grounding cable securely to sound mixer and route and attach the other end of the grounding cable to any metal surface that is in contact with the ground. Hartig is a Certified Physical Trainer combining an expertise in physical fitness with a passion for writing about wellness. He is in the process of developing a website on fitness counseling and has written blogs and commentaries for several health-care websites. Share It. Things You'll Need. Turn on the sound mixer to ensure there is no audible hum induced by a lack of grounding. This is especially important if you plan on using a large amount of distortion or overdrive in your signal because added gain in your sig

dishwasher wiring diagram
2010 nissan maxima interior
subaru oxygen sensor recall

nal chain will amplify noise along with the signal. A properly grounded guitar will ensure you are getting the most out of your tone. Not all pickups need to have a ground going to Earth. Passive pickups do not have any active pre-amp circuitry and will always need to be grounded to Earth. The most common method is to ground each guitar pickup to the potentiometer that will control the pickups volume. This will allow for the shortest lead wires since the volume pot is the first component in the circuit. Each component should be grounded and connected to a common Earth ground. This provides for a cleaner and more consistent circuit as opposed to running a separate ground to the bridge for each component. Locate the path of least resistance to run the ground from the circuit to the bridge. If your guitar is a fixed bridge with a base plate, the path of least resistance is from the control cavity to a location directly under the base plate. By: Lisa Wampler Updated September 15, Share It.