A "How To" Tutorial to creating authentic looking "Relic" guitars

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**Phase 1**

Ok here we go... How to do a relic guitar, a practice that seems to be shrouded in secrecy. I am by no means a master of relic work but have been doing it for a while as a hobby. I want to present to all you folks how "I" do my relic jobs.

First step is to get a guitar or bass... pretty simple you would think. But if this is your first time you might not want to try this on your beloved instrument. A SX Bass or a Squier strat make a perfect candidate for your first few times.

I will be using this Squier strat as the victim for this tutorial. Now I know the purists are going to bash and say its stupid or just play it and let it happen naturally. Well that doesn’t always hold true for people hence hundreds of luthiers and custom shops are offering relics.

If your guitar is nitro laquer this will be a 100x easier to replicate and also will look much more natural but in most cases this just isn’t going to happen with todays durable thick poly finishes. The Squier in this tutorial is a poly finish.

Ok here is a shot of the body before any relic work, its black obviously and has aged white fender parts. *Sorry for the fingerprints and glare i'm not a camera man LOL*
Couple shots of the neck pre relic-ing. Notice I have already done a logo change on this neck before deciding to do this tutorial.. I can explain this more down the road if need be.
And a couple shots of the mirror-like finish on this guitar. Not for long.
**Phase 2 - Take her apart**

Pile of metal parts. Notice the bridge is already showing wear. I will explain how I got that look.

One neck stripped of all her hardware
One naked body isn’t she sexy?

Finally one pickguard and 2 sets of parts (aged white and natural white). I will do two different relic options on these. Aged white will get a small relic treatment, natural white will be getting a BIG time consuming treatment to simulate the old bakelite parts. This guard was once natural white. Under the knobs I kept it white exactly how a aged pickguard would look. This was created by using warm water and some Ritt Tan Liquid Fabric dye. Its a simple process. Fill a tub with water, pour in some of the dye. Check every so often till you get the color you are looking for. I used gum to mask off the white areas.
Ok the first thing were going to work on is the pickguard. A true vintage guard always seems to be cleaner and not as faded under the strings and obviously under the knobs. We are going to simulate that as well. It’s about the details.

So here we have our stock cream-colored guard. You can use white or mint. Whatever you want, even black, but black you can just fade the gloss off.

**I will be using this for the pickguard:**
- 0000ga Steel Wool must and I will say it again… use 0000ga steel wool
- Minwax IpSwich Pine
- Miniwax Special Walnut
- Toliet paper must be plain no dimples or lines etc just cheap toliet paper
- Paper towels doesn't matter what kind
- Q-tips
- Rubber glove if you like not having dyed hands
First thing we need to do is remove the gloss from the pickguard as shown here.

This is done by rubbing the 0000ga steel wool in variable ways don’t keep a consistent up down or right left or it will show. I use small circular motions.. This stuff is going to get everywhere but don’t worry about cleaning it off at this point leave it there.
With the pickguard all rubbed down, there is no gloss left on it. It's nice and flat which is perfect for the next steps cause in this process we also roughed up the finish just enough to accept the stain.
The next step is were going to grab the IpSwich Pine and put a nice amount on a paper towel crinkled up. Dont dip it so its dripping everywhere but make sure ya go some on there
I basically just wipe it on from left to right making sure its got a good cover. You also don't want to wipe any where the strings would be. You should look close to this right now.

Now take plain toilet paper, crinkle it up and dab in alternating dabs. Don't press too hard we're just trying to get the uniformity of the application to look natural. Remember to dab in alternating dabs so nothing looks the same. *Pay attention to the area under the strings. You want to blend in as much as possible, not to look like a seam is there. Just dab it a little more by that separation of colors*
I then will take my bare finger and do circular motions under where the knobs would be. This is a detail step if you want to do it is up to you. Its not neccessary.

You should look like this now.. Repeat as many times you want. Its up to you how it looks. But **KNOW WHEN TO QUIT** its easy to over relic your guitar and the most common mistake done by new guys. There is some hideous relics that are just over done. Were trying to make this as realistic as possible.
Next step is again a detail step. A lot of vintage strats will show dirt and rust stains around the screw holes. We will be using the Special Walnut stain for this part. Get yourself a Q-tip and dip it in the stain.

Take it and push it into the hole. I also will apply some by the switch this again is a detail step.
Now don't freak out when the two stains clash it will look like this. Grab some more toilet paper and crinkle it up and dab very lightly to blend the two colors together. Remember when I said don't clean off the steel wool particles you can see we were leaving them on now and you will see why later on.

The guard is done, set it aside and let it dry as long as possible. Stain doesn't absorb into plastic quickly. It will dry till its really tacky, then we're ready to finish it. Until then, leave it alone for a week or so.
**Phase 3 - Finish the aged white pickup covers and knobs**

Bust out the 0000ga steel wool again and take that gloss down to a flat sheen. As you can see the steel wool breaks up rather easy leaving a trail of small metal threads. Might want to wear a long sleeve shirt and jeans if you got real sensitive skin. Don’t go rubbing your eyes.

One done, two to go. See how the gloss is gone. If your guitar or bass only has black plastic parts then you can stop at this stage, you can how ever dab a little stain on a part you buffed flat to add a different texture to it. Like on a bass black pickguard where your fingers would rub when say, playing slap it would be flat but that part would be a different texture.
With all three buffed down, I will then take the Miniwax Ipswich Pine staind and again begin to dab it in random patterns on the top and partially on the sides of the covers only. Smoke and dirt usually doesn't get where it can't go. Keep this in mind. Remember it's details that separate a good relic from a bad one. If there seen or not it's about details.

You can see the color change from the stain. Not drastic but enough. Parts usually don't turn deep yellow unless you played in cigar bars for 40 years. It's usually a mid-amber color.
Get the Minwax Special Walnut stain and do the Q-tip trick again. Just dab it in the stain, dab and stick it right in the covers hole. Again the stains will react with each other but this is a good thing. When it spreads like that it creates a halo around the hole of a darker color just like it would in real life.

Dab the covers with the toilet paper and get ready for the secret ingredient.
Ok grab yourself a pencil and very lightly and randomly draw some circles around the holes, some full circles, some semi-circles, some close to nothing. Its not a dramatic thing were looking for. Its when we put the covers back on the pickups we want it to blend well.

You can see in this pic its not a dark or big area we are trying to cover.. Just a little goes a long way. Dab the pencil marks with the toilet paper to blend them in. Just like with the stain.
And here we have our finished pickup covers. Again put them in a safe place for at least a week. Do not try to pick them up or put them in a bag they need to lay flat and be able to air dry unbothered.

The knobs are the easiest part to do. Take you Miniwax Ipswich stain get some on a paper towel and dab it all around the knob. get it on nice and thick. Like so..
All three knobs with the stain on

Carefully pick up the knob, trying not to touch it. And put it in some toilet paper.
Grab the toilet paper and give it a good squeeze in your hand. This will take the majority of the stain off but it will also give it a random pattern in the grooves and the knob.

Knobs done.
And if your following this, we now have a plastic set almost done. It should look like this, at this point. We will get to aging metal later on.
Now when we go to simulate the bakelite knobs and covers of the 50s its a much harder ordeal. Lots of cramping in the hands, and time consuming.

Phase 4 – “Bakelite” knobs and covers

Now were going to tackle one of the hardest things to reproduce and thats the coveted Bakelite parts found on the earliest Fender guitars from the 50s. Nothing is going to be 100% but its worth the effort to get 75% of the look.

I would like to thank http://www.provide.net/~cfh/fender.html for the pictures and I want to give them respect for being a true resource for the Fender collector/enthusiast.

Here is a photo of a real 54' Fender Strat notice on the pickup cover how it is worn completely thru, again these techniques can be used not only on guitars but any relic. These knobs were also of a different height and shape and were replaced with normal knobs we see today.
The two pickup covers on the outside are ABS plastic. The three covers on the insides are "bakelite" (actually polystyrene, but collectors refer to it incorrectly as "bakelite"). Note how the "bakelite" covers are whiter, and the edges have rounded. When new, the "bakelite" cover edges were as shape as the ABS covers. But with time, the edges round only on the polystyrene covers. They can even wear to show the black pickup itself underneath.

The top row of knobs are ABS, the bottom row are "bakelite" (polystyrene). Notice again how the edges of the "bakelite" knobs wear (especially on the volume knob), and the ABS edges don't. Also the "bakelite" knobs are whiter.
This is a labor intensive part if you choose to go with this style of covers and knobs.

**List of things you going to need:**
- Fine Toothed Rasp or File
- Sandpaper 100 and 220 grit
- Steelwool 0000ga
- Paper Clip
- Hobby Knife

And lots of patience this will make your hands cramp.. I will have to go more into detail then the pics show to explain it.. Its something pics cant show the best.

The hardest part to replicate and your never going to truly get one perfect is the switch tip.. I try my best to remove the seam line on the tip and to take some of the beef of the lower part of the tip off.

To do this I take a screw and just turn it till it grabs, dont go drilling this thing into the switch tip just enough to make a holder for it like so.

I then take it and wrap it in the 100 grit paper and spin it around about a billion times.. This step alone will make your hand cramp LOL. Try to maintain pressure on that seam line and the bulk of the tip more than anything. You want to make the tip narrower than stock.
Thats it on the tip, at this point it should look like this. No more seam line and alot closer to the vintage shape. This like I said is extremely hard to duplicate with todays parts. If someone has a better way then please feel free to show it.

On to the knobs. This is a ton of work but the results are awesome. Especially if your doing a 50s style relic. Here is the stock knob with its square edged shape not to vintage looking.
Take the fine tooth rasp and begin to scrape it upwards at about this angle

It should look like this, at this point.. You can see were taking a good chunk of the plastic off.
Take your fingernail and scrape off the debris, your part should now look like this.

Really rough looking and im sure some are going to say wow this looks like crap.. read on
Take your 100 grit paper and spin the knob, rub it back and forth, dont just do it flat do it at angles as well.. Rinse and repeat with the 220 grit paper.

Then take the 100 grit and wrap it around the knob like so, and twist the knob. This is going to smooth the edges. This part is a pain in the ass im not going to lie. My hands just lock up when doing this. Switch to the 220 grit paper and do the same thing.
Next step we got to get rid of some of that gold coloring in the knobs letters. For this I use a paper clip

Just scrape it carefully, try not to gouge the plastic you don't need a heavy scrape just multiple smooth and even scrapes. Finally take your 0000ga steel wool and rub the whole knob down till it is smooth. Take it to the sink and rinse it off.
In these pics I did not do the lower numbers yet I wanted to save some time and get this in the tutorial before I went to bed. But here is the final product. As you can see it has a beautiful rounded over feel pretty close to the originals. Again due to todays plastics its almost impossible to get the height of the originals. Remember you also want to keep these bright and white.
On too the pickup covers. Here is the fine tooth rasp I use, I bought a pack of these for $4.

Our stock pickup cover with its square edges again not to vintage looking
Take your rasp and again begin to scrape in a upwards motion like pictured.
Again you will have a bunch of plastic still sticking to the pickup cover. Just remove it with your fingernail like you did with the knobs.

Take the cover and repeat the sanding and smoothing of the tops with 100 grit first and then with the 220 grit. Remember to move it at angles too you dont want to just rub it flat. We are trying to round over the sides and to blend them with the rest of the pickup cover. You can also at this point do some sanding with your hand just smoothing over that edge we just created. Take your time here and just sand it till its smooth and rounded. You cant rush this stage we dont want it to look like you just took a rasp to it.
When your done with the sanding at this point it should look like this. You can see the sides are rounded over now and not square edged. Now were getting somewhere. If you happened to sand thru the pickup cover dont fear thats actually ok. Remember above in the original 54' strat how it was worn like that?

In this pic I am basically just removing a little of the bottom of the cover to make the new found split look a little more pronounced. like in the original.. BE CAREFUL WITH THESE HOBBY KNIFES THOSE THINGS ARE SHARP.. Pickup covers can be replaced fingers cant.
Next step is optional. Strings corrode so obviously there will be some dirty marks on the covers where the knobs wouldn't, this is a detail. Take your pencil and draw some random jibberish on the pickup cover. You don't need a lot, a little goes a long way.

Take your finger and rub it in till blended, you can no longer see the drawing just a slight mark.
And there you have it a set of simulated bakelite covers, nicely rounded and ready to go on the project.

And finally here is our full set of bakelite replica parts.
Phase 5- The Neck

Things needed:

- 150,220 and 320 grit sandpaper
- Good masking tape. Don’t use cheap masking tape I use 3M
- Minwax Special Walnut stain
- Plain Toilet Paper. No dimples or prints

Ok here we have a picture of the stock neck.. Surprising this squier has some nice flame in it.

What I do next is take a piece of tape and tear a random design in it.. If your really interested you can mark out your design of what you want the wear to end like but I feel a random tear gives better results.
Do the same thing for both sides and then mask off a good part of the area behind it. Now you really want to make sure that this tape is pushed down and sealed. What were going to do next if you used cheap tape you will find out that its not going to work.

![Image of guitar neck with tape on the back](image1)

The back of most guitar necks have a very thin layer of satin poly, we are going to remove this by sanding it. DO NOT try using heavier grit papers to make the work faster, you will get scratches. This step is going to take a while but just work at it. First with 150, then the 220, and finally the 320. When your done the neck will be smooth as butter. And notice the tape didn't lift at all. Still where it was put.

![Image of guitar neck with tape on the back](image2)
Ok next step now that your neck is sanded back to the wood, is give it a good wipe down to take the sanding dust off it. If you have access to a air compressor give it a good shot to blow the dust off. I do not have that luxury so I just wipe it down good and blow it off the old fashioned way.

Now grab your toilet paper and the Miniwax Special Walnut stain and get a good amount on the paper, the newly sanded back neck is going to absorb that stain quick.

Here is the neck with 1 coat of the stain on. Starting to get that look. I used 4 coats of the Miniwax stain, with about 5-10 mins inbetween coats to let it absorb in.
After the 4 coats were on I waited about 20 mins then I carefully removed the tape. As you can see we have a obvious stain line from the stock neck to the newly finished neck. 

never fear that is normal we did create it, but its a easy fix very lightly and carefully take your finger and just pull the stain back about a 1/8"-1/16" were just trying to blend in that seam with the rest of the neck. Dont take your big nubby fingers and jab it just lightly rub it back almost not touching it at all. AND MAKE SURE NOT TO TOUCH THE REST OF THE NEWLY FINISHED NECK.
And there you have it, realistic neck wear. Now put the neck somewhere safe for a couple days, we are not done with her yet, she will get some more treatment to make it blend in smoother we just need to wait a while before moving on. *The flash picture makes it look darker than it is, the non flash shot is truer to the actual outcome*
Phase 6 – Metal Relicing

Now first of there is a few ways to do this, I will explain three with the most dangerous and caustic first.

*Beware these steps are extremely dangerous and I do not use these methods due to said danger.*

I have read and seen people who have used Muratic Acid fumes to wear there metal parts. I choose my lungs, skin and safety over this method. But basically it works like this you need two containers one small enough to fit into the other. You will pour some Muratic Acid into the bigger container and then put your parts in the smaller one, Then put the smaller container into the bigger container so ONLY the fumes come in contact with the metal not the actual Acid. I never used this method and dont suggest it.

The second method is to use Circuitboard Etchant Solution sold at Radio Shack, this method is the quickest but can also be dangerous and can ruin your parts in a matter of seconds turning them black.. I dont even know how it works or why. Again I prefer the non-caustic way which I will explain below.

For my method I prefer something that takes a little more time, but its safe to me and everyone else.

**Things you will need:**
- Metal pan for boiling - Make sure its a junk pan and not your moms best pan
- Mortons Iodized Salt
- White Vinegar
- Water
- Time, Time, Time, this is not for the impatient.

Ok first step get your salt and vinegar.. If your hungry get some chips too.
One pan full of water. Start that stove and let the fun begin. Add a decent amount of salt to the water, I would say a cup of salt if this was a recipe. What we are going to make is a Salt water brine.

Now some agree with this some don’t. I have had excellent results with this method. We are going to add some Vinegar to the mix, vinegar is usually between 3-5% acidity. So in the process of the salt water brine were going to add some of that acidity to the mix which will help in the aging process. Now don’t over do it I used about a 1/2 a cup of vinegar.

Get a nice sized container and throw all your metal parts in there. Obviously don’t throw your electrical parts like pots, switches, and pickups, etc etc in there. LOL
As you can see the salt has no become one with the water.. This is what were after. After about 10-15 mins of boiling I now have a *safe* acidic salt water brine..

Take the water and carefully pour it into the container with the parts.. Now its a waiting game.

When doing the saltwater brine method I will let the parts sit for 2 days in the water, then I will take them out and let them air dry(again I will repeat air dry do not dry them with a rag etc. just let them dry naturally), and then back in the water for 2 days, and then out, etc etc until the parts age the way I want them too.

Screws and Nuts etc, will age alot faster than there Chrome counterparts bridges, tuners. So its just a matter of examining the parts on the days there taken out to air dry. If you feel they need more time in the brine so be it, put them back in, if not put them aside to wait till the others have aged..

This method is safe, and effective, there is more control this way.
**Phase 7 – De-Glossing the body**

I like my relics to not be shiney, Break out the 0000ga and a few beers.. This is going to take a while.

Here is a picture of the body pre gloss removal, too shiney for sure.

![Image of guitar pre gloss removal](image)

Ok remember this stuff gets everywhere so if you have sensitive skin wear a long sleeve shirt and jeans. Just begin wiping the guitar over and over in random fashions, you dont have to press hard but you do have to get a even pressure. Get your arms ready for a workout.

![Image of hand wiping guitar](image)
After a few swipes you will see that mirror finish is now GONE.. Now when you first start you will get some finish swirls which can be seen in this picture, the more you do it they will slowly disappear until just a flat smooth finish is left.

Here is the back completely done, there’s still all the dust and debris on the body those are not scratches.
Phase – 8 Simulating "Natural Wear"

Natural wear is not rough like a ding or dent its from years of friction. Were going to do it in an hour.

**Things needed:**
- Sandpaper 150, 220, 320, 400, 600, 800

First thing is to get a idea where you would put natural wear. On most guitars an obvious wear mark would be the forearm contour. So grab the 150 and begin slowly sanding, it will be easier to remove on the edges than on the flat area of the guitar. DO NOT USE GIANT STROKES or you will create more work than is already needed. Keep it simple. Try to find a picture you like and try to emulate it. You want to not go totally down to bare wood. Just to the sanding sealer. If you go thru it, Not a big deal.

Once you decide that it looks ok your going to be stuck with some serious scratch marks in the paint like so. Not to good looking. You can see I went thru a little of the sanding sealer towards the edges. No biggie.
Take some water and use it for a lubricant for the wet sanding. Start with 220 and slowly work your way up to the 800. When your wet-sanding it will look funky like this picture, all kind of gunk in it.
In this pic I just got done using the 320 as you can see the scratch marks are fading quickly..

After 400 grit..
And finally after the 600 and 800 we got no marks what so ever smooth as the rest of the body.

We’re starting to show some age. This is how it looks right now.
Using the steps above I put another spot on the back by the tummy contour. This also is a major natural wear spot on guitars since the finish is much thinner there than on flat surfaces.

Also if you remember from the earliest of posts when I had the parts all laid out, the bridge was already reliced from a earlier project. Well 10 hrs or so in the mixture of salt brine and vinegar we now have a really reliced bridge, since were doing a heavy relic on this one its going to look fantastic.
Phase 9 - Body dings and dents

**Now this is totally up to you on how you want it to look. Also there is a certain art to this, I recommend people find a picture of a worn/vintage instrument and try to replicate it. **

Ok first thing lets introduce the tools of the trade at this point. First up we have our heat gun.

Next up is the 4 tools I use for all my relic bodys. A pair of jewelers screwdrivers (flat and phillips), a hobby knife, and a set of keys.
To simulate light bumps and bruises, take a set of keys and hit the body. Pretty simple one would think. BUT ITS NOT SO EASY. You do not want to lay into the body like your trying to kill someone. Just light and simple whacks. Were trying to make dents and dings, not take paint off.

As you can see now, we got plenty of wounds.
Now here is where it gets tricky. My main tool is the very small jewelers flat head screwdriver. First you need to heat the body up, now im not talking to the point paint is bubbling, im just talking adding a little heat to make the paint soft. You do not need to have the heat gun right up against the paint. I usually keep it a minimum of 3-4" away. Turn the heat gun off and put it somewhere safely. Now pick up the jewelers screwdriver and begin taking the paint off, this is essentially a small paint scraper with control. And begin simulating the wear patterns you liked in that picture, or what you think would look cool.

I CAN NOT STRESS THIS ENOUGH. A LITTLE GOES A LONG WAY..

This step is entirely up to you, this is where the magic happens or a disaster starts. There is no science to it, there is no perfect way, its something that just has to be practiced over and over again. After a few relics you will learn from your mistakes and you will learn what to do if something came out the way you intended. ITS A ARTFORM, its not about draggin it behind your truck, you are removing paint a couple millimeters at a time.. Use different techniques and angles, come from the right, come from the left. Straight up and down, poke it, use a skipping motion, etc etc.. BE CREATIVE..Think outside the box, if it looks to thought out, it will be apparent.

After the paint has been removed to the way you like it, bust out that 0000ga steel wool and rub the area down. This will remove some rough edges and make it blend a little smoother with the finish.
You do not always have to go thru to the wood. Like here in this picture depending on the angle of the Jewelers Flat head screwdriver, you can use it to go to the wood, or just scrape across the clear coat.
Here is a shot of the work I have done on the back so far.
Another shot of not going thru the color coat, just thru the clear. This is all dependent on the angle.

There is not much I can say to make this part easier I wish there was. Now knowing that the paint is being taken of one little piece at a time. How long do you think it took me to do this.

Take your time, have fun, and BE CREATIVE.
The parts were taken out about 3 hrs ago. They have air dried, as you can see the chrome parts just aren't right yet, where the nickel and steel parts are perfect. So those parts stay out the stuff that still needs work will go back in the brine for a couple more days. First another shot of the bridge.

and here is the parts.
Back is done and trem is installed. Again I wish I had a lighter color to do this tutorial with. Black hides a lot of the details but it should be good enough to give you an idea.

I put the neck against the body just for some visual appeal.
Our neck has been dry long enough. Next step get your 0000ga steel wool and lightly sand it smooth. Simple enough. Now if you want you can very gently take the key method explained about and nick up the headstock edges. If you want you can buy some clear coat and respray the back of the neck and then rub it with the 0000ga to take the gloss off, some people just dont like the raw wood feel. If you want you can buy tinted clear for that amberish look if your neck is real bright.

The next step is the pickguard. It should be dry enough you want to very gently brush off the steel wool dust. The reason we left it on there is when its finally off it will leave some places lighter than the rest of the guard, all be it very small its a detail. If you want to lock in the look you could spray it with a clear and then take the 0000ga and buff the gloss down like we did on the body.

And finally we need pictures of the body done front and back.. Were getting close to the end here.. Next were going to discuss more detail work to finish it off.
Ok she’s done.

Some of the detail work I was going to go into. Pickguard cracks is always a good one, taking dust from the vacuum cleaner and sprinkle it on the bridge. Take a brush and wipe it down with it, dirt will stay where its supposed to and not where it isnt. Stickers, etc. just small details.