# Lionel fastrack wiring diagram

Lionel remote control track model train forum trains uncoupling section wiring question for rcs o gauge railroading on line repair manual page set stc ucs scale uncoupler diagram duflot conseil fr layout damage diagrams apy audi bege switches 5 0 engine pickup f schematics toy advanced gargraves trackage corporation and instructions unloader switch jeep wrangler alternator stm2 lcs fastrack seniorsclub it circuit siege serial relay controller raspberry pi geek tracks usb data transfer cable ct90 yenpancane jeanjaures37 untitled6 cw80 fast lcr q meter block ca 27 path right hand electrical 1 box trip building tips are ac or dc the silicon underground railroad problem lcfrx2g4 polar express user l c 6 polaris bathroom vents tukune ho of common rail 97 ford 4x4 how to wire operating through otc using accessory power owner s. Lionel remote control track model trains uncoupling for rcs stc ucs question o scale uncoupler wiring diagram duflot conseil fr diagrams apy train switches toy layout advanced gargraves trackage corporation unloader gauge switch stm2 lcs fastrack instructions serial relay controller raspberry pi geek tracks untitled6 cw80 and fast 27 path right hand electrical page 1 box building tips are ac or dc the manual railroad problem railroading on set user l c 6 section ho of common rail 97 how to wire operating owner s Share this: Facebook Twitter Pinterest Telegram WhatsApp Skype LinkedIn Pocket Print Related Related Posts. Round Trailer Plug Wiring Diagram. Wiring Diagram For Fog Lights. Megajolt E Wiring Diagram. Leave a Reply Cancel reply. FasTrack was introduced in and is now Lionel's most popular track system. It is easy to assemble, can be used on any flat surface, and has a more realistic appearance than Lionel's older all-metal 3-rail track. Also, FasTrack is available in many different curve and straight dimensions, and there is an infinite number of layouts that can be built using it. However, for many beginners FasTrack can be confusing, There are many pieces that perform special functions, and sorting them out and figuring out what is what can be a challenge. The purpose of this short guide is to provide a basic primer on FasTrack, what the different pieces do, how they work together, and to give some ideas of train layouts that can be built using FasTrack. If you have any other questions about FasTrack, feel free to email us at answers trainz. Have fun! Did you listen in math class? If the answer is yes, good! Because a little basic geometry comes in handy when working with FasTrack. If the answer was 'no', read this article twice and then take the question test at the end of the article—just kidding. FasTrack is a rigid track system, and the track sections cannot be cut. Therefore, Lionel has designed a multitude of track pieces to meet almost any need. Knowing how the pieces interrelate is important to planning and building a FasTrack layout. The key concept when working with FasTrack is knowing the angles—all of the curves and crossings except O48 curves work off of angles of 90, 45, O48 uses degree angles. Since nearly all layouts require the train to make a circle in order to form a continuous loop, it's important to look at the curved track sections first. There are five diameters of curvature in FasTrack. O36 is included with most starter sets. Note that each curve diameter is one foot wider than the one before it. Curved tracks are sold by the section:. O sections to a circle Lionel One section makes a degree turn. Each half section make a O sections to a circle One section makes a 30 degree turn. One section makes a Note that O36, O60, O72 and O84 track sections are made where multiples of 8 make a full circle, which makes it easy to make these circles symmetrical and work together on a layout. However, O48 is made where it takes 12 sections to make a circle 30 degrees. This makes it a bit of a challenge to make O48 work in a layout using multiple curve diameters, because the angle of the curves does not match the other curve sections when making partial turns. Straights are pretty easy. The standard straight section is 10 inches long , and a half section is available as well Most special track sections like block sections and accessory activation sections are also either 10 or 5 inches long, making it easy to substitute a regular straight section with one of these special track pieces. Lionel also makes a 30 inch straight , which helps when building large layouts and long straightaways. O36 Remote Switch. This makes it easy to integrate them into layouts. The O36 switch matches the footprint of one 10 inch straight and one O36 curve, and the wider diameter switches are usually the footprint of one of the matching curves, along with a 10" and a 5" straight hooked together. All switches are available in both right and left hand turns. The O60 and O72 switches include extra fitter sections with them. O36 Switches come with both manual control and , where you flip the switch by hand, and remote control and , which includes a controller wired to the switch. All other switches are available only with remote control. The three crossings made in FasTrack are 90 degree , 45 degree , and Note that the angles are multiples of one another There are several special track sections made for FasTrack which perform specific tasks. Lastly, three crossing sections are also available from Lionel. The grade crossing section is 10" long and has a simulated road and crossing built into it. They are sold in pairs. The flashing highway signal and crossing gate sets are 20" long when fully assembled and take the place of two 10" straights on a layout. Click the Diagram to see a larger picture. This little layout, which we call the Double Loop RR, shows how to fit a crossing into a layout.

Take a look at the two parts of the layout outlined in red. Note that the top leg of the loop, the one running horizontally across the top, includes 30" of straight track the two 10" straights plus the straight leg of the switch, which is also 10 inches. Along the parallel leg in the middle of the layout, we also have a 30" straight run, but this one consists of 5 sections of track. Here we have one 10" straight, a 90 degree crossing, which measures 6 inches long, one 5 inch straight, and 2 of the 4. Because the crossing is an odd length relative to all other sections, a special piece is needed to compensate to make the loop match up. The vertical loop has the exact same arrangement of straight sections. This second layout, designed to go around a Christmas tree, illustrates the need for half curves to make a plan fit. At first glance the plan appears to be a figure-8, but it is in fact two reverse loops folded over each other. The top half of the circle is made of six O48 curves. The two switches are O36, one right and one left. The two crossings are 45 degrees. Note that because we are using 45 degree crossings in this plan, we needed to connect half sections of O36 curves between the switches and the crossing to line the track up properly the curves are highlighted in red. Also, note that half curve sections were needed on the outside legs of each loop to close the gap between the turns at the bottom of the layout and the switches also highlighted in red. This had to be done because the curves at the bottom of the layout were wider than those at the top, so we had to include the S-turns to get everything to line up. Studying this plan closely, you will also see that a couple short fitter pieces were used to close a couple small gaps. This layout is an example of how to connect two different diameters of curves into one layout. It is a folded-over figure 8, and the inner loop is O48, and the outer loop is O Note the use of several fitter pieces on the O48 loop outlined in red to achieve the desired distance between the back straightaways of both loops. They were needed because if we tried to use two O48 curves in their place, the plan would not have lined up properly, because of the different angle of O48 curves see the above section on curves. When designing a plan, it is always best to start with the most complex part of the track plan first, and then work your way out. You will find that it is easier to make everything line up with you are finished if you follow this method. This layout illustrates the use of block sections to separate two loops of track and create a two-train layout. The block sections, highlighted in red, separate the power between the two loops. The rest of the layout is very straightforward, using regular O36 curves and 10" and 5" straights. This plan requires:. In this final plan, we see the full integration of all FasTrack components--switches, crossings, short straights, full and half curves, all creating an interesting, fun to operate layout. The layout shows that numerous complex arrangements can be formed with FasTrack. The layout has a pair of reverse loops, a continuous loop, and two figure 8s. Also note that despite this layout's apparent complexity, it only uses 3 pairs of switches. Newly-listed collectibles are viewable by everyone, but only a Private Car member can purchase during the seven day preview period. Want the opportunity to purchase our rarest and most exclusive collectible trains without waiting? Sign up for a Private Car membership today! Ready to climb aboard? Make sure you have a free Trainz Rewards account first, by clicking on the "Sign up and earn points! It's how we know to give you points for your purchases, and how you create discount codes to use on your next shopping trip. Once you're ready, click below! O36 Manual Switch. O60 Remote Switch. O72 Remote Switch. Add to Cart. Out Of Stock! We will notify you when this product becomes available. Availability Date:. Item added to cart! Item added to wishlist! Continue shopping Go to cart Go to wishlist. Become a Premium Member. Premium Membership. What are Premium Memberships? Intended for the serious collector, Trainz Premium Memberships earn more points per dollar spent, and unlock exclusive benefits like Exclusive Preview access to no-questions-asked returns and beyond. Learn More. Unlock Exclusive Preview Items. See More. What benefits do I get? Learn More! How much does it cost? Our Premium Memberships are available at two levels, with a monthly payment option and a discounted yearly rate. Check pricing! Purchase First Class Membership. Purchase Now! Purchase Private Car membership. Uncoupling tracks include a magnet that will activate the Lionel couplers automatically. An operating track section also has the magnet, but it also includes special control rails that activate the Lionel operating cars with plastic slide shoes on the trucks [wheelsets]. The uncoupler track is 5" long, and the operating track section is 10" long. The terminal track section is a 10" straight with wires to connect to the transformer. Starter sets all include a terminal track section. The wires can be unhooked and reconnected to nearly all FasTrack straight and curved sections. The block section allows you to isolate power between sections of track. This is the track section you need to connect two loops operating off of separate transformers. It is 5" long. The transition section allows you to connect conventional O Gauge track to FasTrack. It has FasTrack connectors on one end and O Gauge track pins on the other. It does not work with O The accessory activation track is used to activate Lionel trackside accessories. One of the outside rails is isolated, and when the wheels of the train bridge power into this isolated section, it turns the accessory on and off. The

activation section is 20" long when assembled. Also available is a 10" extension piece for the accessory activation track Bumpers are used on the end of spur sidings to keep cars from rolling off and to give the track a nice, finished look. They are available both lighted and unlighted , and are sold by the pair. Instruction Manuals. American Flyer. Building Kits. Century Club I. Century Club II. Diesel Locomotives. Electric Locomotives. Expansion Pack. HO Locomotives. Large Scale. Legacy Control System. Little Lionel. Operating Accessories. Operating Cars. Passenger Cars. Rail Scope. Rolling Stock. Standard Gauge. Steam Locomotives. Track Accessories. Train Sets. TrainMaster Command Control. Other Documents. Diesel Non Powered. HO Products. Large Scale Locomotives. Large Scale Rolling Stock. Legacy Products. Motorized Unit. Passenger Car. Service Part. Stock Car. Tank Car. Wiring Diagrams. To search for service documents for a certain product, please enter the product number or the first few letters of the product you are looking for below and click the "Search" button. A list will be returned displaying all products which currently have manuals available. Document Categories Use the category filter below to view all products within a category. Product Name or Number To search for service documents for a certain product, please enter the product number or the first few letters of the product you are looking for below and click the "Search" button. Wiring any model railroad can be a daunting task. Like other parts of the hobby however, wiring your railroad is not something to fear. Learn the basics, establish standards, learn as you go and wire as you build. How big is your railroad? How many trains do you run? What accessories do you have? The number of control switches, block sections, transformers, etc. The basic principles however remain the same. While the quantity may change, the systems do not. The pages within this blog are filled with diagrams, photos and video to make sense of it all. You may not need all of this information, or you may just not need all of it right now. Command Control Basics â€" What is it and what can it do? This page will help you make sense of all the controller options available as you add to your command control capabilities to do more than just run trains. There are multiple ways to connect your various accessories to command control. For operating and uncoupling tracks, we have the OTC. And for other special accessories, we have the AMC. And of course those devices and insulated outside rail blocks will still work no matter what is powering your trains. You are really limited only by your imagination when it comes to wiring your accessories. So what do you need to wire your layout? By now you should know what each piece does and what it can handle. While your layout is probably different from the one shown here, hopefully this sample will help show you the way. First of all, thank you for this service as it will help to clear up many questions about wiring. Thanks again. I believe this will help Lionel to convert many fence sitters to come over to the added fun of the Legacy system with the use of AF trains. What conflict, if any, would be impose if command was ADDED to turnouts already wired for standard controller operation. In other words, can the turnouts operate in both command and direct modes at the same time? The ASC and SC-2 are essentially push putton switches which replace your finger with a command code from the command base. This is as I thought. Thank you very much for your fast response. Upgrading my current system will not be an inexpensive job and I want to be sure that I understand completely. This section and its videos have helped me confirm most of my assumptions and given me a final confidence to move ahead. You have my forever thanks for something I felt was very much needed! Our pleasure! Good luck with your conversion, and feel free to reach out with questions any time. The process can be overwhelming in scope and budget! Have fun! Thank you and what a great idea. In your sample laout, I see there are several crossover sections to go from one loop to the other. These are using 2 switches that are face to face so to speak. In a crossover, both switches can be wired to one terminal on the controller. Not only will it save you money on hardware, it will make operations easier as well. Sorry looking for some tehie details too thus.. Thanks, just trying to fully understand things, so they can all be seamlessly integrated and used to their max potential. If a command switch is in a close proximity to these devices you can use DAT and common to drive those devices. Next question related to back to back switches I have one section where there are basically 2 loops connected with o36 switches. I am using 2 â€" o32 command control remotes on the mainline, and 2 â€" o32 std remote switches on the inner loop. Would this cause any problems eg are the OUT and THRU connections used to feedback voltage to the controller for indications , and is there a way around this? Thank You! As a bonus to doing this, the Anti-Derail feature will throw both switches too! We have building a brand new layout which will be quite large. We will only be using legacy. Thank you. Thank you for your fast response. So if we add LEGACY to our switches and accessories do we just put in either the accessories or operating track and then take that back to where? We have operating fastrack, accessory fastrack, not sure exactly how they work. Also we have a rotary coal tipple, is there anyway we can connect it to legacy so I can operate with a preprogrammed sequence? Thank you so much for all your help. You can

find instructions for all of these on the wiring your layout page. For example, a crossing signal can be controlled easily with an insulated rail and will be operated by the train â€" no need to add a manual control unless you want to turn it on and off every time by yourself. Does anyone have any idea of why Lionel cars with coil couplers are opening on various sections of Fastrack? I am at wits end trying to figure this out. Does not matter which car any one of them from , or any one particular section of track. It will happen on both my conventional blocks and my Legacy blocks 7 blocks over all. I have tried taping over the shoes on the cars but this only makes a mess of the track, gets caught in the switches 26 Command Control aux power and does not really address he problem. Thanks for our input. I really do not want to disable all the shoes with the wire cutters. There is no likely electrical reason for the problem. More probable is that the coupler springs themselves have simply weakened with age. You could try replacing the springs on the couplers. I am just getting back into Lionel model railroading. I purchased some fastback and fastrack switches. Everyitme the loco rolls over the middle of the switch it stops. This happens on both switches, it appears that all the rail connections are as they should be and the wiring and jumper is correct. Am I missing something? I am changing from tubular track to FasTrack. To get started, I just want to replicate my tubular layout in FasTrack. My tubular switches each had original controllers but also had 2 wires from one directly to the other This way one switch was activated by the train passing thru the other as shown on page 89 of The Big Book of Lionel 2nd edition. So here is my question. Can Fastrack switches be wired together to do this, and if so what are the wiring connections required? YES, red and green may be connected between switches. Both switches will activate simultaneously either by switch remote. Seems the insulator pins conflict. Yes, you just need to move the insulated pins. Use a pair of needle-nose pliers to pull them out of the ends of the rails. Just purchased my first LionChief train and am curious about adding wiring accessories to this system. Can you recommend a resource for this? You can add track-powered accessories to your LionChief set using track power as you would with a transformer controlled set. The only caveat to this is that any accessory wired to the track must have bulbs rated for 18V. Your LionChief power supply has adequate power to run the train and a few small accessories without any problem. If you want to power the accessories directly not from track power then an additional power supply should be purchased. We recommend separating accessories and train power regardless of what control system you use if you are going to have several around the layout. Our Accessory Transformer will work well for this. You can find more specific tips for wiring the different types of accessories here on these pages. I am starting a new first layout, if I plan on using the Lionel Legacy Control, can I power the track with a constant 18volts right from the transformer? Do I still need to add control blocks as in older layouts? Are the new engines equipped with the Trainmaster and Legacy controls completely self controlled and not relying on the variable voltage from the transformer,as long as I have a constant 18 volts to the tracks? I plan on using all new updated engines. I need to know if all I need to do is provide a constant 18Volts to the track and of course the one wire from the Legacy control. Yes, all you need is 18 volts to the rails. There is no need for any blocks. Do you have any suggestions to fix this problem? How can I print out a copy of these instruction. Racking my brain: In regards to my operating track section, Lionel , which works fine using track power in both the uncouple and unload modes using my operating box car , I prefer to wire it to a constant 14V power supply to my CW80 watt transformer via the accessory terminals. The uncoupler still works fine, but not the unload feature. All I did was remove the red lead from under the track and connect it to the 14v supply per your video blog. The uncoupler still works fine, but the accessory rails do not. With my multimeter, I notice that one set of accessory rails upon pressing the unload button energizes to 14v, but the other set of rails maintains a constant 1. When I re-hook up the red lead back to the track for track power, everything works fine again. One set of accessory rails energizes to 14v while the other set de-energizes to 0v and the box car operates just fine. Any idea why there would be a difference just by re-directing the red lead to accessory power from track power. Also, I did notice that my operating track upon removal of the beveled roadbed has 4 sets of three copper terminals which I do not see in the instruction manual or in your videos. It appears to be wired with red hot , green, and black wires at each location for some function that is beyond me. Is this operating track different or are they all the same? I have a total of 28 command control fastrack that want to start wiring up to a central location. I am going to wire in the switch lever and also use command control. As per the Lionel Fastrack book I am going to use the Radio Shack 12 position terminal strips I am going to use separate power for the switch not track power. So with the power feed and switch lever wiring that is a total of 6 wires going to the terminal strip, so I can wire two switches per terminal strip. So here is my question, according to the Lionel book they talk about using 22 gauge wiring, can I get away using Cat 3 6 wire 3 pair wiring which is 24 gauge instead of the 22 gauge? I am concerned mostly about the

power handling of the 24 gauge, will it be alright or do I need to use at least 22 gauge? If you already have the 24 gauge wire, you can hook up your furthest switch for a test. If it works, you should be fine for all. I am just getting used to 3 rail track, it has so many advantages over my garden railway G gauge 2 rail, reverse loops are a breeze. Thanks Mike for the instructional videos, just love the April Fools ones, Brilliant. As a newcomer setting up for son for Christmas , I am hoping someone can answer what is probably a very simple question but I do not want to assume and burn a house : If I want to say double a 40 x 60 Christmas train layout, with a few cars and a dual motor diesel, is going from a CW 80 to a CW enough or do I also need to run busses? Like, one bus on the opposite side if it is a symmetrical layout for example? I experienced the obvious when I set it up normally with no busses and just the CW 80â€¦â€¦. Thank you! This is my soon planned figure-8 layout, which also gives my LionChief 18 volt DC Polar Express train the ability to reverse reverse loop its forward direction by using 4 remote switches 2 left and 2 right. All advice and comments are welcomed please! I have kidsâ€¦so I am going to have both lines totally separate, crossing over each other via a trestle at the midway point of the longest walls. In other words, there will be 2 totally separate track systems so there is no chance of collision. That being said, can I use the Lionel Legacy controller on 2 totally separate tracks? Or do I have to use 2? Thanks in advance. I am having trouble with the fast track and getting enough power to the track from the transformer without the wires getting hot. There is power to the track but not enough to move the train around the track. I have checked all of the connections and it is new track. The train will start moving slowly and then just stops. Please help me with this problem as I am at a stand still and need an expert to help me ouG. I have a three light stop light and a slide switch, how should this be wired? Your email address will not be published. One other question. Exactly how do you figure how many transformers you need for fastrack. Is there a step by step wiring book for dummies anywhere? With pictures? Is there a way to turn a fastrack manual switch into a automitac one? Lionel Fastrack Wiring I have a total of 28 command control fastrack that want to start wiring up to a central location. Do I need to have capacitors across my blocks? Leave a Reply Cancel reply Your email address will not be published. I need help with a fastrack switch controller wiring. I purchased some used fastrack switches on of them. Replies sorted oldest to newest. On the switch it should be G, B, R, Y just like the controller. They reverse on a switch going the opposite direction. Skip to and you will see the wiring. You're right, that switch is wired wrong, I didn't notice that! Served me right for just picking a picture and not looking closely at it. This post is helpful. What do I do with the track jumper? A video from Lionel that I watched said to remove it. Thanks for the quick reply, John. What is the jumper for and in what instance would I leave it in and use it? The jumper is there for powering the switch with the track power center rail. This can be a greater challenge when running trains in transformer control in that when moving the locomotive slow at lo

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 w voltage the switches will also have low voltage. FWIW, since my entire layout track and accessory power shares a common ground, I only had to run the hot accessory wire to Aux In on the switches. The ground is picked up from the outside rails of the track. Skip to main content. I purchased some used fastrack switches on of them The controller was not wired, and I cant find a diagram in the manual. Thanks Dandeo Original Post. Riverrailfan Member. John H. Thanks everyone! Here's the illustration I should have used Runnikee, you are correct. Membership Required We're sorry. You must be signed in to continue. Sign In or Register. Are you sure you want to remove from your Block List? When you block a person, they can no longer invite you to a private message or post to your profile wall. Finally, you'll never receive email notifications about content they create or likes they designate for your content. Note: if you proceed, you will no longer be following. Link copied to your clipboard.