How to add a fuse to a car fuse box

In this instructable I want to show you how to properly add a new circuit to your car using an add-a-fuse-adapter. You can also watch it as a Video on my new YouTube channel. Safety Note: You should only use this method to add circuits that use less than 10 Ampere of current, because it partly uses your car's original wiring. For circuits that operate at higher current's, such as Audio amplifier's you need to run a seperated wire from the positive terminal of your battery to your device and do not forget to add a fuse near the power source. Always use wires and switches with a suitable size and insulate your wiring to prevent short circuits. Choosing the correct wire size is very important. If the wires are to thin they overheat and can cause a fire. A simple formula to determine the size you need is this one:. L : the total length of the wires in meters in this case from the fuse box to your grounding. U : The maximum Voltage loss you want to have in your wiring I recommend 0,5 V. The first thing you need to do is locate your fuse box. It can be under the hood or inside your dashboard or both, many modern cars have more than one fuse box. Your owners manual will tell you were it is. Open it and use your fuse removal tool to remove one fuse at a time. Connect the negative wire of your multimeter to your cars body, set it to 20V DC and measure the voltage of both pins. First measure without the key plugged in. If a slot's pin shows 12V this means 2 things:. Reinsert the fuse and mark the slot with a post-it or some tape. If you need a slot that is powered when the key is in position 1 for devices like a radio, you search for a slot that has no power when the key is not inserted, but is powered when it's in position one. Mark it in a different colour if you are connecting more than one device. If you want a device to only have power in key position two, you follow a similar procedure. Keep on measuring until you found the right slot for your application. I mentioned that it is important to know where the input and the output of the slot is. I'd like to explain the reason for that with this little animation. Your fuse slot has two pins 1 the input is connected to the positive terminal of the battery 2 and the output goes to your original device 3. The battery and the device are also connected through your cars body, they are grounded. The bottom slot of the add a fuse adapter is for your original fuse 5 that, as usual, completes the original circuit 6. The top slot is for your new fuse. It connects the input or the positive terminal of the battery to your new device and closes your new the circuit 7. If you plug the adapter in the wrong way 8 , your new circuit won't work without the original fuse 9. As if this wasn't already bad enough, when both fuses are inserted the current for both circuits runs through the original fuse 10 , which will probably cause it to burn out Now you know why it is important to plug the adapter in the right way. So you found all the slots and know a spot where you want to mount your device? Than it is time to run the wire in between the two. For this you will probably have to take a few parts of your car apart. Which parts you need to remove is of course very vehicle specific. This step will cover how to do it in my Corsa C. You now have a way for your wires to go through. Unfortunately there is an obstacle. An almost fully packed rubber tubing. How are you going to pull the wire through this? Luckily there is also a trick to handle this. You can use a thick piece of garden wire and cover the tip with tape or shrink tubing but the better solution is to use a thinner wire, fold it 4 times and twist it. Now you have a special tool with a round tip. Start pushing it through from one side of the tube while navigating it from the outside with your other hand. This is the trickiest part of the whole project and it might take some time, keep calm. When you eventually reach the point where the tip comes out on the other side, hook your cable up to the and and secure it with tape. Use your pliers to pull it through and thread the wire into your car, so that it comes out in the footwell. From there you lead it to the radio slot from behind. Pull it out of the slot and push it back in downwards. Stick your hand under the middle console from the side to grab it and pull it out there. Thread it through the hole of the original 12V output and you are finished. This step is actually pretty straightforward. You remove the insulation of your cable, put it into the crimp connector on the adapter and compress it with your crimping tool or your pliers. You can also put some shrink tubing or isolation tape around the connection to prevent it from corroding. Insert the fuses and plug the adapter in the right way. Time to mount and connect you device, but before you can mount it you need to make a grounding. I crimped 3 wires into a cable shoe - not the best solution - but I also soldered it and added shrink tubing. I atached it to a screw under the middle console. I made myself a nice little panel with several switches because I want to connect more than one new device. I also soldered wires to them and crimped flat connectors onto every cables end. My switches do also have angel eye illumination and ,as I am mounting the panel where my original 12V output, which was also illuminated, was located, I will connect it to my original pin shematic 1. You can also connect the illumination to the switches middle pin or to the positive terminal of your device , so that it indicates when the device is turned on. Wrap the connections with isolation tape and hide the wiring. Test if everything works as it is supposed to and secure the wires. Now reassemble your interior. After you are done making your dream of an advanced car a reality, you can finally enjoy the advantages that it brings to you. Go for a ride and show your

new gadget around. I hope this instructable was helpful for your project and I would really like to know if you like the way it was presented to you. If you have any questions feel free to ask. As this was my first video project I am also curious to know what you think about the video. Feedback of any kind is appreciated. Good luck with your future projects and have a great day :. Be very careful when using an add a fuse device as you can easily overload the original circuit by piggybacking one fuse on top of another and both the add on circuit and the original circuit are operated at the same, these add a fuse devices may well work fine for some but be very careful , you may well have a spare fuse slot in your fuse box i would use that, I found this out to my cost on a car I owned a while ago, much better if you look into it and use a relay circuit it involves a bit more work but better than popping something in the middle of nowhere at night. I hope this helps people decide what to do. Thank you for showing me the Add-A-Fuse device. I had never seen them and they will make adding a power outlet "cigarette lighter" socket for my dash cam and backup camera in my truck much easier. I was expecting to have to trace wires and splice or use a tap connector like tidux suggested and even with a wiring diagram, it was going to be difficult. There is a number of wire size charts available online. I rarely ever use wire smaller than 18 just because the smaller sizes don't tolerate rough handling and often their insulation is very thin. Great write up and video, I plan to do the same thing but I'll be using a control panel with a twin usb and 12v cigarette lighter chargers with no switches and power when in ignition position 1. My question is can i run 1 wire from the add a fuse to run both chargers on the control panel or do I need to splice the wire into 2 1 for each , I'm just a little confused about your wiring to the unit. Reply 4 years ago. It is good that you have some respect for the right wire size. There are way too many people who simply use any wire they can find. I use the formula to determine the minimum size i need and then choose a wire that is one or two sizes bigger because bigger is better in this case:D. If i input 10 amps, 1 meter and a 0. The formula is correct. I know that it seems pretty small but you have to consider that the resistance of the copper wire is directly proportional to it's length. So if you double the length the required cross section to achieve the same voltage drop also doubles. This is a nice ible. I have seen many people do things like this a skip the fuse. The fuse is the most important part. May I recommend instead of breaking the original line completely to use a product called "mid line tap connector" or "displacement connector". Both names are the same product as far as I can tell. I always called them piggy back connectors. This connector snaps over existing wire and then you insert your new circuit into the connector that runs to an in line fuse holder. Yeah, I used this type of connectors to hook my parking aid up to my reverse light. They are great but in my case the original wire from the fuse box does not suit my purpose because it is only powered when the key is plugged in. Although I could have used the original grounding. I need a charger that can be turned on at any time to charge my phone on camping trips and in parking lot's while I am shopping. Hey that hammer use near the windscreen is trouble, Just use wd40 or powerlube to soak into the threads for 10mins first. No risk to the windscreen or any components plus less stressful to you. Otherwise really nice instructable. I did actually not know that trick. It sounds great. I will definitely try it out next time before using raw force and putting my windshield in or other exterior parts in danger :. You are completely right, it is extremely important to choose the right wire size. I added a safety note and a formula to choose the right diameter. Unfortunately I also already had a few experiences in the past where I could see how powerful the current of a 12V battery can be. Luckily none of those happened inside a car or a building. By Basement Engineering Follow. More by the author:. About: Hi, my name is Jan and I am a maker, I love building and creating things and I am also quite good at repairing stuff. Maybe you are also in a situation where you want some extra functionality in your car. Be it an extra Output, a central door locking system or an integrated coffee maker. For this project you will only need a few things. Use the size that your fuses have. If a slot's pin shows 12V this means 2 things: This slot does always have power. You would use such a slot for devices such as an alarm system or our charger that should be able to charge a phone while the car is parked. On the outside: The first thing that needs to be removed is the wiper. It will probably be rust-welded to the thread and some force will be required to remove it. You simply use a wrench, that fits nicely around the thread and a Hammer also good to relieve pressure, if you get frustrated. Protect your car with an old towel and carefully hammer onto the thread several times while pushing the wrench upwards. Eventually it will come off. Open the hood and unscrew the two screws that hold the water reflector in place. Squeeze it out and put it to the side. You won't be able to remove it completely, as the cleaning nozzles are still attached. Now you have access to the body control module's cover. Unscrew its' 7 screws and take it out. As you are already taking it out, inspect the sealing. It is probably corroded which is a common problem in the Corsa C and leads to water flowing into your footwell. You can replace it with some window sealing. Inside the car: Remove the small storage compartment under the

steering wheel by releasing the two noses on the top of it. This is pretty tricky. After the small compartment is removed you can unscrew the two screws that hold the big panel under the steering wheel in place and pull it out from the bottom. Pull the seats to the front and remove the 2 screws on the back of the center console, then pull them back again and remove the two screws on the front. You are now able to lift the center console up a little bit. This will allow you to stick tools or your hands under it from both sides. Also remove your radio with a suitable removal tool. Did you make this project? Share it with us! I Made It! Tinfoil Embossed Artwork by cfb70 in Woodworking. Beef 4 months ago. Reply Upvote. UncleEd 3 years ago. ProphD 3 years ago. Basement Engineering killroytech Reply 4 years ago. A question, are you certain about the formula? Basement Engineering tjdux Reply 4 years ago. Mjtrinihobby 4 years ago. Basement Engineering Mjtrinihobby Reply 4 years ago. Basement Engineering smaster2 Reply 4 years ago. Thank you for your comment. This method offers a more professional-looking installation and is more secure in the long run than wrapping the wires around the legs of a fuse. This article is an expansion of our general hardwiring installation guide to teach users how to install their add-a-fuse kit. Click below to view the full guide:. When you are first purchasing your add-a-fuse kit , you will first need to make sure that the fuse tap you purchase is one that is compatible with your size and voltage requirements for the new equipment you are about to install and the fuse box of your car. To find out which fuse is right for you, you can either consult your vehicle owner's manual, Google the answer, or consult the dealership where you've previously purchased the vehicle. If you can't find the answer, then our product experts are here to help! Contact us below and we'll get back to you within 24 hours. If you set them up with the wrong order, it will not feed power to the hardwire kit. The amperage rating of the fuse you select does not need to match the amperage rating of the fuse that we include. This video shows you how to attach a fuse tap onto your add-a-fuse, as well as using a crimping tool ie. Using your needle nose pliers or a similar crimping tool , trim off some of the rubber tubing if necessary to expose some wiring on your hardwiring cable. Connect that cable into the other end of the add-a-fuse metal tube , then crimp them down together to make the connection. Once the crimping is done, use some force to tug on the add-a-fuse and wire so that nothing is loose. If everything feels tight, then the crimp is good and the connection is properly made. In total, you will need two add-a-fuses for your hardwire installation one for a constant fuse, and another for the ignition-switched fuse if you're installing with a traditional hardwiring kit. Once everything is complete, the add-a-fuse simply needs to be put back into the slot that the fuse was taken out of. Please note the ground wire of your hardwiring kit does not need an add-a-fuse kit and only attaches to a metal ground bolt. If you have any further questions, please don't hesitate to contact our product experts today. We are here to help. New to dash cams? Try out our dash cam buyer's guide. Want more out of your dash cam? Find an accessory right for you. Make great purchasing decisions with the right dash cam for you. Not to fret, our in-house product experts are here to help. We have spent years curating helpful content and video guides, helping customers with their dash cams, but we understand that we can always do better. Contact us using the form below and we'll get back to you as soon as we can. We love what we do, because we're here to help you make the most informed purchasing decision. Setting Up with an Add-a-Fuse Kit. Using Add-a-Fuse Kits. Add-a-Fuse Kits. Fuse Taps. Micro2 Fuse. Mini Fuse. ATO Regular Fuse. Low-Profile Fuse. How Add-a-Fuses Works. Explore Our eLearning Guides. Dash Cam Buyer's Guide. Our Buyer's Guide. Dash Cam Accessories. Our Accessories. Our Best Dash Cams. Best Dash Cams. Installation Guides. Got More Questions? Car accessories add function and convenience to your car. Additional interior lights, or LED under-car lights jazz up a plain vehicle. These components wire directly to the car's fuse box. So, in order to install them you must learn how to add a component to the existing electrical system already available in the car. Neon lights and additional interior components like extra lights each take a separate circuit right in the car's fuse box. It is simple to learn the process. Locate the car fuse box which is normally behind the dashboard or inside the glove box. Locate the amp rating for the accessory you are going to install. This is the amperage the accessory is rated for and it is only safe to use the accessory at or below this rating. Amperage ratings are listed in the accessories manual near the beginning of the installation section. Install the appropriate circuit into the fuse box in the slot beside the connector you will use for the car. Any open slot on the fuse box will suffice. Slide the accessory's connector pin into the car fuse box. If there is no connector pin, unscrew the fuse box connector screw with a screwdriver. Slide the bare wire under the connector and tighten the screw. Steve Smith has published articles on a wide range of topics including cars, travel, lifestyle, business, golf, weddings and careers. His articles, features and news stories have appeared in newspapers, consumer magazines and on various websites. Step 1 Locate the car fuse box which is normally behind the dashboard or inside the glove box. Step 2 Locate the

amp rating for the accessory you are going to install. Step 3 Install the appropriate circuit into the fuse box in the slot beside the connector you will use for the car. References Kenwood: Stereo Installation Guide. Accessory manual Car fuse box Wiring diagram Circuit breaker size depends on your accessory Screwdriver Wire crimper. Forums New posts Search forums Search images. Showcase New items New comments Latest reviews Search showcase. Members Registered members Current visitors. Log in Register. Search titles only. Search Advanced searchâ€¦. Image Searchâ€¦. New posts. Search forums. Search Images. Log in. Change style. Contact us. Close Menu. JavaScript is disabled. For a better experience, please enable JavaScript in your browser before proceeding. Thread starter jviviemore Start date May 15, Hello Everyone, I've done this before in a previous car and I'm drawing a blank for the proper way to do this. I'm adding 4 LED strips for footwell lighting. I'm going to either tap into the slot for the ACC power or the daytime running lights since both remain on. I have the 'Add A Fuse' already purchased but I'm having trouble remembering what to actually plug into it. Do I keep that slot empty or am I supposed to add a fuse to that slot? If so, how do I know which to actually put in that slot? First, thanks! Second, I have more questions. Stupid Question 2. How do I determine which sidei s the hot side? I see that it's the side that goes to the battery so I basically look at the fuse box inside the Civic Hatch and the side with the wires leaving the fuse box is the hotside? Stupid Question 3. Your second part makes perfect sense to me until "then you insert the fuse on the top slot". How do I know what fuse to add here in addition to the 10 I already added? Do I use a 5, 10, etc? The only stupid questions are the ones you don't ask. Question 2: I use a volt meter to determine that. Once you remove the fuse, you should only have one side getting voltage. If you are talking about the in cabin fuses, i believe the slot towards the bottom was the 12v from battery. It's been a while since I hardwired my dash cam so i'd have to look. I tell you that because if you insert it the other way, as you can tell from the diagram, now your going through 2 fuses to power the footwell lights and putting a strain on the original 10A fuse instead of having a independent fuse for your new circuit footwell lights in this case. If you insert it the original way, you have 12v and a 10A fuse going to the DRL, and a separate fuse going to the footwell lights. Question 3: The fuse you add in the top slot depends on the current draw of the acc you are trying to add. Technically, you'd have to figure out the current draw of the new accessory and figure out a fuse rating from there. Anyways, that's too much talk lol. LED's don't usually draw too much power so i'm sure a 5A probably would be just fine. Progress thank you. I just need to find a ground location in the driver sider footwell area. Any recommendations. I saw these two screws above the gas pedal but nothing else? Also, anyone know what size "c" clamp if I'm even calling it that correct these would be? Use the bolt by the fuse box. The head of the bolt is 10mm Not sure what you are trying to buy but the connector your referring to I believe is the spade terminal? If the wire is a 18 gauge wire, you have to get a 18 gauge spade terminal or else you will not be able to crimp it correctly and might have a loose connection. If the bolt is too big for the spade terminal, you can open it up slightly. I've been dealing with electrical work for years so it wasn't anything new to me. You must log in or register to reply here. Member Posted Images. Best Dash Cams of Comparison Tool. Forums Search forums New posts. What's new New posts New profile posts Latest activity. Contact Us. Log in Register. Search titles only. Search Advanced searchâ€¦. Search forums. New posts. Log in. Install the app. For a better experience, please enable JavaScript in your browser before proceeding. You are using an out of date browser. It may not display this or other websites correctly. You should upgrade or use an alternative browser. Can you use Fuse taps on empty slot fuse? Thread starter Ferginator Start date Aug 10, Tags acc amp bat empty fuse fuse tap fusetap slot. Using Fuse taps on empty slot fuse, which is best? Use pigtail fuse taps with 10A in original slot and 3A in external slot Votes: 2 Only use 3A in external slot, no need to add the 10A Votes: 2 Use either, no pro or con either way Votes: 0 0. Use a different method to plug 3A into fuse box without fuse taps Votes: 0 0. Total voters 4. Ferginator Member. And if so, does it still need a 10A for the original front slot on a fuse tap and 3A external even if the slot was empty to begin with on the fuse box or do I just use the 3A in the external? Or does it not matter either way? Any pros or cons? Nigel Well-Known Member. Yes, you can use them, but make sure that you put the original non existent fuse in the bottom, don't put a 10A or something in since you don't know what it might power, probably nothing but it may be something that shouldn't be powered. Since that will not pass power across the fuse tap, you will need to put the fuse tap in so that the tap fuse gets it's power from the hot side of the fuse holder otherwise you wont get power. Nigel said:. Just because the manual says they are not used doesn't mean that they are not connected to anything. They may be unconnected, but unless you can prove that they are not connected it is not worth taking the risk of putting a fuse in them. You will need your 3A fuse in the top, going to the camera. Leave the bottom empty, and remember the tap will then only work one way around. Hillbilly Well-Known Member. You must log in or register to

reply here. Similar threads Fuse tap on empty fuse. Which side of a fuse is Hot vs Cold? Fuse tap on empty fuse. Sep 10, Aug 2, Extending wire to reach fuse box. Nov 25, Oct 23, Fuse taps using the hot side aka wrong side. Jan 17, Discussion in ' Technical Chat ' started by Caligula , Aug 4, Log in or Sign up. Tacoma World. Welcome to Tacoma World! You are currently viewing as a guest! To get full-access, you need to register for a FREE account. Adding fuses and a relay to stock fusebox Discussion in ' Technical Chat ' started by Caligula , Aug 4, Post Reply, Cab Prerunner 2. As you can see there are two empty relay spots. The one where I am pointing takes a standard relay similar to the EFI relay. Does anyone know what snaps into this open space in the fuse box? I thought i found a relay holder off a 4runner that would work, but the tab is recessed. This would need to stick out. Caligula , Aug 4, I wouldn't add relays and more fuses to a box especially to power a light bar if it puts too much power out you can short your entire fuse box just run a wire to the battery with an in line fuse with a 20 amp fuse in there and you'll never have to worry about it. If fuse blows you replace no other problems. Last edited: Aug 5, Caligula , Aug 5, I guess so but I meant in line fuse like connected straight to battery that way your light bar doesn't short out the entire fuse box it just shorts out your fuse I've never really messed with adding relays and everything like that so I'm no sure if there would be a problem just throwing out my opinion. You have access to some tools and knowledge that I don't, but I personally would be VERY circumspect before modifying the wiring in the factory fusebox, even on a pre computer vehicle. What you have right now is a good running truck. The smallest mistake could short out whatever the most expensive thing is, leaving you with yard art that needs thousands of dollars to restore the factory wiring so you have a truck again. I am not saying you can't do it, just the risk is way up there. If you screw something up you will still have a toyota truck, but you will need to repair your DIY circuitry. If you are SURE that all you want to add is two pairs of lights you could pull the clutch reservoir bracket and two bolts holding it in from a manual tranny tacoma at the junkyard. Drill a couple holes in the bracket to mount your two solenoids, use the bolts to bolt the bracket into your truck, and go. Ready made lighting harnesses from LightForce, KC and etc will have a master fuse just inches from the ring terminal that mounts on the red post of the battery. If something goes wrong with your lights, the main fuse blows and the rest of your truck is unharmed. Finding a manual tranny tacoma at a junkyard is a bit of a challenge. On my the two bolt holes are M8x1. Poindexter , Aug 8, Didn't read all of it but first paragraph is exactly what I was thinking seems sketchy. Yotamac , Aug 8, Show Ignored Content. Lubegard Automatic Transmission Fluid Protectant, 10 oz. Spicer X Center Bearing. Spicer X U-Joint Kit. Genuine Toyota Ambient Temperature Sensor. Smittybilt 5, Collinite No. Username or email address: Do you already have an account? No, create an account now. Yes, my password is: Forgot your password? Automotive fuse boxes are the central point through which wiring passes to all the electrical equipment. The fuse box is an essential part in a vehicle because if anything electrical goes wrong, the in-line wired fuse blows. If you install new electrical equipment into your vehicle, such as a car stereo, you need to add wiring to the fuse box. Most vehicle fuse boxes have several extra fuses so you can add other equipment easily. Open the fuse box cover. Find the fuse layout diagram that's either on the outside of the fuse box cover, or on the inside. It details what each fuse connects to, and tells you which fuses are not in use. Select a spare fuse connection. Look at the connection and you can see "in" and "out" labelled, though the wording may be slightly different. The "in" marking indicates it's from the battery. The "out" means it goes to the electrical equipment. Locate the red positive wire from the electrical equipment and connect the end to the "out" terminal on the spare fuse. Remove the fuse using your fingers and slide the wire into the connector. It clips in place. Attach another red wire to the "in" terminal on the fuse using the same method. The opposite end of the wire connects to the battery. Check the amperes for the electrical equipment on its label. It's important the fuse matches the equipment's amperes. Place the correct amperes fuse into the fuse holder. Push it into place using your fingers. Replace the fuse box cover. Check that your electrical equipment operates now that you've added the wire to the fuse box. Stephen Benham has been writing since His current articles appear on various websites. Benham has worked as an insurance research writer for Axco Services, producing reports in many countries. He has been an underwriting member at Lloyd's of London and a director of three companies. Benham has a diploma in business studies from South Essex College, U. Written by: Stephen Benham Written on: December 03, And fixing a blown fuse is as easy as replacing a light bulb. This guide will walk you through locating, reading, and replacing fuses in your vehicle. Before doing anything else, make sure the car engine and ignition are completely off and none of the electrical systems â€" like the radio or hazard lights â€" are running. You should use safety gloves to avoid electrocution. It could even be split into multiple hubs throughout the vehicle. None of them are named, but there is a way to read them. Each fuse is in a specific position on the grid. Kelley Blue Book gives its verdict.

This tool is sometimes included with the car and stored in the fuse box, but you can also buy one online or at a local car parts store. Sometimes, the automaker is gene

ford f150 coolant
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 rous enough to include a couple of replacements in the fuse box for you to use, but you may have to buy a replacement if you do, make sure you buy an identical unit from a reputable source. The replacement fuse should look exactly the same, including the color and number on it, which denotes its amperage. Use the tool to slot the new fuse into place and then test if it fixed the problem. Aaron is unashamed to be a native Clevelander and the proud driver of a Hyundai Veloster Turbo which recently replaced his Saturn SC He gleefully utilizes his background in theater, literature, and communication to dramatically recite his own articles to nearby youth. Widmar happily resides in Dayton, Ohio with his magnificent wife, Vicki, but is often on the road with her exploring new destinations. Aaron has high aspirations for his writing career but often gets distracted pondering the profound nature of the human condition and forgets what he was writingâ€¦ See more articles by Aaron. Aaron Widmar.