



ImmersionRC FatShark Goggle PIC Replacement

Disclaimer

As with any modification, FatShark will not cover damage to goggles caused by this mod. That said, FatShark repair centers are pretty reasonable, and will help to repair any damaged caused.

Tools Required

PIC Programmer - PicKit 4 tested, but any should work

14-pin SOIC test clip (for a solder free mod), Pomona 5251 works nicely

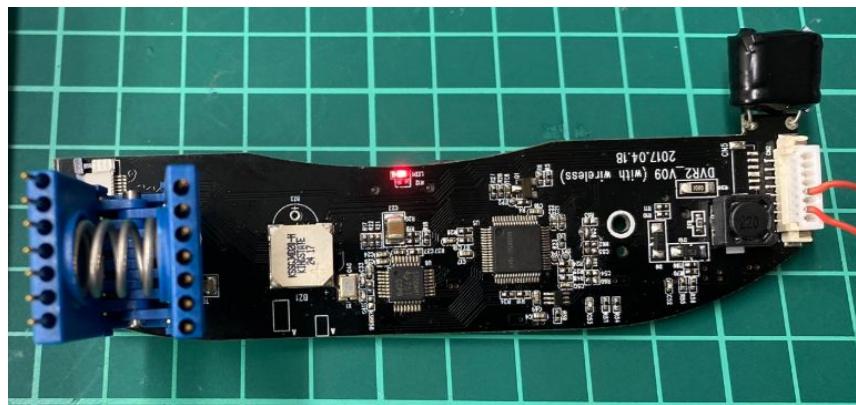
<https://uk.farnell.com/pomona/5251/test-clip-14-pos-1-27mm-soj-soic/dp/2406244>

Wiring

Wiring is simple, basically Gnd, Power, MCLR, and PGD/PGC are required.
(top of the clip in the below photo is pin 1/14).



The part to program is on the visible side of the DVR board, and should be the same for all DVR boards shipped by FatShark.



Pin	PIC Pin	PicKit Pin
MCLR	4	1
Vdd	1	2
Gnd	14	3
PGD	13	4
PGC	12	5

Programming

To program the part, power must be applied to the goggles. For the first time programming, a full erase of the part must be performed to remove the protection bits.

Note that during programming the beeper may scream like a banshee, this is quite normal.

Recovery

The stock hex file will be uploaded to the IRC Beta Hub.



Changes/Features

Channel up/down and volume up/down should work as previously.

Hold down Volume Up, and press Channel up/down to change low battery threshold:

Current settings are:

Disabled, 5.8V, 6.0V, 6.25V, 6.5V, 6.75V, 7V, 8V, 9V

Long beep indicates end of range, low tone for low value, high tone for high value.

Three short beeps at power-up indicate that the modified code is active.

Rx channel and battery threshold are restored after a power cycle.