



JAMES'
HOME OF TONE
SINCE 2015

SIGNATURE SERIES

Pre-wired Guitar Harnesses

READY TO INSTALL YOUR NEW HOME OF TONE GUITAR WIRING HARNESS?

Before we dive straight in and fire up the soldering iron, do please take the time to read through this install guide. I have written it to help you with your install, to help the process be as stress free as possible, and to hopefully cover any questions along the way. It is intended for any guitarist, whether you are new to the world of guitar wiring, or an accomplished pro with plenty of re-wires under your belt. Thank you for taking the time to read this guide!

First of all, I want to say a heartfelt thank you for choosing one of my pre-wired harnesses for your guitar. Whether it's for a long overdue repair, upgrade, modification or a project, I honestly enjoy making them for you all and the response from guitarists since introducing them back in 2015 has helped that enjoyment grow further, so thank you for the continued support.

Important note

Although a complete, pre-wired harness offers a guitarist the simplest solution to swapping your guitar's wiring, I do recommend taking your time to familiarise yourself with the task ahead before attempting to fit. I do understand for some new to guitar wiring that it can be a daunting task, but it can be a rewarding job to carry out if done so with the correct knowledge, tools and preparation and something I feel is a skill that is of great benefit for all guitarists to learn. Soldering is a somewhat simple task, but good technique is achieved from practice and you'll need to ask yourself whether you're keen on practicing that technique on your pride and joy guitar. I honestly don't want to deter anyone inexperienced in guitar wiring from giving it a go, but perhaps find some old or broken pots for example and practice getting used to feeling the solder flow and when it 'takes' to a surface, this could be a big help when it comes to installing the harness and reduce the risk of damaging your new harness or guitar.

To help further, on my YouTube channel there are some videos where I have featured some helpful soldering methods and techniques. Particularly useful if you too are using lead-free solder.

With that being said, if you are at all unsure about fitting, I do highly recommend getting a professional and importantly, trusted guitar technician to fit the harness for you. If you are local to my office (Stourbridge, West Mids based), I do also offer a fitting service of my harnesses if required or if you're not local, I have begun to compile a small list of trusted techs I would be happy to recommend across the country.

I cannot take responsibility for the incorrect fitting of your wiring harness, control knobs and other harness related items to your guitar. If you choose to fit this harness yourself, please do ensure that you have the correct tools prepared, have read through this guide, taken the time to feel confident in carrying out the task and have read and fully understand the wiring diagram associated with the kit. Please ensure you refer to my wiring diagram(s) rather than one from another supplier, this is simply because my diagrams are drawn with the components I use and methods I used in mind, so it should be easier to follow than referring to one where these details may be different. Importantly, you should feel 100% comfortable carrying out the task. I pride myself in the level of care and attention when making my harnesses. The components, connections and solder joints are checked prior to packing, if the item has been mistreated, incorrectly fitted or damaged by yourself or those fitting for you, I cannot take responsibility for said damage which is another reason why I highly recommend having a qualified, trusted professional guitar technician carry out the work for you. Since introducing my harnesses in 2015, I can honestly say the entire experience has been very positive and any customers who have been concerned about any details have contacted me prior. I am very much here to help and take pride in doing so, so if you have any questions do please contact me before diving in and possibly fitting incorrectly, causing damage to your much loved guitar and/or new wiring harness. I'll be more than happy to help with any queries!

Your tools

- Most hobbyist soldering irons we have in our tool cupboards at home are up to the job of helping you fit your harness. For working on guitar electronics, I personally recommend a minimum of a 40w iron, this should provide ample working temperature for the task at hand. A variable temperature iron can prove to be useful for guitar wiring too, as soldering lugs doesn't usually require as high working temperature as soldering grounds on pot casings for example. Again, this is something where practicing solder techniques on any old components can prove really useful to get a feel for the optimal operating temperatures suitable for each task. This all helps ensure a solid solder connection is made and no damage is caused to any component or your guitar.
- Due to commercial product reasons, I have to use lead free solder to complete my wiring harnesses, so if you plan to use the same during your install, I personally use and recommend Rapid brand 22SWG 0.7mm lead free solder wire.

Whether you're a soldering veteran, or completely new to soldering, many find that using lead free solder can initially prove a little tricky to work with, as it flows at a higher temperature than previously commonly used 60/40, for example. So if you are new to using it, perhaps use some old components to test on and get a feel for using it before working on your new harness and/or treasured guitar. Rapid lead free solder is available in small lengths meaning you won't necessarily need to buy a huge reel of it if not required to. Rapid lead free solder can be purchased direct from Rapid online or from most major online electronics suppliers, such as RS Components for example. Please take care when using, avoid breathing in flux fumes and ensure you wash your hands before eating or drinking for example.

- Depending on brand/model of pickups you have, you may also require wire strippers if they are plastic coated wires, or simply wire cutters if they are push-back style wires.
- Small nose pliers. These make some delicate or small wires easier to handle when installing the harness and pickups etc.
- Screwdrivers for removal/installation of pickguards, pickups etc depending on your model of guitar.
- Sockets/spanners for removal/installation of pot and jack mounting nuts.
- Multi-Meter. These are incredibly useful during guitar wiring work, for testing components to troubleshooting.

Wiring Diagrams

I have created wiring diagrams for all of my pre-wired harnesses, and in an effort to reduce the amount of excess packaging and waste, I have made all of these available on my website to view or download as a PDF. The wiring diagram will help with the final stages of the install, and I've tried to make the illustrations as simple to follow as possible. Please do familiarise yourself with the diagram prior to starting the install. The wiring diagram will mainly be required by you when fitting your pickups and where to solder those wires too. You will find the wiring diagrams via the drop down main menu 'Wiring Diagrams & info!' Along with sub menus to select the specific guitar type/style, along with links to the various guides too. But if you're not sure which is the correct one for the harness you have purchased, do please drop me a message and I'll happily forward it to you via e-mail as well! - james@homeoftone.co.uk

Pickup wire colour codes

When soldering your pickup wires, you will need to consider the colour code of the wires. Rather unfortunately, no two guitar pickup companies appear to totally agree on a set colour coding to use. Different pickup makers and factories use their own colour codes, so please ensure you refer to their colour code diagrams prior to going ahead with soldering. Depending on the guitar, and type of pickups you are intended to fit, there could be a variety of pickup wire types and colour codes to consider. If you are at all unsure, contact your pickup manufacturer prior to starting the harness install, or failing that, feel free to get in touch with me and I'll do my best to help! My wiring diagrams have been drawn with either traditional 2 conductor or McNelly Pickups colour codes in mind. Again, a McNelly colour code diagram is available to view on the 'Wiring Diagrams & info' page of the website.

Install prep and tips

Pot shaft diameters

As my harnesses use USA specification pots, if you are upgrading your far east built guitar for example, you may find you need to widen the body holes and/or pickguard holes to accommodate for the larger shaft diameter (9.52mm). I recommend doing this using a step cutter. This is in my experience the safest method as it will reduce the risk of paint chipping around the hole, but also make the process easier on pickguards too.

- I usually widen the pot mounting hole on pickguards or bodies depending on the guitar being worked on, to a 10mm hole to comfortably suit and fit the CTS USA specification 9.52mm shaft diameter. Switchcraft 3 way toggle switches for example require a 12mm mounting diameter hole. If you are installing the harness to a USA made guitar, then there is very good chance the components will be like-for-like sizing and will be a direct fit.

A good technique is to tape off the stop point diameter required on the step cutter to avoid drilling to the wrong diameter hole, and carefully run your drill to ensure an accurately finished hole. Once this is done, you can finally finish the hole to straight edges by running a suited regular drill bit through for the pots to easily fit through.

IMPORTANT- Again, please note that if you are not comfortable with doing this in any form, or importantly don't have the correct tools, I highly recommend taking this to be done by a trusted professional guitar technician. It's not worth the upset and disappointment in damaging your guitar.

Fitting Push-fit control knobs

Now this paragraph might seem utterly crazy, how hard can pushing your control knob on be?! But hand on heart, this is a very common mistake and one that deserves mentioning specifically!

This does not apply to solid shaft type pots as they are affixed via a adjustable grub screw and shouldn't require the attention to detail upon install that a spline shaft, push-fit control knob does.

Whether you are refitting your existing USA spec control knobs (5.95mm diameter with 24 splines), or have purchased a new set of control knobs either from myself or another store, this is very very important as it can easily cause damage to your freshly fitted and wired in harness which only leads to disappointment. Please ensure care is taken when fitting your push fit control knobs to your pots as they are designed to be a snug fit on the pot shaft, but if forced on can cause extensive damage to your pots which I can't be held liable for. It is very obvious for me to see if the damage caused to a pot was done by incorrect adjustment and force fitting a control knob, as the pot shaft will be pushed right through the back casing of the pot as a result.

To correctly fit - Gently push them onto your pot shaft first. If it feels too tight, to the point that excessive pressure is required or that you get a feel that you are forcing it on, then stop immediately and remove the control knob.

With the control knob removed, slightly pinch the split shaft of the pot together and re-fit the control knob, repeat if required until fit is perfect. It should push on fairly easily but with enough pressure to feel like it has sufficiently gripped the pot shaft and your control knob will stay put. If you have import sized control knobs these will NOT fit the CTS pots I used for my harnesses, they're too small and will damage your pot in forcing on to fit, so please do not attempt to fit these to the harness.

The very design of a split shaft pot is to do this, ensuring a tight, secure fit on the control knob. They are of course super super easy to fit, but surprisingly super easy to break your new pots in doing so as well. I advise to take care when fitting to avoid any damage to your pot. Nothing worse after spending time fitting your fresh harness, string back up etc and finally end up damaging your pots by forcing the control knobs on afterwards.

If it helps further, over on my YouTube channel I filmed a simple visual guide to adjusting split shaft pots for push-fit control knobs so if that sounds like it would be useful to you, pop over to the channel for this guide.

Soldering the jack socket (only on certain guitar models)

It is a simple task for many, but some might not be quite as confident at wiring a guitar's jack socket. On some guitar models like a Strat or Les Paul for example I cannot pre-wire the jack socket prior to install due to cavities and routing inside the guitar body. If you haven't soldered a guitar jack socket before, I have written a helpful article on the blog showing you how to do it to avoid any disappointment or frustration from wiring it incorrectly. I hope this helps! - <https://www.homeoftone.co.uk/blogs/news/how-to-guide-wiring-your-guitars-jack-mono-socket>

Troubleshooting

You've finishing the soldering, and eager to hear your guitar breathe again but something is wrong! Then don't worry, it is likely to be something quite simple and I'm also here to help best I can. If for any reason you have encountered a problem after following the instructions and wiring diagrams, here are a few common issues that may get you back up and running before any concerns kick in.

- ***There's no sound at all?*** If it is completely dead, with no signal at all then this could ultimately be a number of things. But first thing to double check is that the lead is fully engaged into the new pure tone multi contact jack socket. If you haven't used a Pure Tone jack socket before, these do feel a great deal firmer than a regular jack socket. It is surprisingly common for players to have not fully pushed the lead all the way in, so the connector isn't correctly seated onto the tip contact of the socket. So double check that firstly, if it is fully connected then we need to check over your connections from there. It could possibly a broken hot lead. Check your guitar cable and re-address. Check that the wires to your jack socket, switch or output lug of volume pot are okay. Another commonly seen fault is on guitars where the control cavities have been lined with shielding. Sometimes there is a live connection touching the shielding, resulting in the signal being put to ground. Double check any connections are clear of your shielding. Still nothing and not sure

what else to check? Send me an e-mail at james@homeoftone.co.uk with some clear information and photographs of your install and I will see what I can do to help.

- ***There's a loud hum/buzz, but there's no string sound?*** This is possibly down to a broken ground connection. A correctly grounded circuit in a guitar is pivotal in it operating correctly. Check the ground connections made, and re-address. It could also be an incorrect connection at the jack, or again, the lead not correctly seated in the jack socket. Check and re-address. Again though, not sure what else to check? Send me an e-mail at james@homeoftone.co.uk with some clear information and photographs of your install and I will see what I can do to help.

- ***There's a hum, which gets louder when I touch the pickups or metal components?*** This again has the potential to be a few things, but there are some key points to check. If it's exclusively when you touch the pickups, then there is potentially a fault with the pickups, either themselves or simply their connections. Double check their ground connection/solder joint is secure, test with a multi meter if you have one for ground continuity and re-address. If connection secure; If the pickups are brand new, consult the pickup supplier/manufacturer (providing all other wiring connections have been tested and proved to be okay). If they are old pickups that worked perfectly prior, check you have correctly identified the 'hot' and ground wires, and install the pickups correctly to the harness.

If it is when you touch metal components on the guitar such as the bridge or strings, then you may have an issue with your ground connection from the bridge. There should be a wire coming from your bridge, bridge stud or tailpiece which has been soldered to your new harness. Ensure this is securely connected and re-address. If you do not have a wire from the bridge, you will need to install one to ensure your strings are ground in use. If it happens when you touch other metal components, control plates or control knobs for example, there is a potential ground loop. You will need a multi meter to rule this out though, checking for continuity etc. Again though, not sure what else to check? Send me an e-mail at james@homeoftone.co.uk with some clear information and photographs of your install and I will see what I can do to help.

- ***One or more of the pot controls don't work?*** This is likely because of a broken connection. Check back on the wiring, and look for any connections that may have been broken, wires that have been pinched upon installation, and address.

Ultimately, I wouldn't wish or expect you to have to fault find yourself. So if you have an issue that you are at all concerned about, please let me know and I will be happy to help you resolve and get back to enjoying playing your freshly wired up guitar! If you have any further questions, or perhaps wish to have your harness fitted to your guitar by me, don't hesitate to get in touch and I'll be there to help as soon as possible. I really take a lot of pride in my wiring harnesses and most important to me is that fitting is as straightforward as possible and your guitar is enjoyed more than before! Thanks for supporting our shared passion.

Please be safe upon installing your new harness.

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