Fia master switch wiring diagram

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Pull Cable seized? Master Switch failed during a race? Our Battery Isolator Systems are fully sealed and have NO moving parts meaning you can always rely on our kits to work in the tough environments of motorsport. Cartek supply many manufacturers across the world. Ginetta LMP3. Yamaha YXZ R. Mitsubishi R5. Evolution of the Kill Switch. Early types of electrical isolation were by large mechanical master- switches while more modern systems have utilised electro- mechanical solenoids. Both of these types of systems contain mechanical electrical contacts which, due to the combination of high electrical current and the shocks and vibration of the race car environment, sparking between the contacts occurs which results in contact erosion and eventual unreliability. Our Solid State Battery Isolators are also filled with a hard setting resin which prevents any ingress of dust, dirt or water therefore further increasing their strength and reliability. Our Cartek Battery Isolators provide two functions. The first is to disconnect the Battery from all Electrical Circuits. The second is to kill the engine. The Battery Isolators work by being fitted in between the negative side of the battery and the chassis As seen above. When the external kill button has been activated or the internal button been switched to the off state, then the Battery Isolator will disconnect the negative side of the battery from the Chassis. This means that no power can get to any of the electrical circuits as there is a break in the circuit. To kill the Engine there are two options of Battery Isolator:. This kills the engine by taking in a fixed 12v input and sending a 12v output that would power your Ignition or ECU. When the negative side of the battery has been disconnected it will also cut the 12v output powering your Ignition or ECU. This will kill the engine. This unit does not have a power input or power output. Instead it sends a signal which is wired up to either a Power Distribution Module or Motorsport ECU that has an ignition switch signal input. The new Battery Isolator XR also features a 0. This was implemented by Ford in the Formula Ford Ecoboost series. If any of the Formula Ford cars would end up against a barrier or upside down, it then allowed a marshall to always have access to kill the engine. The unit will instantly trigger into isolation mode when any of the kill buttons are struck or on detection of any fault or break in switch wiring circuits. CK- FP- Cartek also manufacture a unique Fire Extinguisher button that also connects to the Battery Isolator Circuit. This means that if the Fire Extinguisher system has been activated the Battery Isolator will kill the engine and Isolate the battery. The two electronic isolation circuits are controlled by microprocessors and incorporate various safety systems including over- temperature and over- current monitoring. Unlike race seats, harnesses and fire extinguishers the FIA does not have an approval procedure for Master Switches. However, most FIA race and rally championships require cars to be fitted with a spark- proof master switch to isolate the battery from all electrical systems and stop the engine. The Cartek Battery Isolator meets these requirements. The general circuit breaker must cut all electrical circuits, battery, alternator or dynamo, lights, hooters, ignition, electrical controls, etc. The circuit breaker, when operated, must isolate all electrical circuits with the exception of those that operate fire extinguishers. How Does It work? The Solid State Isolator contains two isolation circuits. However, the main difference between these two units is the method used to stop the engine. This latter method of engine kill means that the XR is smaller and lighter than the GT and incorporates a sealed, circular connector. The Isolator can be controlled by any number of switches although the usual configuration is one internal on- off switch and one external kill button. How much cranking current will it handle? Both units are capable of handling amps of cranking current depending on the duration. Facebook Twitter Instagram Youtube. Opel Adam R2. Solid State means no moving parts, all power switching is fully electronic. How it Works. Installation of Toyota GT How Is It Controlled? Size Matters. Is the Isolator FIA approved? GT or XR? How Is It Operated? Product Comparison. Cartek Links. Original Poster. Search My Stuff What's New 3 12 24 Hi I'm wiring up a car from scratch and have an FIA-style cut-out switch I want to use, but I've no instructions for it. Obviously the big terminals cut out the battery, but there are 4 other spade terminals off the back. Not tested yet to see if they're double pole or just 2 connections to a single pole though. Now presumably 2 of these are for the low tension side of the coil, but what are the other 2 for? Also, in searching for a wiring diagram off the 'net, what looks like my switch for sale new comes with the description - Comes with a resistor, which when wired in correctly, prevents damage to your alternator diodes, when the engine is switched off. So, where does this resistor that I don't have with the 2nd hand FIA switch go, and what should it be rated? Except that I already have a ballast resistor 2 actually on the low tension line to the coil; they came with the [Mallory] coil. Is this what the description of the kill switch is talking about, or other resistors somewhere else on the charging circuit? And finally Apart from the ballast resistors I already have at the coil, is there any need for any other resistors in the loom? I've just drawn it up so far with the obvious stuff like fuses, switches and relays Thanks WB. Mikey G 4, posts months. When the switch is in the on position the 2 that are closed are used to interupt the ignition circuit, so you need to extend your ignition switch wires

to these so when you use the cut out it opens the circuit and cuts the car out. The other 2 that are closed when the switch is off will be open when the switch is on, these are used to protect the alternator when the power is cut. Connect a wire from the starter side of the cut out switch as the alternator is normally connected direct to the starter to one of the terminals and there should be a resistor that goes to the other side of that terminal which is then grounded. I'll try to find a picture.. MartinDB posts months. A bit cheesy, but it may help. I think I took the resistor values off the instructions that came with mine, and I'm using a bike engine so I've wired the kill switch where you're wiring your ignition. Ah, many thanks all. It becomes clear now. I hadn't worked out that 2 of the contacts were closed when the switch was off. Martin very interesting, I need to find a resitor because I don't have one fitted on mine. Do you have to have the resistor? Cheers Jack. Reading the instructions which I found yesterday, yes as you're connecting a running alternator to earth. Locoblade 5, posts months. It knackers the vr on genny. Hi guys, I have just wired the switch. I find my resistor getting extremely hot every time I cut off the power, but it works fine if I uncut it. Please help, thanks. Thanks Mikey, I'll isolate the resistor by it self, so it doesn't burn any wires. Hi Anyone still got this picture, as look like the orignal has been removed. Also is it ok to connect the starter to the battery or does it have to connect to the switch. Thanks Leigh. Related Sites: Your Link Here. To stop the alternator charging you have to break the current of the field coil activator wire if the wire is not switched off when the main switch is turned the alternator will carry on charging powering the ignition and the engine will not shut down. On an AC DElco alternator this is terminal 2. Terminal 1 is for the light. Funny enough I had a short in the alternator recently, the main terminal came undone internally and burnt the wiring out it also blitzed the FIA switch. I do know on another car I have which I did wire up does not have the diode and I have a separate manual field coil switch which when i switch off will kill the engine. Find More Posts by Al Weyman. All times are GMT. The time now is TenTenths Motorsport - Top. All Rights Reserved. FaceBook Us. T-Shirts etc. User Name. Remember Me? Mark Forums Read. Thread Tools. My previous engine's alt only had one main wire running to it from the battery and one other wire for the charge light on the dash. My current engine has 3 wires going to the alternator. How would I hook up the 6 pole master switch and where on the diagram I've attached. Find More Posts by Bevan-L. South of Watford just. Posting Rules. Similar Threads. Car Wiring advice. Tacho wiring. Register a free account today to become a member! Once signed in, you'll be able to participate on this site by adding your own topics and posts, as well as connect with other members through your own private inbox! Log in Register. Search titles only. Search Advanced searchâ€¦ Home What's new Latest activity Authors. Forums New posts Search forums. What's new New posts New media New media comments Latest activity. Media New media New comments Search media. Everywhere Threads This forum This thread. Filters Search. New posts. Search forums. JavaScript is disabled. 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. FIA master switch and push start wiring. Thread starter Craig Ed Start date Aug 1, Craig Ed. A bit of guidance as I understand where I'm going with this but auto electrics is slightly different to my component level understanding and not something I want to get wrong. A diagram of my view. Or is this better? A new way of thinking. This works fine if you only want the switch be used to prevent the car from being started, but if the engine is running then the alternetor generates enough power to keep the engine running even if the battery is disconnected. I have now bought the same one as above but not to sure how to connect it up. Any help? Namabuki - Sort of a little help but doesn't go into a clearer level if that makes sense. Ourboy - Yes the bottom of the switch has 4 prongs and on my pic at the top those close when the main switch is opened allowing back EMF or back charge upon closure so it protects the alt Im pretty sure my second diagram will work just need someone who has done it before to confirm this. Hope these make sense to you let us know what you come up with. Makes sense now i think, The momentary i. And the Z part of the master switch is coil where a constant 12v supply is held from for accessories. Ill draw up another. Final attempt till I get some expert guidance. The lower part with fuses and that is my take on wiring it to the Omex ecu. I have my switch down beside the bonnet release handle but am thinking of moving it to the gear stick surround to keep it closer to the drivers seat. If you wanted you could have it in the footwell. If it's for extra security then a hidden spot is ideal but not ideal really if you like to blip the car jump in a turn I have no Renault ecu what so ever so I am mounting it to the dash inline with an after market immobilizer system keyless entry. Ic you have it where you are on about putting it then I can imagine it being a pain to lean over and plug it every time. Have a sit in your car with the key and see where is easy for you but discrete? Craig Ed Did you get anywhere with this? I'm looking to fit a FIA kill switch with a push start button. Seat Ibiza Cupra TDi. Ive got a kill switch with a push start but those pictures above seem like a foreign language

:smile:. AdamCup said:. Is it a FIA kill switch? If so, don't suppose you have a wiring diagram? Did you use a relay with the push start button? Yes its, an FIA kill switch, plus I have a switch for ignition, and the push start. The push start came as a kit, with a relay, so the wiring for it is pretty specific. And I don;t imagine too many people are using a switch for ignition as most people need the key for the immobiliser anyway. Ads29 ClioSport Club Member. Clio Merc ML You'll probably find it easier to wire up the kill switch, and get that working properly first, and then move onto a push button starter rather than confusing things by trying to wire it all up together. Ads29 said:. You must log in or register to reply here. Similar threads C. FIA Kill switch install. Replies 3 Views Oct 15, cliokid Clio brake servo and master cylinder. Replies 0 Views Ph1 cut out and now wont start. Replies 11 Views Aug 30, NorthloopCup. Replies 4 Views Jul 5, Danboy Apr 19, M90SR. Log in. Install the app. Forums What's new Log in Register Search. This site uses cookies to help personalise content, tailor your experience and to keep you logged in if you register. By continuing to use this site, you are consenting to our use of cookies. Accept Learn moreâ€¦. By Cornwallfrank, February 21, in Electrics. Hi all, having wasted my money, albiet about a fiver on a battery cut of switch, realise that this doesn't " kill " the engine, now i have bought a better item, but have a couple of questions if anyone can help. The large terminals are for the battery feed so that when off the battery is completely disconnected. One of the two smaller spade connectors is for the ignition cutout i. The other connector closes rather than opens when the switch is turned off and this is to short the alternator down to earth via the resistor so that the alternator is not damaged when its still turning and hence generating until the engine stops but can't charge the battery as its been disconnected. The resistor is used in series with the alternator connection to earth to limit the current as the charge from the alternator is dissipated to earth. The other 2 spade connectors are simply an additional switch in the main ignition between ignition key and ECU. So acts the same as turning off the engine in the normal manner but as the battery lead is now disconnected, the small amount of charge given while engine slows before stopping is effectivly bled away. Yes, that's exactly it. Likewise make sure the correct spade connector pair are used as one closed when turned off and one opens. Cable size due to the resistor current will be below about 1 amp so it doesn't need to be thick cable. This was helpful to me as I was wiring up mine at the time. One point of clarification for other numpties like me if you are removing the ignition key barrel. The ignition feed to coil, don't make the mistake I did and try and connect the heavy switched ignition supply from the ignition barrel, this just needs a low amperage switched 12v supply. As mentioned above, operating the kill switch will open the main feed heavy copper bolted connection close the alternator dump circuit terminals 1 above allowing any current from the alternator a path to earth through the resister and open the 12v supply to the coil terminals 2 above killing the spark. If I have said anything wrong feel free to correct me as I'm not an auto electrician but I hope this simple explanation and advice helps. Does anyone have an idea which wire we should use to kill the ignition on our Westy when fitting a FIA switch? It's a 1. This is exactly the route I was going to take, cut the main ignition feed wire at the barrel, extend, and connect to the spade connectors marked "2",. Iade sure I posted this as the main ignition cable is a heavy cable running all the switched circuits on the car. This could see quite a bit of current. If your just taking a loop to The FIA switch to give you switched 12 v it should be fine, I was meaning when you're removing the ignition key barrel. Anyone else fitted one of these to a Megabusa? Coming back to this again, I'm finally going to tackle the cut off switch. At the moment I have the main starter cable coming from the battery to starter relay and then to starter. I plan to place the cut off switch between battery and starter relay. For the ignition circuit, I plan on using the grey cable which supplies the ignition coils, I will also be able to use this for my flat shifter. Now the question, the westfield wiring loom is also supplied from the battery, meaning if the cut off switch is activated there will still be power to the rest of the car, lights, etc. Or - is it just as effective to use part 2 of the switch to interrupt the supply to the fuel pump? What did you do in the end? I am in the same situation and wondering if I should keep the main wiring loom direct to the battery or not. Hi TableLeg, I have one positive feed from battery to Cutoff switch, then all feeds are supplied from the other side of the switch, this means the switch will shut off everything as it should be. You can post now and register later. If you have an account, sign in now to post with your account. Restore formatting. Only 75 emoji are allowed. Display as a link instead. Clear editor. Upload or insert images from URL. We have placed cookies on your device to help make this website better. You can adjust your cookie settings , otherwise we'll assume you're okay to continue. Reply to this topic. Prev 1 2 Next Page 1 of 2. Recommended Posts. Cornwallfrank 0 Posted February 21, Posted February 21, In my mind the diagram with the switch is over complicated, or I'm not seeing the right way. The switch came with a resistor to go to earth to prevent alternater damage due to over run. Cheers Frank. Link to post Share on other sites. Conehead 4 Posted February 21, PhillB 2 Posted

February 21, Hope that makes sense? Cornwallfrank 0 Posted February 22, Posted February 22, If correct, any idea what size wire is required for this loop? Chee rs again Frank. PhillB 2 Posted February 22, Cheers, Phill. Nick Algar Posted March 9, Posted March 9, Copied accross to FAQ as useful info. One point of clarification for other numpties like me if you are removing the ignition key barrel The ignition feed to coil, don't make the mistake I did and try and connect the heavy switched ignition supply from the ignition barrel, this just needs a low amperage switched 12v supply. If I have said anything wrong feel free to correct me as I'm not an auto electrician but I hope this simple explanation and advice helps Ian. Cornwallfrank 0 Posted March 10, Posted March 10, Just when I thought I had it all worked out I read this in Ian's post The ignition feed to coil, don't make the mistake I did and try and connect the heavy switched ignition supply from the ignition barrel, this just needs a low amperage switched 12v supply. Deanspoors Posted December 17, Posted December 17, Deanspoors Posted September 28, Posted September 28, Posted June 13, Is switch 2 supposed to interrupt: a The main, 35a input into the igntion switch b the ignition output to the main circuit, i. TableLeg 1, Posted September 12, Posted September 12, Deanspoors Posted September 12, Join the conversation You can post now and register later. Reply to this topic Insert image from URL. Followers 5. Go to topic listing. Sign In Sign Up. I accept. It is clear I think! But cutting either next to the battery means a remote relay solution. Not much safer, but safer it is as you have half the "dangerous" points one rather than two. Using the zener and a resistor is not much more complex than the resistor and long wires. You could bolt the zener directly to the engine block near the alternator and strap the resistor to the LHS engine mount. Blatchat Google Search. Has worked faultlessly for years, act as a basic anti theft device as well FIA switch externally is a bit obvious for this purpose. I have a four pole switch with an alternator resistor fitted inside underneath on the passenger side of the scuttle. Before this thread I had not even considered fitting it on the negative side and I can see why it might be worth thinking about. As an emergency safety device the negative side may be slightly better as most of the positive side will already have fuses and switches that may break a circuit whereas the negative side has nothing but at the end of the day a big switch that cuts either leg is much the same. I am struggling to think of a scenario where a negative switch would be advantageous. Electron flow is negative to positive but no electrons flow in an open circuit regardless of where the switch is. If you cut the negative you don't have a live feed to the switch that is unfused. In case of a short circuit to the chassis of the feed wire to the switch it's just an earth and the worst that can happen is that the master switch can't cut power whereas if it's a positive then you have a short circuit - and this is the battery you short. Who said fireworks? Alternative wiring diagrams and wire specifications will be very welcome - this is for an

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"FIA" switch, in case there are choices I might like to make. It worked fine until multiple roadside fixes mostly direct to the battery, so it's probably ok as it is, when the fixes are fixed. Skip to main content. Master cutoff switch - cut the positive or the negative? Last post. Last seen: 5 days 19 hours ago. However, that's not the popular option; presumably because it's not what CC deliver. If the remote scuttle mounted switch is to used it's much safer to cut the -ve. Anthony, "bear the alternator" - should have said "near the alternator" - Could you edit that for me :-p. Last seen: 11 hours 26 min ago. So my experience is KISS led. You need to be able to reach it strapped in and upside down. And I prefer not to be simple. Last seen: 1 month 3 weeks ago. Cut both by using a jump plug. Jonathan Kay. At the same time I will acquire the kit to install a dark side relay solution. As such staying simple by staying the same, allowing for change in due course if I wish. May the force..