

## Shift-I Installation - PRB/Birkin S3 Clubman

This is a review of the Shift-I sequential shift light, supplied by Ecliptech Innovations, as fitted to a Birkin S3 with a VDO Electronic Tachometer.

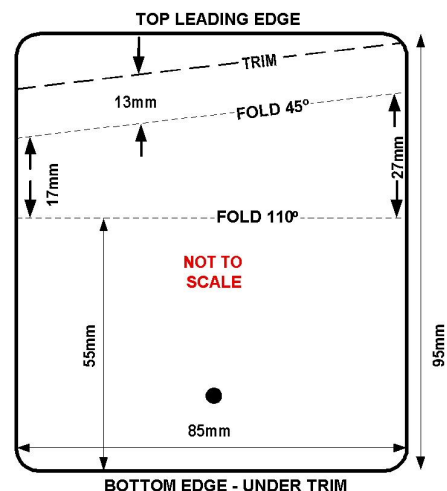
Having assessed the many various colour combinations available, a straight unit with a GGGGRR colour combination was selected.

It arrived well packaged, with a printed user manual and installation guide, 2 sticky mounting pads and 2 cable ties for the wiring.



First impressions are that it's a tiny little box, with a footprint of around 85mm x 13mm, very lightweight, and nicely built and finished.

Finding a location for the unit was easy. There's a bit of room above the dials, but that's really obscured by the steering wheel; anywhere else on the dashboard is really too low for effective viewing anyway, so on top of the scuttle seemed a good choice. The PRB Birkin comes fitted with a padded scuttle trim, which prevents direct scuttle-top mounting, certainly with a windscreen in place. Also the scuttle falls away to the right, so a small bracket was made which presents a level mounting plate for the shift light unit. The bracket was designed to be fixed under the trim using one of the trim fixing bolts, and wrap back around and over the trim, such that the popper may still be used to fit tonneau cover. The bracket was sprayed black, and fitted with a felt pad on the underside to prevent scratching the scuttle.



The Shift-I unit was fixed to the top of the bracket using the 2 supplied sticky pads, in a position where the top edge just clears the windscreen. Alternatively you could use a strip of velcro to allow later removal.



The wiring, which comes out of the top right hand corner of the unit, was routed under the base of the windscreen, and down behind the dash via an existing hole in the scuttle, normally used for the heated windscreen wire.

Ecliptech worked to devise an appropriate and simple wiring method suitable for easy connection to the VDO Electronic Tachometer. It was considered preferable to have a plug and play, solderless installation, so the unit could be fitted without cutting into the loom, and moved from car to car if required. The connection leads have also been made longer than normal too as slightly longer runs are required behind a car dash than behind a bikes instrument cluster. Ecliptech now supply the VDO compatible connectors and longer leads on request (75cm supplied on this unit, although in retrospect, 65cm wires would suffice.)

The PRB Birkin wiring loom is fitted with a connector for the tacho. Unplug this from the back of the tacho. It was easier to pull the tacho away from the dash to access all the connections.

*Note that some PRB wiring looms may differ depending on year, so check each wire entering the connection block properly first using a multimeter.*



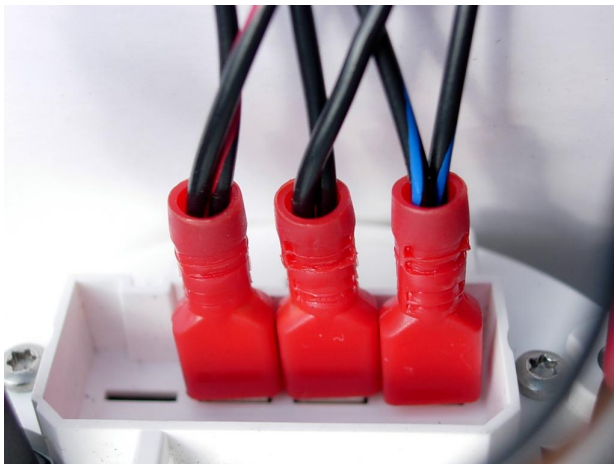
Once unplugged, the terminals on the back of the tacho are visible. Per the VDO Tachometer wiring diagram, the three required feeds at the back of the tacho are as follows (left to right in this photo):

- PIN 2 Ignition
- PIN 3 Ground
- PIN 4 Signal





The supplied 6.4mm spades on the supplied flying leads connect Shift-I into the original tacho plug on the wiring loom.



Next, Shift-I connects directly to the tachometer terminals using the supplied 6.4mm female terminals.

- Shift-I Black/Red Tacho PIN 2
- Shift-I Black Tacho PIN 3
- Shift-I Black/Blue Tacho PIN 4

That's it connected!

The unit fired up immediately the ignition was switched on, and picked up its initial 1000rpm signal the first time the engine was started, with no calibration required. The default value of 2 seemed to work well. There was also no fluctuation or stutter at high revs, and the default sensitivity value seemed to work well.

There are numerous ways to setup the unit, but it's really a set and forget job. The display mode is simple to change, and a number of variations were tested on the road, before settling on the cumulative and flash display mode. Shift points starting at 6000rpm up to a shift point of 7400rpm, coinciding with peak power (standard 4AGE 20v) have been set, giving neat 200rpm increment between each light. Shift point setting took a little more getting used to, but after reading the manual properly and doing it a couple of times it really becomes quite intuitive. The unit appears to be accurate and responsive, with no perceptible lag detected when checked against the MOTEC computer.

## Summary

This is what it the final installation looks like in normal sunlight. Illustration shows the battery voltage display mode.



This is a great little unit, having all the functionality that could usefully be needed from a sequential shift light. It's also quite a flashy bit of kit, so if impressing your mates is important, it does that too! The nice thing about this unit is that it's fully self contained, rather having a unit for the lights and a separate control unit for the electronics and programming functions. The plastic enclosure looks neat, seems well built, and is very lightweight. It would have

been nice if the 2 screws on the back were black to match the casing – the author painted these for completeness! The buttons are obviously small, and in use are solid if a little fiddly. However, they are right there on the front panel when you need them, which probably isn't very often.

As yet, the unit has not been extensively tested in all conditions or on the track where it's likely to be most use. However, installation was really simple thanks to the connections supplied, and it consistently picked up an accurate signal.

The lights are very effective even in bright sunlight, although tucked in behind an aeroscreen would give it more protection. The dimming feature works well in tunnels and at night, and no instances where it got confused by other car headlights were detected. If it did get annoying at night, the unit can be turned off altogether; few of us are likely to be bouncing it off the limiter during the hours of darkness though!

The only thing not included is an independent shift down light to indicate when you're dropping out of the power band, although you could use the first light to indicate that.

In summary this is a really neat bit of kit that does everything it says it does, and does it very well. Shift-I seems to be good value for money for the range of setup options provided, as long as it stays competitively priced. It's worth mentioning that Tony from Ecliptech has been particularly responsive and helpful to deal with; it's not like dealing with a mass manufacturer, and that's a good thing!

### Disclaimer

The author has no connection with Elicptech Innovations. A small discount on the unit installed was given after approaching Tony for a development sample on behalf of the club, and by agreeing to write a review. The product would have been sent back for a full refund had it not been compatible, or had it not met expectations in full. The author does not guarantee the accuracy or completeness of technical data and instructions in this document, and users of this information do so at their own risk.