# The Fan Car



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#### Introduction

Congratulations on purchasing The Fan Car! We hope that it will bring you just as much joy in improving your layout as it has done to us. The fan car has been co-developed with our friends at <a href="www.grootspoor.com">www.grootspoor.com</a> to deal with a specific problem: accumulation of fallen leaves from trees. Special care has been taken to achieve sufficient airflow to be able to remove leaves and small twigs from the rails. The car is equipped with two powerful dual-stage fans that suck the air from the top of the car and then pushes it at high velocity through the specially designed nozzle. The housing and chassis are 3D-printed in a durable material with excellent weather resistant properties, making the whole car well suited for outdoor use.

The operation is done through a Zimo<sup>®</sup> decoder with a custom-made power bank consisting of nine 10F capacitors, to allow the car to run through short power interruptions. All wheels have power pickup and ball-bearings to achieve the smoothest possible ride with low resistance; even a small Stainz locomotive can push the car.

During operation the flashing lights can be activated over the digital system. The Zimo<sup>®</sup> DCC-decoder is fully compatible with all major manufacturers of digital systems (LGB<sup>®</sup>, Piko<sup>®</sup>, Massoth<sup>®</sup>, Esu<sup>®</sup>, Zimo<sup>®</sup>, Roco<sup>®</sup> etc.).

## Usage

The default digital address of the car is 3 (this can be changed using CV 1).

To use the car, you must first put it in front of a locomotive. **Never run the** fans in the car without the car being safely coupled to a locomotive, the power is enough to accelerate the car to quite substantial speeds.

F0 will active the lights in the forward direction. To start the fans simply choose address 3 on your digital system (unless you have changed it). Then turn the knob on your controller in the forward direction. We recommend running at maximum speed since this will offer the best possible removal of leaves and twigs in combination with minimum current usage. It is however also possible to run at reduced speed, although the power will be lower. Choose the address of your locomotive and start your cleaning. The LGB cleaning locomotive (LGB 21670) is a good partner for this car, since it will polish the tracks while you are removing debris.

Please keep the car under constant surveillance while running to make sure that there is no large or heavy debris ahead of it.

Over time the wheels of the car will become dirty and need cleaning. We recommend using ISO-propanol, which can typically be acquired from the local pharmacy, for this purpose. To clean the car itself use a soft, dry cloth.

The car is compatible with LGB R1 radius.

Please do not try to remove the hood; there are no user settings on these cars, they are tested and adjusted prior to delivery.

## Safety notes

- Never use water to clean the car; this can damage the electronics and destroy the fans.
- To clean the car simply use a dry cloth, to clean the wheels use a cloth lightly drained in ISO-propanol.
- Never run the car in rainy weather conditions; this can damage the
  electronics and destroy the fans. Never run the fans without having
  the car safely coupled to a locomotive; this can cause the car to
  accelerate and reach substantial speed before likely derailing at a
  point or narrow curve causing irreversible damage to the car.
- Never run the car without the rear hood; this exposes the fans directly leading to a risk for severe physical injury.
- Never put your fingers or any other object into running fans, this can cause severe physical injury.

#### Service

If you are experiencing problems with your fan car, please contact <a href="https://www.grootspoor.com">www.grootspoor.com</a> for assistance.

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