

## User manual

### FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Relocate the equipment
- Increase the distance between the equipment and the Bluetooth Speaker
- Consult your local agent or experienced radio/TV technician for help

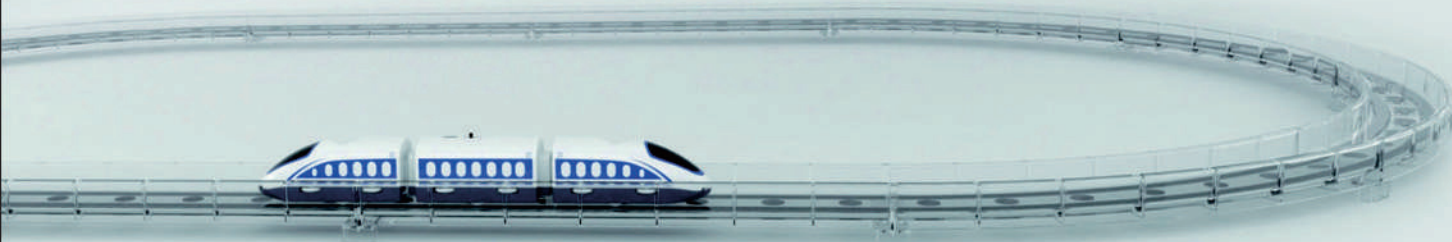
Changes or modifications not expressly approved by the equipment manufacturer may cause interference and void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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# *JD Daz* Information Material

## E-Maglev Train

**A dream promises a future, and unveils the world tomorrow.**



Lavish on your kids a top hi-tech product accompanying with his/her growth



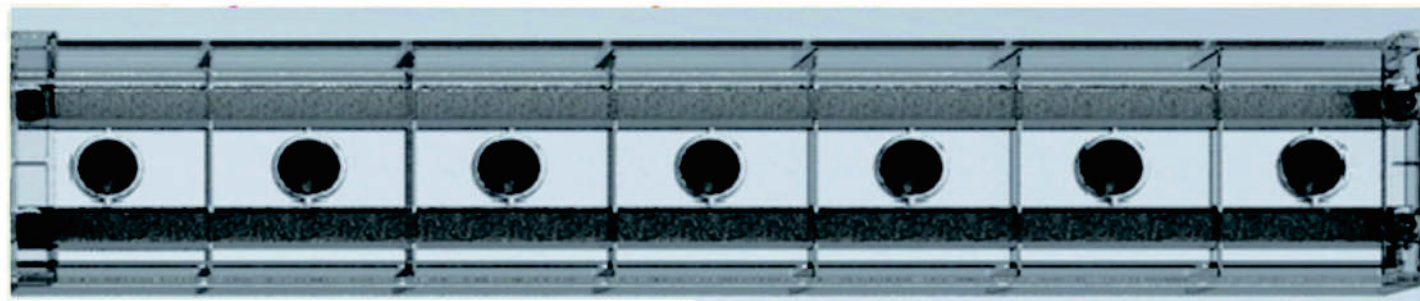
## PROPULSION

Coils underneath a train vehicle electrify, becoming electric magnets, when they pass by the propulsive magnets on the track, generate an additional upward force and a forward force parallel to the track, driving the vehicle forward.



## Levitation and Propulsion of a Maglev Train

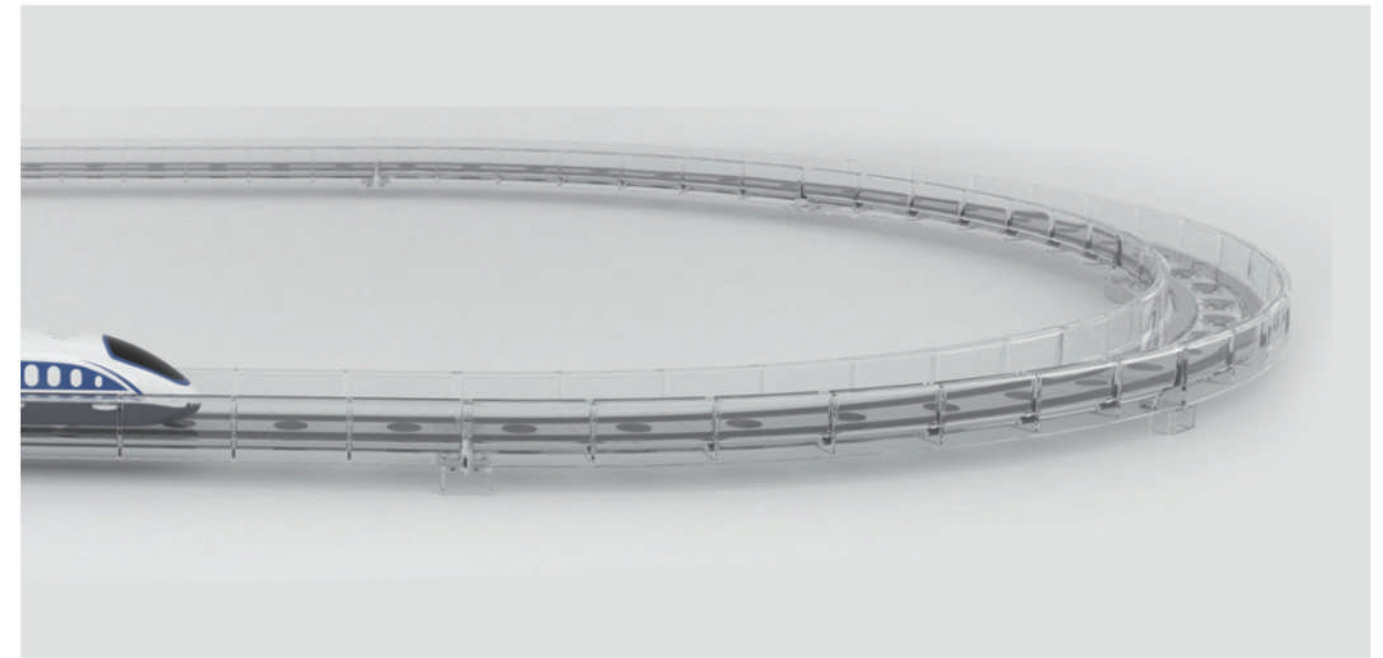
**LEVITATION:** The repulsion between the levitating magnets underneath a train vehicle and those on the track allows the vehicle to levitate about 2 mm above the track.



## Introduction to Shanghai Hi-Speed Maglev Train



Shanghai hi-speed maglev train, the first commercialized line in the world, reaches 430 km per hour at its fastest, only next to plane. It only takes 8 minutes to cover the whole line of 29.863 km. Being the ideal super express transportation in the 21 century, it attracts tremendous attention worldwide. China, Japan, Germany, the UK, the US are currently developing it and Japan's superconductive maglev train, after manned test, could reach over 600 km/h.



A *JD* *Daz* Small Hi-Speed Maglev Train



### Warnings

It is supposed not to put the train above the track or in a magnetic environment for long time in the power-on state to avoid too much consuming lithium batteries and thus depreciating service.

It is normal to notice the bottom heating after a long -time operation.



### Charging and Switching

Standard micro USB interface, chargible anytime and anywhere, and simple switch for easy operation.

### Battery Endurance

250 mAh batteries endure for 5 km

### Materials

Imported PC materials for the track and ABS for the body

Free of poison and odour, kids could fully enjoy themselves in it.

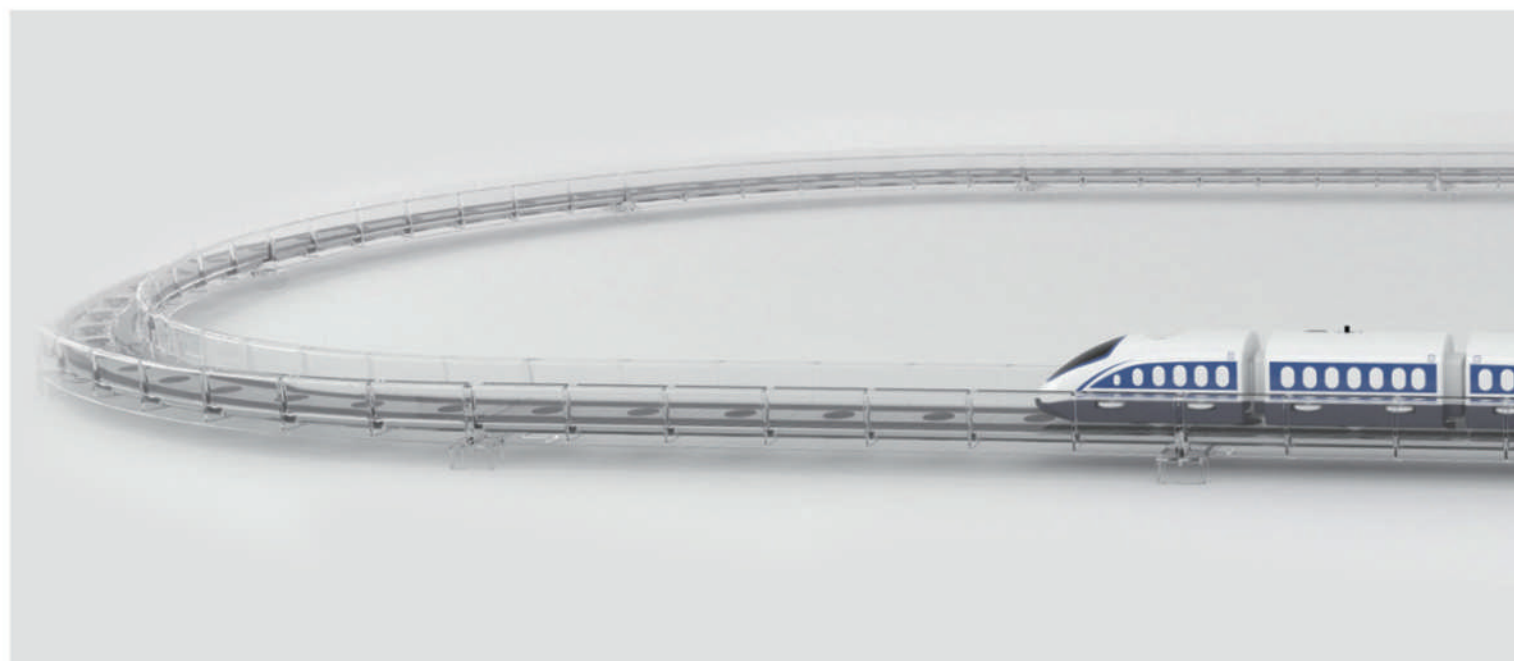
### Speed

Speed of 1.5 m/s in safety

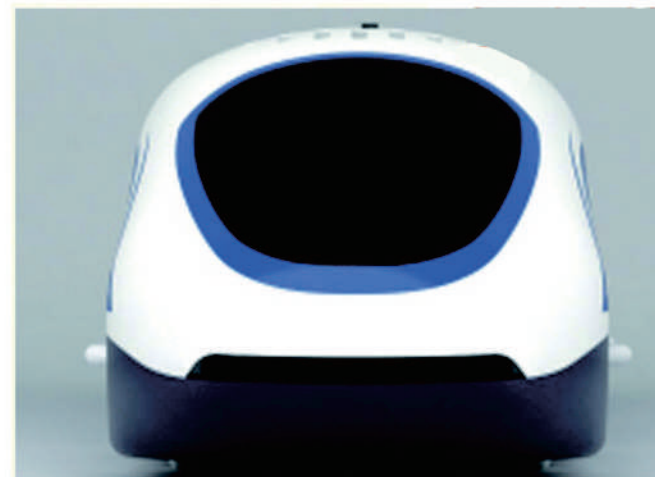
## Start and Stop

is supposed to turn on the switch and levitate the train above the track and then to push it slightly forward to accelerate it before reaching its fixed and highest speed in 15 seconds. When stopping, the train is expected to be blocked by hand and levitated in a certain position.





## Comparison with Traditional Toy Trains



The maglev train upgrades the traditional wheel-driven toys with electromagnetic propulsion, attracting both grown-ups and kids with its amazing visibility. It helps kids develop intelligence and imagination with its novelty, observability, speed and science fiction. Even adults would be greatly interested in it.

## Abounding Scenery Design



## Levitating Bluetooth Speaker

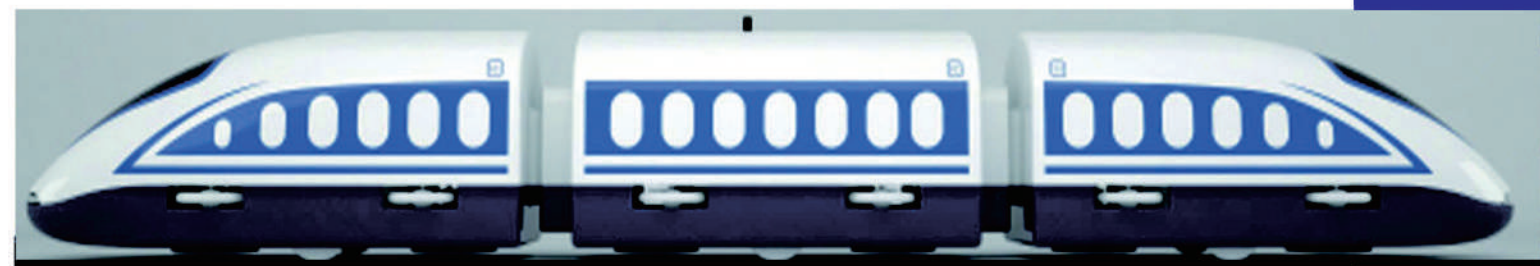


The innovative levitating speaker with bluetooth plays your phone musics when the train is in motion or at rest. The music play lasts for about four hours in an effective distance of 10 m with the signal noise ratio  $>$  or  $=$  75 db.



## Comparison with Real Hi-Speed Maglev

Shanghai maglev train levitates 8 mm above the track in a magnetic field relying on repulsion(attraction) force generated from magnets underneath the train and those on the track. The linear motor-driven train operates at 300km/h.



## A JD Duz Small Hi-Speed Maglev Train

The small train, also driven by the zero-friction linear motor same to the maglev train, levitates about 2MM with permanent magnetic levitation technology. It is supposed to reach 3m/sec at its fastest and over 1000 km/hour if measured with the equal ratio to the real maglev train.



# Shanghai magnetism aerosol train

Shanghai Magnetic Levitation Train Projiet is a hige-speed railway combining the traffic,sightseeing and touring.The main line is 30 km . Maglev trains can travel at a speed of up 430 klilometers per hour ,and it will take about eight minutes to travel between the downtown area to the airport by the maglev train .it's the world's fastest,modernest passenger line.

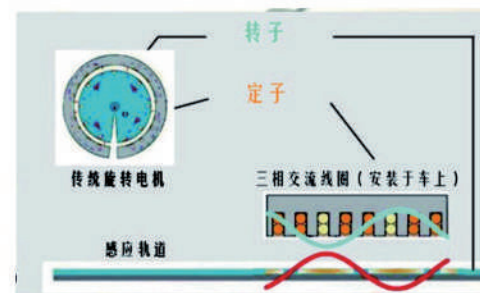
## System structure

The maglev train is mainly composed of a suspension system, propulsion system and guidance system composed of three parts, although you can use the magnetic propulsion system and independent, but in the vast majority of the current design, the three parts of the functions are finished by magnetic force.



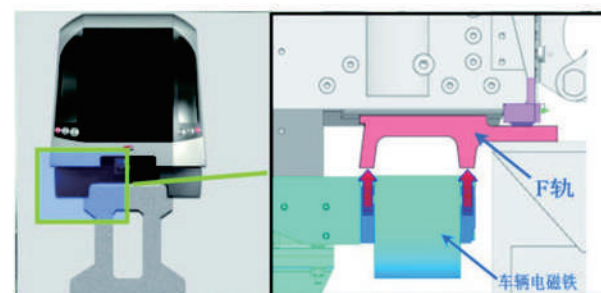
## propulsion system

The application of synchronous linear motor to the drive of Maglev train. As the lower part of the vehicle is supporting the solenoid coil coil excitation linear synchronous motor, to play the role of the armature winding drive three-phase ground track of the mobile magnetic field inside the long stator winding like linear synchronous motor.

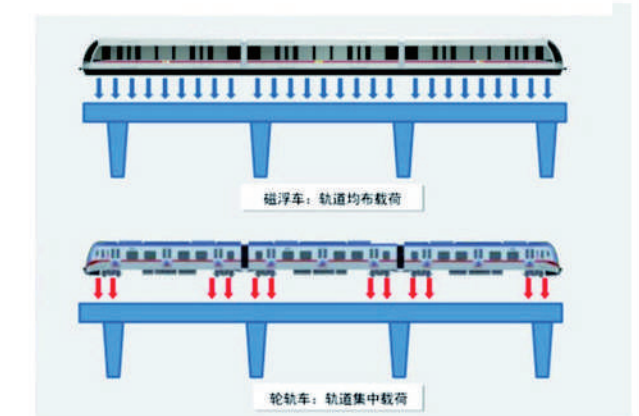
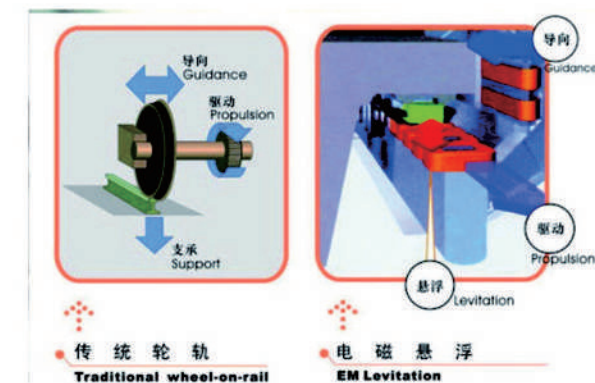


## Suspension and guidance system

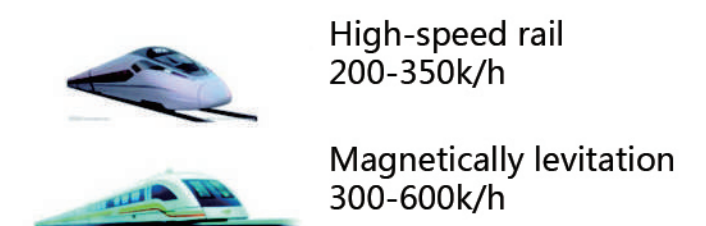
The suction is the principle of using two phase anisotropic magnet, electro-magnet is arranged in the track below and fixed in the bogie on the body to produce a mutual attraction of the strong magnetic field between the two, the train can be suspended; suction type magnetic levitation train, whether static or motion state, can maintain a stable state of suspension.



## Comparison of magnetic suspension and wheel



## Comparisons of the speed of public transports:



The Birming-  
ham Interna-  
tional Maglev  
shuttle



SCMaglev  
test track in  
the Yama-  
nashi Prefec-  
ture, Japan



Transrapid 09 at the Emsland test  
facility in Germany



American hyperloop