

16 Coasters!

We can't hold it back any more. It's time to talk about building Roller Coasters, one of the simple joys of playing the *RollerCoaster Tycoon* game.

First, let's talk about the scope of this chapter. We'll give you advice and guidance on how to construct Roller Coasters that will thrill your crowds and at the same time give you a warm feeling inside as hundreds of guests report that they've never ridden a better Coaster. We'll look at what makes a good ride and what makes a bad ride and offer a few tips here and there regarding track placement and construction quirks.

What we *won't* do is show you every special twist and turn you can put into your ride or tell you how to build Coasters step by step. You literally have uncountable selections for different rides and turns and special features in the *RollerCoaster Tycoon* game.

When you learn to build a truly great Coaster in the *RollerCoaster Tycoon* game, you'll get a fantastic sense of accomplishment. You know you've built a quality Roller Coaster when a) guests ride it, b) guests love it, and c) no one dies on it. The complexities you must figure out for yourself.

That said, we will show you a few tricks, special curves, and inversions you can try with your Coasters. Then the rest is up to you.

Before we begin talking about Coaster building, let's take a closer look at the factors that will play a role in all your custom Coasters.

Intensity, Excitement, and Nausea

As discussed earlier, these three factors influence how your guests view a ride, experience a ride, and feel after the ride ends. Keep in mind three goals for your Roller Coaster's Ratings:

- High excitement
- High to very high intensity
- Low to medium nausea



A ride with these three characteristics will not only prove popular with your guests, but will also keep their lunches inside them and keep them coming back for more.

TIP

Use pre-made Coasters as models and study them to learn how to build your own.


What Are “G’s” and Why Should I Care?

When we refer to vertical and lateral g’s, we mean *gravitational forces*. Normal Earth gravity has a value of 1.0. Values higher than 1.0 make you feel heavier, while values less than 1.0 and negative g-forces make you feel lighter, and can lift you out of your seat on a ride.

Generally speaking, you should set limits of 4.0 and -3.0 for gravitational forces on a ride, but you’ll usually find all of your rides’ g measurements fall well within these values.

Lateral g’s refer to how much force pushes riders from side to side on a ride. Lateral g-forces that pull riders to the right have positive values, while those that pull riders to the left have negative values. These g-forces make riders feel nauseous, and you should keep them under 2.0, and never more than 2.5, or your guests will get uncomfortable. You can reduce lateral g’s by slowing the speed at which your Coaster takes curves, and by using Banked Curves.

Vertical g’s refer to the forces pushing riders into or pulling riders out of their seats. Riders feel high vertical g’s at the bottom of hills and low vertical g’s at the top of hills. Normally, high vertical g’s influence the ride’s Intensity Rating, not its Nausea Rating. Vertical g’s higher than 4.0 or lower than -3.0 will drive your ride’s Intensity Rating to



You can find values for gravitational forces on any ride under the **Measurements and Test Data** tab in the Ride Information Window.



extreme levels and drive away your guests. High vertical g-forces can cause human beings to pass out as the pressure prevents blood from entering the brain. Overly intense rides may actually cause pain. To decrease vertical g-forces, limit your ride’s maximum drop height to something less than that used for astronaut testing.

TIP

Don’t get TOO frightened of positive vertical g’s. Riders can tolerate short bursts that shoot g-forces near 6.0 or 7.0 about once per ride.

Coaster Variety

Each Coaster style possesses its own particular strengths and weaknesses. Some rise taller than others, while some can travel at slower speeds and still excite your guests.

Operating Modes

The vast majority of Coasters you construct in your park will operate in a Continuous Circuit Mode. That means that the train will start from the station, make a loop, and return.

Some Coasters work differently, however.

- **Powered Launch Mode:** Shuttle Loops usually use this mode. Powered Launch Mode propels the Coaster train out of the station toward the ride. This mode leads to a higher running cost for the ride than Continuous Circuit but adds excitement and intensity.
- **Steel Coasters**
- **Stand-Up Steel Coasters**
- **Steel Corkscrew Coasters**
- **Inverted Coasters**
- **Steel Twister Coasters** (*CorkScrew Follies* and *Loopy Landscapes* only)
- **Air Powered Vertical Coasters** (*Loopy Landscapes* only)

You can adjust the speed at which the train leaves the station under the **Operations Options** tab in the main Ride Information Window.

POWERED LAUNCH AND THE SHUTTLE LOOP

While the Shuttle Loop is most likely one of the first rides you'll tinker with, be careful—if you increase the speed of the Shuttle Loop's Powered Launch, be sure to add segments to the end of the ride. You'll need two track segments for every 10 m.p.h increase in launch speed. Underestimate and your train of cars will try to turn into a rocket, only to get a nasty reminder of reality by that harsh mistress, gravity. Tiny deaths are the most tragic.

Also, don't be fooled that a test run with no passengers on the Shuttle Loop in any way reflects what will happen when your train is full and has a full head of steam, with extra momentum on loan from the added weight of your guests. What looked like a thrilling ride in the testing phase can become a deathtrap in reality. When adding on to your track and testing, make sure your empty test-train has at least half a segment of track ahead of it before it reverses. Otherwise, your guests will be in for a nasty surprise.

A quick breakdown of some sample Shuttle Loop modifications:

- Powered Launch Speed: 40 m.p.h.
- Minimum Track Height: 20
- Excitement: 4.37
- Intensity: 3.90
- Nausea: 1.53
- Powered Launch Speed: 51 m.p.h.
- Minimum Track Height: 28
- Excitement: 4.75
- Intensity: 5.32
- Nausea: 1.97
- Powered Launch Speed: 60 m.p.h.
- Minimum Track Height: 32
- Excitement: 4.93
- Intensity: 6.33
- Nausea: 2.36

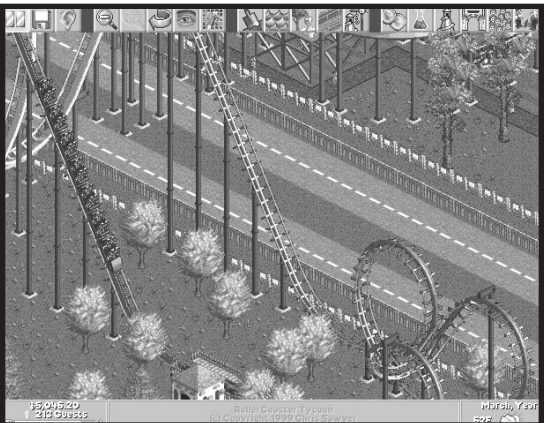
Note that even when your launch speed is cranked up to 60 m.p.h., enough to give your guests wind burn on their faces, your nausea rating stays low. Handyman love this ride—no mess near the exit.

- Reverse-Incline Launched Shuttle Mode: In this mode, the train is hauled backward up a hill and released. Gravity takes over, and the riders are off! While this mode offers high excitement, it also requires the highest operating cost, meaning you must make loads of money on the ride. Make sure you build a station long enough to use the maximum number of cars for the train (between five and seven station platform tiles).

You can use Reverse-Incline Mode on:

- Steel Mini Roller Coasters
- Steel Roller Coasters
- Stand-Up Steel Coasters
- Steel Corkscrew Coasters
- Steel Twister Coasters (CorkScrew Follies and Loopy Landscapes only)
- Steel Wild Mouse Coasters (CorkScrew Follies and Loopy Landscapes only)

If you choose to use the Loopy Landscapes Reverse-Incline Launched Shuttle mode, you can use a steeper hill than normal to pull your train up, leading to a faster, more intense ride.



You'll find reverse-incline launches incredibly exciting and somewhat more intense than conventional ride starts.

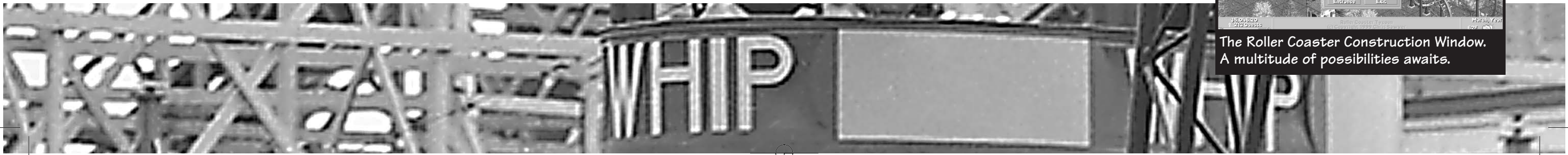
Out of the Station. Now what?

Once you build your station, the ride begins. You can either start your riders on a chain-pulled incline immediately or, based on your terrain, drop them over a cliff, giving them a thrill they didn't expect. Either way, you want to speed your guests up so they have enough momentum to make it through the rest of the ride.

Once you begin to build the "line" of the ride, you have options: straight, wide turn, or tight turn, as well as slope selections and,



The Roller Coaster Construction Window. A multitude of possibilities awaits.



usually, roll and bank options. Your choices will change as you build your Coaster due to safety restrictions. As you grow in Coaster construction skill, you'll learn to adapt your ride to the construction elements available.

TIP A roll or bank on a Coaster track must begin on a straight track segment before the curve, so the bank carries through the entire curve.

When you build your Coaster, remember that higher drops don't always mean better rides. The train will take an awfully long time reaching the top of your 200-foot drop, and many of your riders will find the intensity of said drop a little on the extreme side.

Keep your drops moderate at the beginning, but make sure you provide enough speed to guarantee that your trains can cruise through the rest of the ride. Try to avoid extra chain-pull lift sections, as they increase the operating cost of your ride.

As you build your ride higher and higher, you'll occasionally get a message that you can't build the next section because it is too high for supports. You can either tear down your Coaster-in-progress or raise the land to suit your needs. Either way, you'll spend about the same amount of money.

While you build, insert a few pieces of flat, straight track in your ride, even if it means you must alter your overall design slightly. You can come back to these flat pieces and add brakes or boosters later if you need them.

Once your train starts speeding along, sooner or later it must turn. If the game gives you the option of Banked Curves, use them to reduce lateral g-forces.

Finally, remember to keep your ride exciting to the very end. A sudden drop before the station platform or a sudden stop at the platform itself (high running coasts) will pay off in higher Excitement Ratings.

Special Curves, Loops, and Inversions

Once you get rolling (pun intended), a variety of special track segments related to the ride will open for you. For example, depending on the Coaster, you may have Vertical Loops, Banked Helixes, Barrel Rolls, Steep Twists, and more.

We can't discuss each specialized segment in detail, but you should learn the

value of each option. They all have their own special purposes and they all work best in specific situations. You can make good use of these options if you learn their strengths and weaknesses.

Most of these special track segments will require you to monitor your train or car's speed, slowing it with brakes or speeding it with boosters so it runs through the special section at the appropriate speed. If you stall or go through too fast, your Intensity Rating will increase.

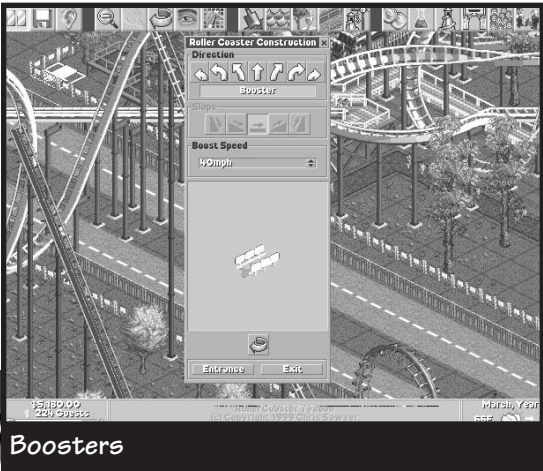
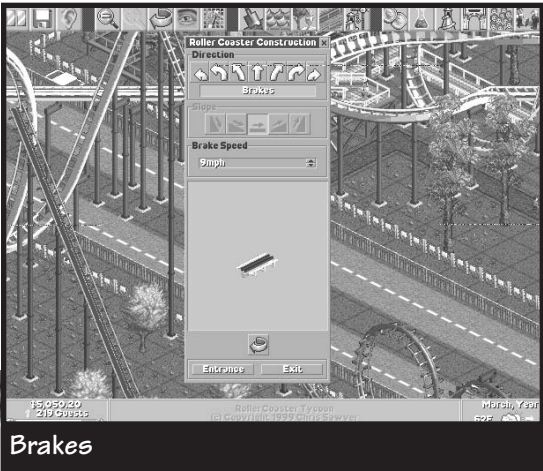
TIP When you place two (or more) Corkscrews in a series, put a couple of horizontal segments between each to lower the intensity slightly.

As you continue to build Coasters, you'll learn to combine special segments in different ways to produce novel turns and inversions of your own. Or you can copy real-world Roller Coaster construction, using such standards as the Boomerang Loop, the Cutback, the Diving Loop, and the Sidewinder.

Boosters and Brakes

Not all Coasters offer brakes or boosters, special sections of track that slow your cars or trains down or speed them up. Before you lay the first section of station platform for your Coaster, check to see whether you can use brakes and boosters, and begin to think about where in your ride you'll need them.

TIP When your Coaster goes into loops or corkscrews, it should travel between 30 and 40 mph.



You'll need to use brakes and boosters in front of Vertical Loops and Corkscrews to send the car through at an appropriate speed. Most importantly, you need brakes in sections of track coming into station platforms. As a rule, put two brake sections in front of your station, with the brakes closest to the station slowing the train to 9 miles per hour. That should prevent it from smashing into any train or car sitting at the station.

Tunneling Your Coasters

First-time builders shouldn't take a Roller Coaster underground, nor should the faint of heart. Tunneling your Coaster will cost a lot of money, but ideally, it will pay off in increased excitement for the ride, which will attract more paying customers.

Refer to the principles behind tunneling discussed in Chapter Six. First, as you build, take your track up to the point where you want to enter the ground. Remember, to begin tunneling with your ride, your track must enter the ground two blocks below the surface. This may require you to level or raise a section of land.

As soon as you prepare the ground, you should see the yellow construction arrow pointing into the ground, indicating that you can now click the Add This button. As soon as you do, your tunnel begins. When you finish the tunnel, remember to make your exit at least two blocks below the surface.

When Do I Tunnel?

When you choose to put a portion of your Roller Coaster (or any other ride with a track, for that matter) underground is entirely up to you. Ideally, tunneling all or some of your ride will increase the ride's Excitement Rating, which will attract more guests.

Popular places for tunnels include a ride's first drop, at the base of a spiraled drop, or after any turn. With all ride construction, keep your riders' experience in



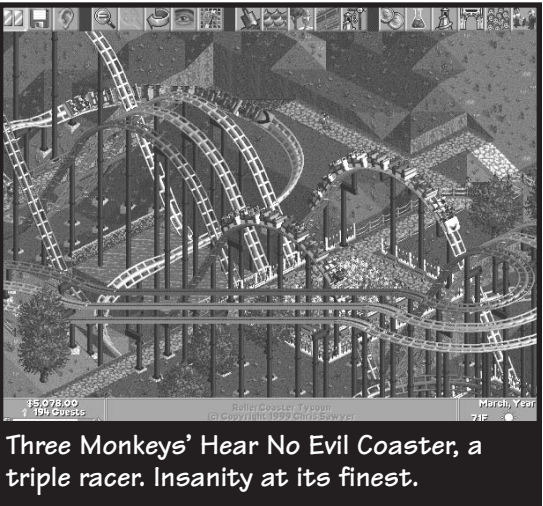
mind. They'll find a sudden tunnel followed by a brief run outside and then a return to the tunnel more exciting than a long tunnel with twists and turns.

If you go through the lengthy, complicated process of building an entire Coaster or other ride underground, you can get tremendous results in the form of extra cash and increased popularity, especially during rainy weather.

Racers, Duelers, and More

Want a sure-fire way to add to the excitement of your Coaster? Match it with another Coaster. To do this, place a new station platform as long as the one on your first Coaster adjacent to the original platform. Build your second Coaster to take advantage of the other's track. For example:

- **Dueling Coasters:** Point two Coasters' elevated straight-aways at one another, allowing the Coasters to shoot down Steep Twists after riders get nervous about a potential fiery crash.
- **Racing Coasters:** With a simple track design, keep large portions of your tracks close together, allowing two (or more) trains to race.
- **Shuttle Loops:** The easiest option for racing Coasters. Build two Shuttle Loop Coasters beside one another. Flip one so the trains pass close together as they fly around the loop.



As you become more adept at building Coasters, only your imagination and the laws of physics will stop you. Great ride elements include crossed loops, intertwined corkscrews, and straight-aways that shoot through the loop of another Coaster.

In order to have your Coasters race or duel, or coordinate any other movements on the track, you'll need to check the box in front of "Synchronize with adjacent stations" under both rides' Operations Options tab in their respective Ride Information Windows. This will set both rides to a similar schedule, launching both trains at the same time.

Ride Stuff

After you build your ride, remember that you can add to its excitement merely by placing theme items around it or by planting trees in front of sudden curves and drops. Also, never forget the landscaping power of water. A drop with a turn always becomes more exciting when it turns over water.

From the beginning, assume that people will like your ride, so add an On-Ride Photo segment to the top of your Coaster's biggest drop. Your guests will gladly shell out for a picture of themselves in mortal terror after the ride.



Lowering Intensity

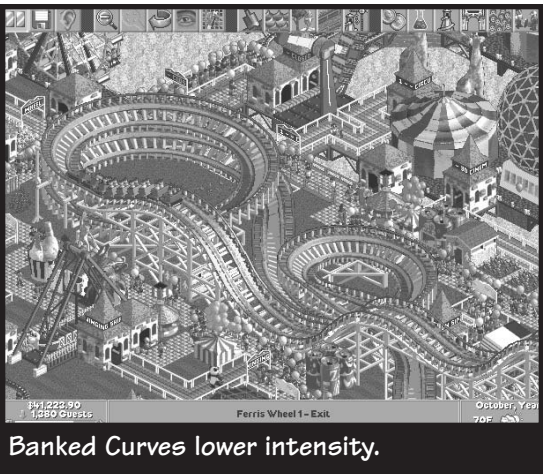
First-time ride builders may experience this common problem: They build rides designed by their inner child.

Don't worry, that's not a bad thing. And if you utter a child-like "awesome!" when you complete the design, you're not alone. But many of these rides suffer from first-timers disease: high intensity. Not just high, but the extremest of the extreme. You can build rides with intensities higher than 15.00, and even ones that approach 20.00. But don't do it, because they can *kill* people.

Your guests know better than to commit suicide. They just won't ride these mega-intense rides.

You can usually pick out the overly intense parts of your ride by sending a test run out and watching the velocity under the Graphs tab in the Ride Window. You'll probably find the highest intensity at the points of highest velocity, so target those areas. But after you find the problem areas, how do you decrease the intensity of a ride already built? Check out these pointers:

- Are your curves too tight? Try to use curves with a wider radius. That design eats up ground space, but it pays you back in the ride's popularity.
- Do you have banks on all your turns? Horizontal curves increase lateral g's and therefore increase intensity. Try to avoid flat horizontal turns altogether or use curves with a wider radius.
- Are your cars or trains going into loops, inversions, Corkscrews, or Helixes too fast? Add some brakes or lift your loop or inversion, creating a short uphill section before the special segment.
- Are your trains too long? We generally support the use of long stations and long trains, but longer trains weigh more and run faster downhill. If necessary, try using more trains with fewer cars.



A Final Note

Roller Coaster construction takes lots of time, and you only get better at it if you keep working. View every Coaster as a learning experience rather than an adversary, and you'll be creating incredible rides before you know it.

