

Rover Design, 2009- 2010

(rewritten in 2020 from different reports)

The project started after a visit to Switzerland of Bud Kay, founder of Plantraco, a Canadian company developing hobby planes and robots.

Didel was very successful with the MicroCeline, developed at Omar Benjelloun's Shenzhen company thanks to the impressive small plastic pieces designed by Huang Shaoyuang (Hy), still Didel partner after 11 productive years.

The project with Bud was to have an IR transmitter that controls a blimp, a rover and other possible products like boats, vehicles and home flying microplanes.

Didel had the Bimo experience of infrared transmission with up to 4 simultaneous users. The objective was to design :

- Transmitter - 2 joysticks, charger for 50 mAh Lipo
- Rover - Fast, but precise movements possible
- Blimp – Ultralight to fit under a standard size balloon

Transmitter result

Option switches are fine and the look is excellent. Changing batteries easy. AAA batteries duration is very good. Transmission distance is good.

Weak points

Molex charging connector is not satisfactory, but there is no other solution. A first insertion must be made at QC to reduce insertion force.



Software

Switches defined 3 operation mode : normal (linear), exponential (greater sensitivity at low speed) and beginners (reduced range). A Microchip 16F676 micro was programmed in assembler (4 MHz, 2k of memory).

Power was from 4 AAA batteries, with the circuitry to charge the Roves LiPo

Rover

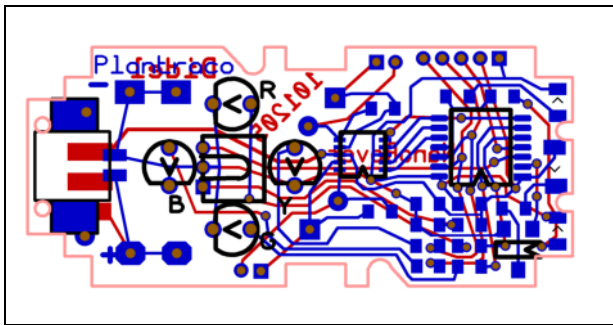
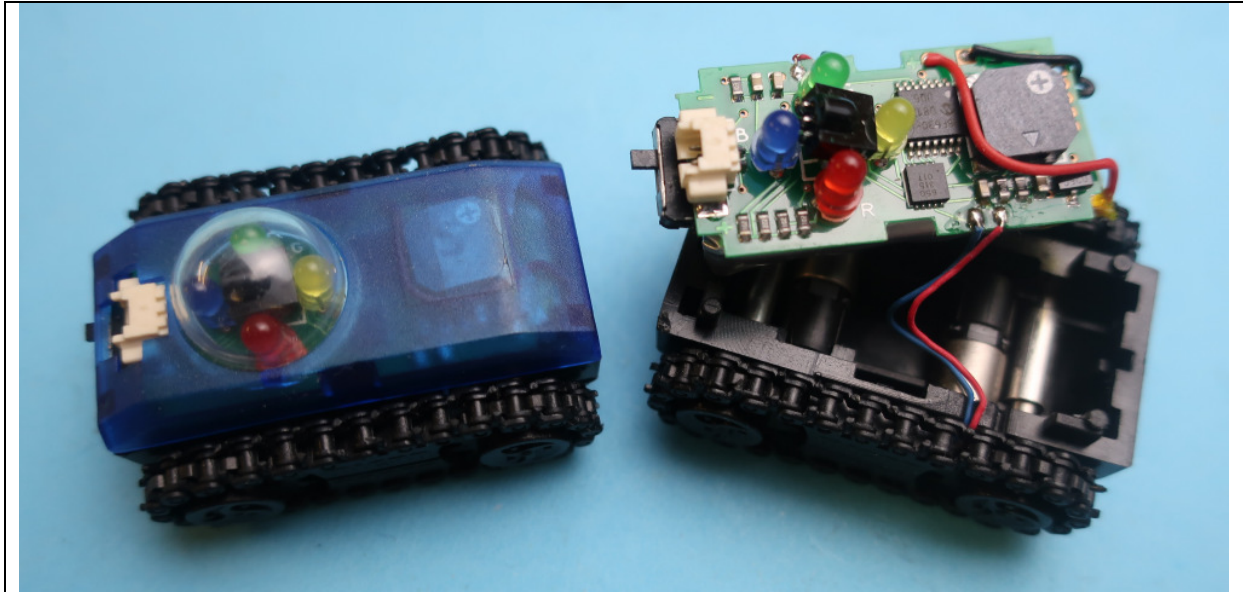
Look is excellent. Lipo duration is very good. Speed and manoeuvrability is very good.

Weak points

Molex charging connector is not easy to insert and remove. Cover opens if the rover falls on the ground.



Pictures



Pub, videos : chercher Plantraco micro-rover (le site Plantraco a disparu)

Jdn 2002