

## **World Joyland (Wujin, Changzhou, Jiangsu, China)**

World Joyland was opened since April 30th, 2011. It was inspired by the games created by Blizzard Entertainment, such as Starcraft and World of Warcraft. It took around 48 million dollars to build. World Joyland has three steel roller coasters, Clouds of Fairyland, Dragon Roaring Heaven, and Sky Scrapper.

Their most famous ride, Sky Scrapper, was designed and built by Bolliger & Mabillard and is a flying coaster that is 2,805.1 ft in length, 104.3 ft in height, and travels up to 54.7 mph. It was opened since April 30th, 2011 and is still operating. It is the first B&M flying coaster that contains a vertical loop as well as a straight drop and is known for having the most track inversions of any flying coaster (5 inversions).

Another coaster of World Joyland is called the Dragon Roaring Heaven. It is a steel sit-down mine coaster designed by Golden Horse. It is 2,578.8 ft in length and 52.5 ft in height with no inversions, and travels up to 29.8 mph. It was opened since April 30th, 2011 and is still operating.

Their third roller coaster is called Clouds of Fairyland. It is a steel sit-down coaster designed by Maurer Söhne and is 492.2 ft in length, 151.6 ft in height with two inversions, and travels up to 65.3 mph. It was opened since August 5th, 2011 and is still operating.

World Joyland does not seem to be lacking in steel coasters, but it does seem to lack tall and fast coasters. We originally wanted to make a wooden roller coaster for World Joyland, but because we wanted to reach a height and speed that better fit the video game thrill, we decided to make a steel sit-down coaster.

### **Design Critique**

Starry Sky Ripper was made by B&M and is located in World Joyland in Changzhou, China. Since World Joyland is heavily themed on video games like Starcraft and World of Warcraft, Starry Sky Ripper gives riders the thrill of being in a video game. It leaves the rider with a strong impression, holding the record for the most inversions on a flying coaster.

Its strong points are that the coaster never stops looping or rotating. It also has the unique element of going upside-down in between stone-like walls. This makes sure that the rider isn't bored or loses the rush of adrenaline. When it is looping, it dives close to the ground or water, giving the rider a sense of danger and the feeling that they are pulling out of a dive while flying. However, it does have some weak points. Some reviews of the ride have said that the ride may be too intense because of its strong G-force and many continuous inversions. Also, the appearance of the ride itself is lacking compared to the detailed decorations in the park.

## Through the Rift

Over the past couple of years, the game League of Legends (LoL) has risen in popularity. To further complement the video game theme of World Joyland, we designed the roller coaster “Through the Rift,” which depicts various LoL champions through the coasters elements, structures that provide visual resemblance to in-game visual effects, and speakers stationed at various points in the ride that play in-game sound effects. The coaster’s name is derived from the main battle area in the game, Summoner’s Rift. Below is a more detailed representation of the ride.

### Visual Representation

- A Launch from a tube with rainbow colors on the inside.
  - This imitates the champion Lux’s ultimate skill, “Final Spark” which shoots a rainbow laser. Sound effect: Game sound of Lux casting her skill
  
- B Goes down from launch and into a cobra roll
  - This imitates the champion Kayle in her fight with her sister Morgana in the League of Legends trailer. This part should be “shaky.”
  
- C Turn around and over the launch tube and into two bunny hills
  - This imitates champions Cho’Gath and Jarvan IV.
  - First bunny hill will have a structure of spikes on the ground to represent Cho’Gath’s skill “Rupture”, which knocks the player up. Sound effect: Ground rumbling and Cho’Gath roar.
  - Second bunny hill will have a crater structure on the ground to represent Jarvan IV’s skill “Cataclysm”, which traps the player inside a big hole. The coaster should go “into” the crater, underground, and then back up. Sound effect: Jarvan IV yelling “Demacia!” and ground rumbling.
  
- D Goes up and into a zero-g roll
  
- E Make sharp tilts left-right-left-right
  - This imitates the champion Master Yi’s way of running
  
- F Make a left turn, go down, and then weave through the bunny hills
  - This imitates champion Kennen, which resembles a squirrel-like animal. He is very fast with his skill “Lightning Rush,” much like an out-of-control, zig-zagging mouse. Sound effect: Static noises.
  
- G Turn around and go down into a barrel roll and back to the starting point
  - This imitates champion Janna’s skill “Zephyr”, which is much like a tornado. Sound effect: Whirling wind.

