

## **HOW TO BUILD A SIMULATED ROTARY ENCODER (by Pedro Bibiloni)**

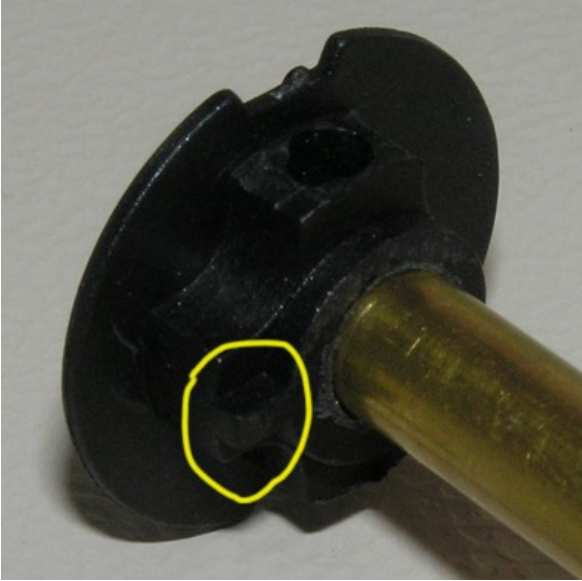
[http://personales.ya.com/micabina737/bricolaje/rotat/rotat\\_360i.htm](http://personales.ya.com/micabina737/bricolaje/rotat/rotat_360i.htm)

We are going to modify a standard 12 positions rotary switch to use it as a simulated rotary encoder. Once modified, we will use it to select the course on the MCP panel for example.

We start by taking the switch to pieces as shown in the picture below. Lightly force the plastic hooks. Open it being cautious with the metallic balls and spring inside the switch (the balls can be thrown really far away by the spring, far enough to loose them forever). Take apart these pieces for later. Also take apart the metallic contact that closes the circuit; take into account the initial position for this piece.



Now, in the axle piece, we cut the part shown in the picture (this picture shows a rotary with a modified axle, as explained [here](#)):



We will cut the spring a little. Once this have been done, we will mount all again checking the movement. If It's still hard, we will cut the spring a little more; if it's too soft, we will stretch the spring.

And we can now use the switch as a rotary encoder. We will connect the following groups of pins:

- 1, 4, 7 and 10
- 2, 5, 8 and 11
- 3, 6, 9 and 12

to three consecutives inputs in the same group of inputs in the Master card. The common pin is connected to the ground pin on that group of inputs.