

Frequently Asked Questions – Cost Focused

Updated: 1/27/2024

Plastic vs. Wood

Please note: When I say “Plastic”, I am referring to Carrera track. Carrera is the best of the available plastic tracks, and that is what you should use as a benchmark.

Yes, it is relatively expensive to buy plastic track to build a large layout, or CNC route. I have not done a back-to-back comparison, but if you consider each piece of Carrera track may average \$10, and it takes quite a few pieces to build a good sized 4-Lane layout, you may be looking at \$1500 +/- \$500 in Carrera track and aprons. This is your cheapest and easiest racing solution, and you can have a lot of fun with it. I’ve built a lot of Carrera plastic track layouts, and they were especially fun after removing the magnets from cars so they would drift around the corners.

However, there is NO comparison between even the best Carrera plastic track layout and what we do at CNC Track Design!

CNC Track Design

For ballpark costs, most of my Customers have a budget of \$6,000 +/- \$2,000. So, we are talking about covering a price range of \$4,000 - \$8,000. What does this include?

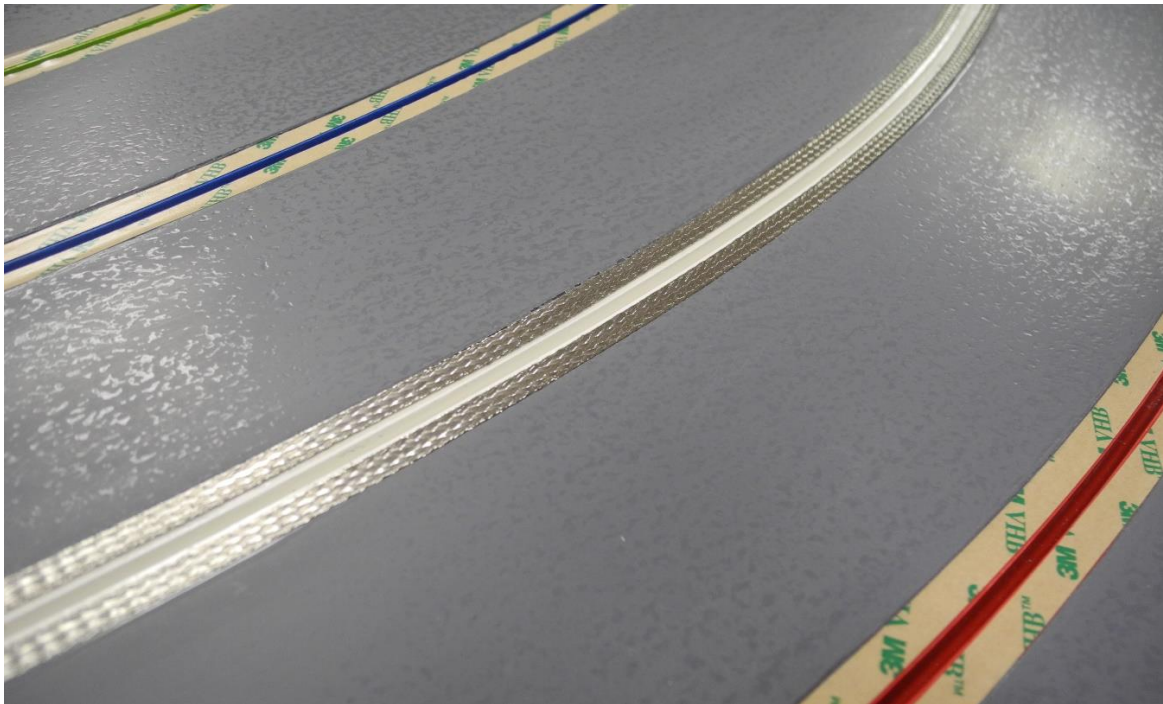
- Sketches, where we work up a concept to fit in your space.
- Personalized contract where we list (and agree) what we will be doing for you/cost/timing.
 - At this point a 50% deposit is required from you to start the Design phase.
- Design of the grooves and racing line borders.
 - Variable groove spacing will add some cost, anywhere from 10% - 30% depending on how aggressive we go and how large the layout, (more turns = more design time)!
 - Design reviews with you. Usually we have 2 – 3 reviews as we progress thru the design phase with final sign-off from you before we start the Manufacturing phase.
- Design for Manufacturing, which is dependent on the number of sheets of MDF.
- MDF – which is the highest quality on the market. Extremely dense and expensive.
- CNC Manufacturing your layout onto the sheets of MDF.
- All of my Customers option to have me hand route the gain, (grooves that the braid sits in).
 - You could save some money if you chose to do this yourself.
- Personalized assembly instructions, which includes recommendations for:
 - Bill of Materials
 - Recommended Vendors
 - Part numbers and quantities for items to complete your layout.
 - Painting to achieve best bond with the braid, and tire grip.
 - Recommendations for installing the braid and wiring.

If you follow the recommendations, which I have refined over many track builds, you *should* have good results.

CNC Track Design offers many services, from constructing the base for your layout to finishing touches. Effective Project Management implies making the best use of resources to minimize time and/or expense. Since our goal is for you to have the most professional results, (appearance and performance), you may want to consider having me help with more of the finishing tasks like:

- Installing the track sections, setting elevations and banking.
- Laying tape and braid.

Not many people have laid more braid than me. It is the finishing touch that really makes, or breaks, the appearance of a track.



Laying braid is a 2-Man job. It is best if one person has experience... I always use un-taped braid. Laying tape is hard enough. Trying to lay tape and braid together means you are going to throw away a lot of expensive braid. Here you can see 3 taped lanes waiting for braid. Of course, taping and braiding the turns is the hard part, and requires a bit of “technique”!

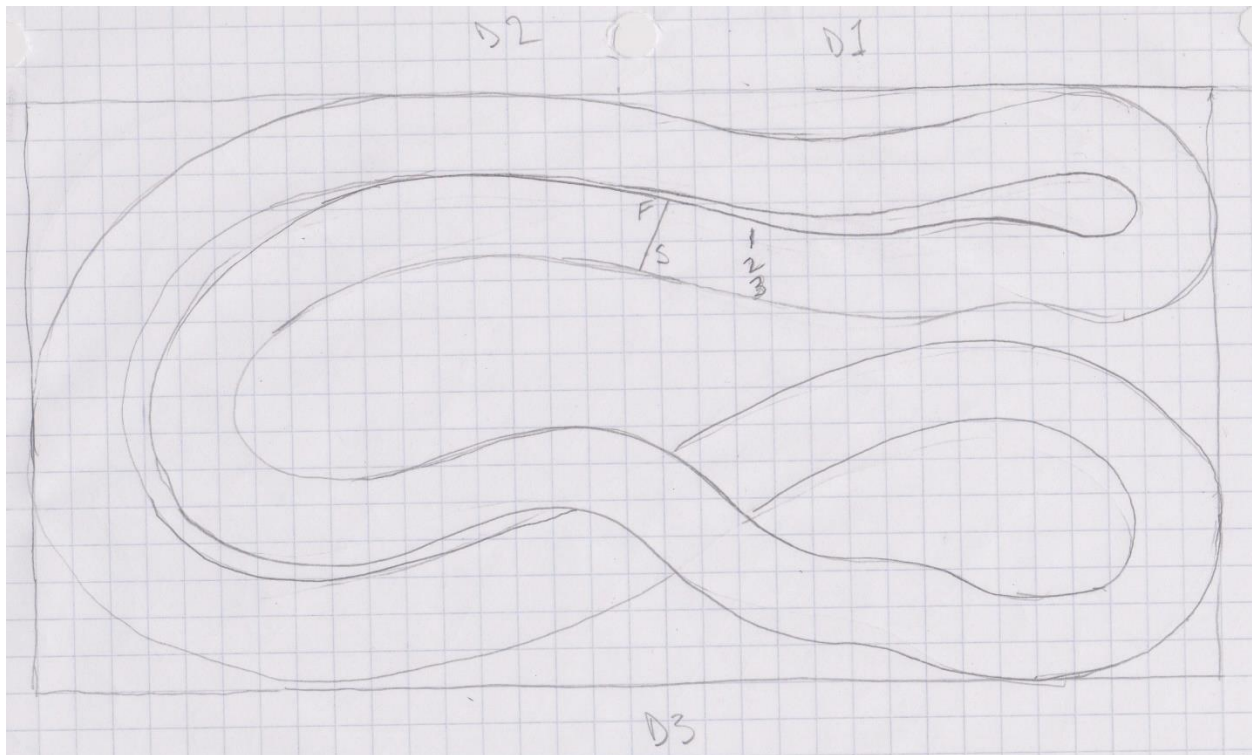
Please note: None of what has been mentioned up to this point includes painting, which can more than double the cost. You are probably wondering how something “low-tech” like painting can double the cost of a high-tech product/process? Well, it is just the crazy hours required to complete all of the painting steps that adds so much cost. It is not unusual for painting to add 100 hours or more...

I am assuming most people can follow the painting instructions that we supply. Thus, this is a big cost save, that could be applied to the fore mentioned installing the track sections and laying tape and braid. Of course, the finishing steps must be done on-site at your home. I have tracks from CA to MA, so travel and time would need to be negotiated for this level of support.

SMALL

For talking purposes, I would recommend something like the 3-Lane sketch shown below which fits in an 8' x 16' space. If your space is bigger, great! Let me know what we have to work with. I can't really give you an accurate estimate until I have a better idea of your space and how many sheets of MDF are involved, and how much of the work you are willing to do yourself.

The image below would be on the low end of the price range. Almost all of the tracks that I do are quite large. We have done some large 3 lane layouts with mild variable lane spacing for \$6,000. 4-Lanes (or more, such as 6-Lanes) really affect how efficient we can be with material usage and add significantly to the cost. Cost is primarily a function of design time and material usage, and how many services you are asking me to do vs. what you can do yourself. Many 70+ year old Customers struggle to do some of the more back-breaking tasks, so they leave those to me.



A 3-Lane sketch within an 8' wide x 16' long footprint. This is about as small as I would recommend for a 1/32 scale layout. You want to be able to wring-out the cars at WOT to get some speed out of them, and with our large radii bends this is possible.

Of course, a smaller design could be done, but the cost/lane length starts to get poor. Smaller tracks than this are far more cost and effort effective in plastic. You can't do much in a 4' x 8' space, period! Really, longer length layouts (20' – 30' table length x 8' or greater width) are recommended.

LARGE

A fully variable 4-Lane track like mine (below) would fall on the high end of the range.



The track featured in the YouTube CNC Track Design video is my personal home layout. See image above. It is 8' wide at the narrowest end, 12.5' wide at the far (blue) wall, and 24' long. It has fully variable lane spacing, which means it is like designing 4 layouts and then putting them all seamlessly together, which is very time consuming/expensive. We don't design tracks like this anymore, we have created more cost and material efficient solutions. We can do variable lane spacing at a fraction of the cost! All of our current tracks have the racing line border CNC cut as part of the design, saving you a lot of time, and they look really cool!

As previously mentioned, essentially every track that I have done has been "large". They typically are 24' long x 12' wide, or larger. I don't share images, CAD data, Customer names, etc. You wouldn't want me to share that information if it was your track – would you!? If you came to the Detroit area to visit, I could probably arrange for you to see a local Customer's track.

However, I think it is best to work with you on your custom track design, incorporating your ideas/features/theme/desires. Our goal at CNC Track Design is to create your dream layout, not a copy.

Procurement of BOM Items, Paint, Timing Systems, Etc.

Unless specifically requested, the items listed on the Bill of Materials that you will receive as part of your CNC Track Design kit will NOT be supplied. You will have to procure/order all remaining items to complete your track build. The BOM items, Paint and painting supplies, tape/braid and wiring, track timing and any scenery items that you need to complete your track will have to be purchased separately. How much will this cost? That is entirely up to you...as we have no idea what you already have, or prefer for controllers, fencing, structures, lap counter/timers, scenery, etc.

Shipping

I normally insist that Customers pick-up their track sections from my house. Then they can see how my track is constructed. Seeing an example really helps most people to avoid build mistakes. Our goal at CNC Track Design is to help you have the most satisfying build experience and professional results. I have delivered tracks up to 12 hours from Detroit. I do NOT recommend, nor will I be responsible for shipping. Realize that these 4' x 8' sheets of MDF are extremely heavy. It is not unusual for a stack of track sheets of MDF on a pallet to weight 1200 lbs! Most freight companies will not deliver to a residential address, only a commercial address with a loading dock. Thus, you would have to make special arrangements with a carrier if you want delivery to your home. You really should pick them up from my house. We will have a good time running cars and a lot of questions can get answered on the spot. For people that can't get a truck or trailer, I can remove the track sections from the 4' x8' sheets (for a small fee). The individual track sections generally fit in most SUV's or similar utility vehicles.

Scenery

A lot of cost comes with any "scenery" requests, which would include adding guard rails, barriers, pit lane detail, rock faces, hills, trees, tunnel entrances, lighting, etc. All of these items add significant artisan hours, which must be finished on site at an elevated hourly rate. It is best if you can do all of this yourself. It isn't that hard, but it is time consuming. Companies like Woodland Scenics offer excellent instructional videos to aid first time Artists. The hardest part is getting started. I made a small diorama using a left-over piece of MDF as a base, and built some rock walls and rolling hills. I watched a lot of videos, a book on O-Gauge scenery from Dave Frary, and bought quality products from Woodland Scenics. Make multiple dioramas to develop your skills, using different themes, products and techniques. Even my Wife was shocked at how good the diorama and my scenery attempts turned out. I am also lucky to have local expert Consultants like Jimmy Attard. You need to check out his Northline Raceway on YouTube's "Lunch King" video series, or James Harlan's "White Lake F1 Ring", or Anthony Ramsey's digital layout, or any of the Slot Mods layouts!

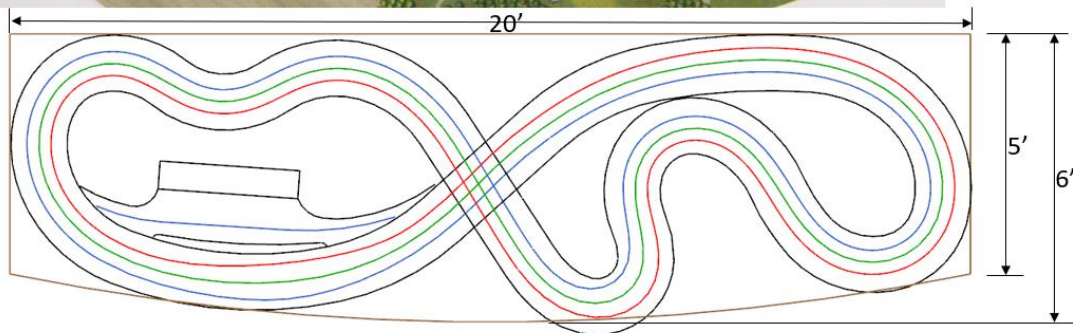
OK, what is the absolute lowest cost that someone can get into a CNC Track Design layout? That would be a \$2000 “Standard Suzuka” layout where the design cost is amortized across multiple units. The Standard Suzuka layout on the website is 6’ wide in the center, 5’ wide on the ends, and 20’ long. Note: I have routed the gains for all of my Customers, that is why I am saying the Standard Suzuka would cost \$2K, even though it is listed for \$1250.00. I am assuming most people will want the base track at \$1250.00 + \$740.00 option to have the gain routed. If you are really handy with a router and patient, you could do it yourself and save \$740.00 after purchasing the router bit from Slot Car Corner.

The Standard Suzuka layout features 3-Lanes, an average lap length of 50.4’, and variable lane spacing, (varies from 3” under the overpass to 4” in the hairpin turn and approaching the Start/Finish line). An optional pit lane can be added, which is nice for displaying cars.

CNC Track Design Interpretation of Suzuka

1/32 Scale Slot Car Track Layout Designed with a Suzuka Overpass Theme

- 6’ Width (at center), 5’ width (ends) x 20’ overall length.



Of course, we could not replicate the real 3.614 mile Suzuka circuit in a 6’ x 20’ space, even in 1/32 scale. CNC Track Design tried to keep the theme and significant elements while making it fun to drive.



Most people that contact me want a permanent routed layout, and are willing to do some of the work themselves. They know the difference in wood vs. plastic track, and want something that they can improve (by adding structures and scenery) and enjoy for years and years.

- We can CNC route something that races far superior to what can be assembled in a plastic track! If you don't believe me, just ask anyone who has raced on any wood track, and they will tell you that there is no way they would go back to plastic.
 - Our CNC Track Designs are far superior to any wood track out there, so you could say the next step in analog slot car track design.
 - James Harlan (White Lake F1 Ring) is a brilliant Designer who started the sinuous CNC routed track design trend in the Detroit area. His track utilizes AC2, (2 cars on one lane via a simple diode and AC power supply). I chose to feature simple analog designed layouts, because I think side-by-side racing is fun. AC2 is neat too and we have a couple of big races each year in the Detroit area.
- Elevation makes a huge difference in the visual appeal and (depending on how it is executed) racing rhythm. Plastic track (specifically, the contact between track section joints) does NOT do well when asked to be manipulated, and you end up with a bunch of segments creating the elevation change feature. Well supported plastic track is functional, but nothing like the smooth undulations that we can create in MDF.
 - I had an Indy Car guy over last week and he was blown away and commented numerous times about the elevation, smoothness, and how nice it was to race on my track. He is a good slot car Racer, and quickly learned and was racing side-by-side with us. We had a blast!
- If you want the racing line appearance for your layout, you can achieve it in either plastic or wood, it is about the same effort for either medium. However, understand that anything that looks professional will take a lot of time. If you are going to put in a ton of hours making something that looks nice, you might as well start with the best possible medium for your layout!
 - Likewise for the design, if you are committed to building a wood track, start with a CNC Track Design.
 - You are going to spend a lot of time and effort if you hand route one yourself, which takes a considerable amount of skill and back strength. Never mind you can't get the good MDF that CNC Track Design uses. You may think I am joking, but the prep and painting alone will take over 100 hours!
 - Refurbishing an old track is no picnic either. The old particle board is really crappy stuff compared to what is available in MDF. Stripping braid to re-do can turn into a huge mess, with uneven gain (the groove that the braid sits in), which can act like speed bumps to the car's guide. Never mind the paint that randomly gets pulled up!

We are happy to assist in Designing/Manufacturing your routed slot car track, to bring your vision to life! As one of my Customers' said – "This thing is going to be spectacular!". Let's create something cool!