

# GRADE CROSSING MODULE

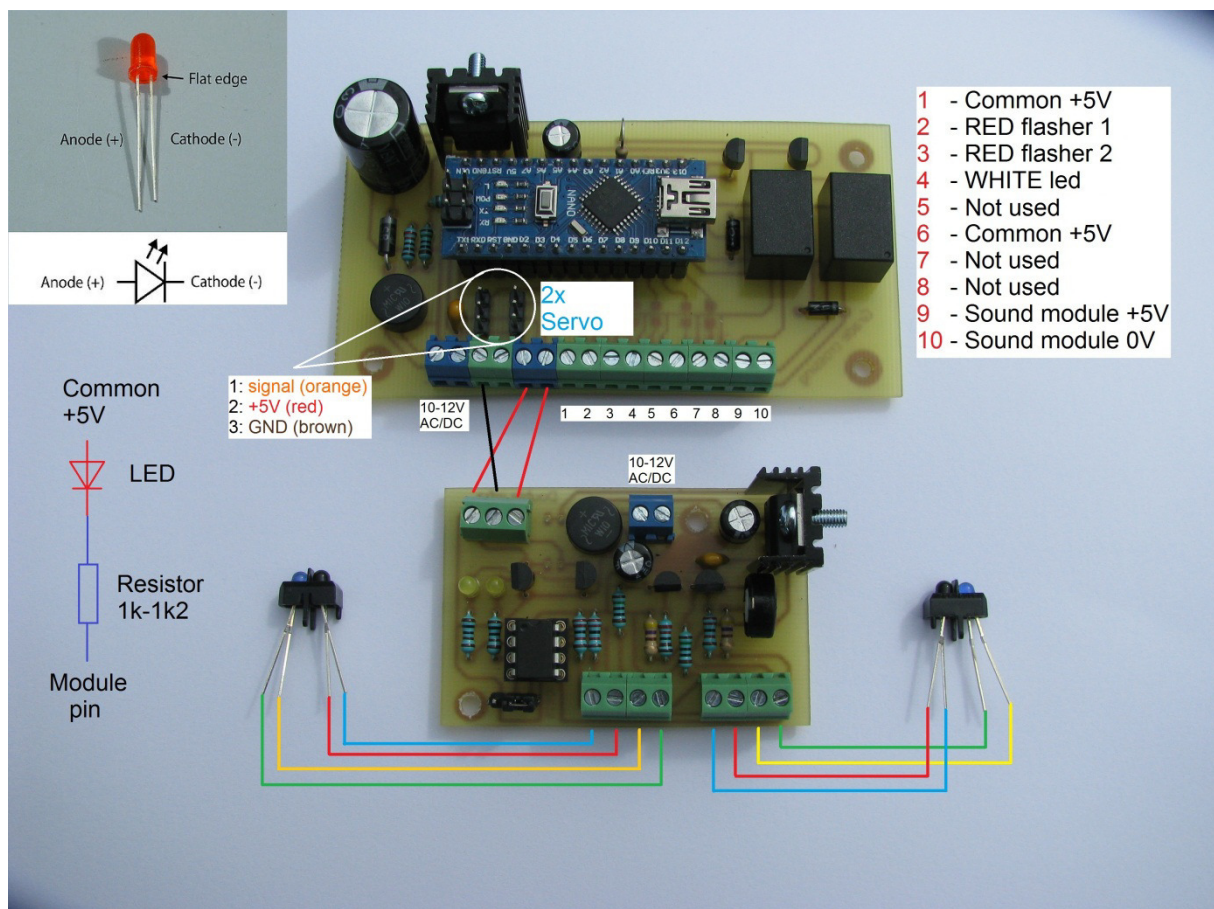
- the module commands 6 LEDs, relay for sound module and 2 micro servos
- ideal for DC and DCC system as well
- output for 6 LEDs: 4x flashing red as warning lights and 2x flashing white (Eastern Europe version) as free grade lights
- 2 input for infrared sensors
- 2 output for micro servo (moving grade barriers)
- output for Sound module (5V DC)
- servo angle range: 90 degrees
- the servo doesn't swing after the power switched on!
- recommend power supply: 10-12V AC/DC /10-15VA

## Description:

When the crossing grade is free the warning LEDs are off, the flashing white LED indicates free grade crossing (optional).

As the train covers the sensor, the red lights start flashing and the relay activates the Sound module. After 2 seconds the gates come down slowly - servos are active.

Keep flashing until the sensor stay uncovered for at least 1,5 seconds (the last wagon leaves the sensor), then the gates come up, the warning lights and sound will go off.



First steps:

- connect IR sensors to Double infra board (smaller board with 2 amber LEDs) following picture 2
- connect power supply between 10-12V AC or 12-15V DC
- cover 1st sensor - the 1st amber LED must be lit. Then test the 2nd sensor at the same way.
- connect both boards with 3 wires cable (picture 1)
- connect LED diodes (semaphore) and Servos to the Grade crossing board. Do not forget use resistors to reduce voltage for LEDs!
- switch on the power supply and cover sensor. The semaphore/LEDs will be flash, 1st relay clicks (output to sound module - not included), after a few second the 2nd relay activates servo output.
- cover another sensor for 1,5 s and uncover. The ending sequence will be start (see: Description)

