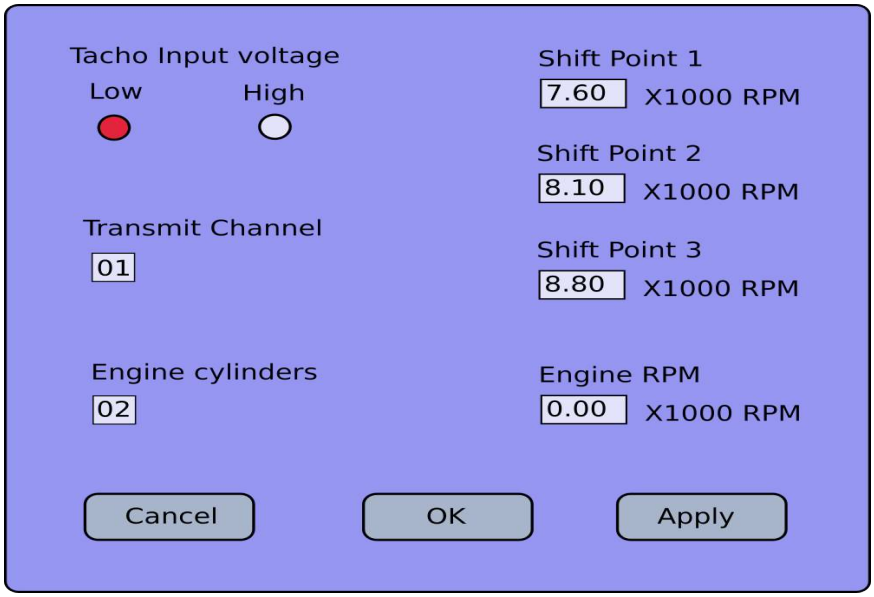
SPA USB Remote Shiftlight manual

The SPA USB remote shiftght is configured and tested via USB software on the PC. It then transmits shift data to the remote helmet shiftlight receiver. Install the software from the CD and then plug in the USB remote shift light. The dialog below should appear:-



There are only a few options to set. Tacho input voltage is set to low unless you are using a high voltage magneto type of igntion.

Transmit channel needs to match the remote helmet receiver channel (see below).

Engine cylinders is normally set to the actual number of cylinders.

Shift points are set as you require them.

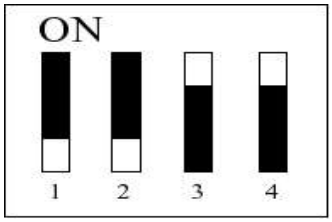
Click apply and start the engine to test. You will see the RPM displayed correctly if it is all wired and configured correctly.

The USB remote shiftlight transmitter sends shift information to the remote helmet shiftlight receiver worn by the user. The remote helmet shiftlight can be switched on by pressing the button, or by passing a magnet near the button area (if its covered by jacket/leathers). It will switch off automatically after 6 minutes of inactivity from the transmitter (IE it is out of range or the shiftlight power is off).

Whenever the on switch is pressed, the LED's quickly flash green, yellow, red twice. When switching off after 6 minutes of no activity, the LED's slowly flash red, yellow, green once.

The shiftlight transmitter and receiver have 16 selectable channe1s. These are selected by tiny switches inside the receiver, and this must match the channel selected in the dialog above. The channels must match for them to communicate. You only need to change these if there are other remote shiftlights in use nearby. Here is a chart showing the switch selection of the channe1s:-

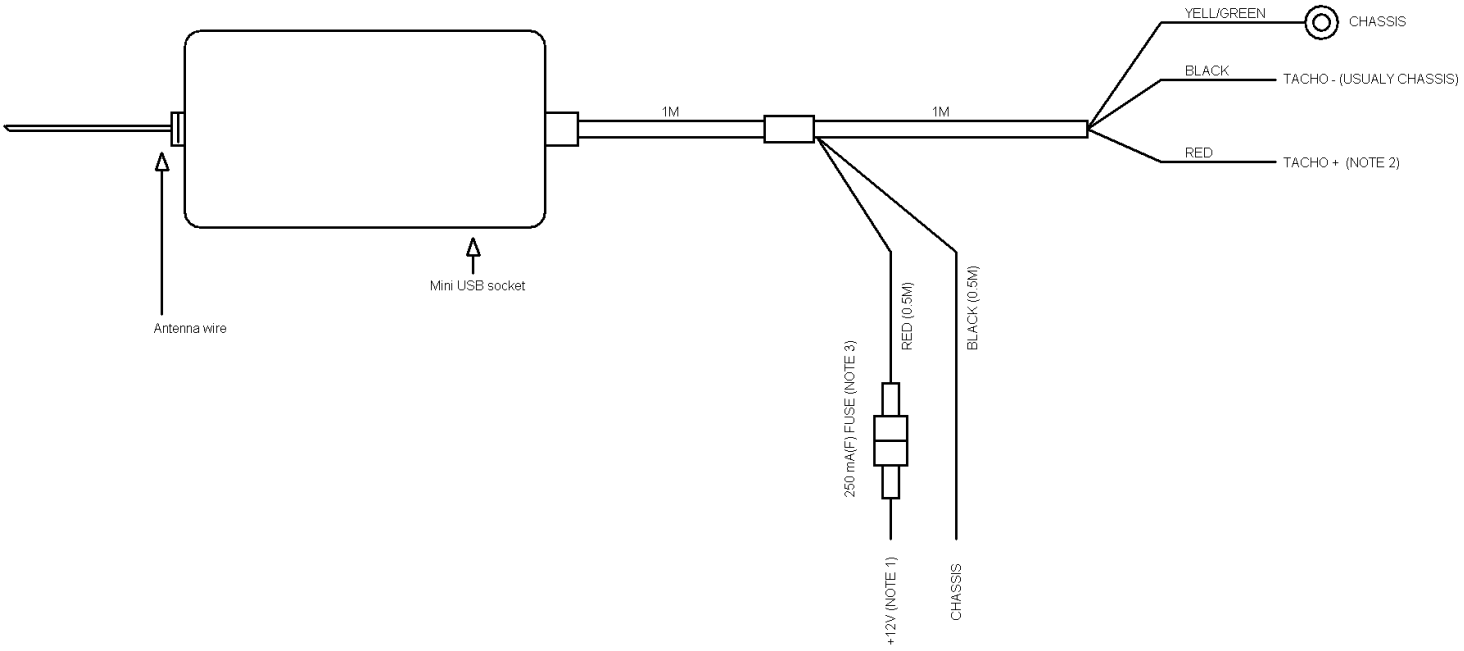
Channel	*1*	*2*	*3*	*4*
1	OFF	OFF	OFF	OFF
2	OFF	OFF	OFF	ON
3	OFF	OFF	ON	OFF
4	OFF	OFF	ON	ON
5	OFF	ON	OFF	OFF
6	OFF	ON	OFF	ON
7	OFF	ON	ON	OFF
8	OFF	ON	ON	ON
9	ON	OFF	OFF	OFF
10	ON	OFF	OFF	ON
11	ON	OFF	ON	OFF
12	ON	OFF	ON	ON
13	ON	ON	OFF	OFF
14	ON	ON	OFF	ON
15	ON	ON	ON	OFF
16	ON	ON	ON	ON



The above picture shows the default channel 4 selected. Push the white slider up for ON. You will need a very tiny screwdriver or fairly sharp pointed tool to alter them. To access this switch in the trasmitter, uncrew the case halfs. To access this switch in the receiver, just pull the case back off by the indent (see diagram for changing the batteries).

Installation:
Wire the USB remote shift light as shown below.

The red antenna wire should be taped away from any wiring with as little distance to the driver/rider as possible.



NOTE 1: USE AUXILLARY OR IGNITION +12V SO POWER GOES OFF WITH THE SWITCH
NOTE 2: CONNECT TO THE TACHO OUTPUT OF ECU, OR THE COIL (USUALY NEGATIVE SIDE)
NOTE 3: NEVER REPLACE THE FUSE WITH A DIFFERENT RATING

For certain types of ignition systems, that is ones that have more than one ignition coil per engine, it will be necessary to set the cylinders to a different number than the engine has. If you are using a tacho output from the ignition amplifier box, some systems (like the Ford coil less) give half the ignition pulses and so cylinders would be set to 2.
Also most motorcycles use an ignition coil per pair of cylinders, so a 4 cylinder engine would need to be set to 2 on the shift light since it will only see half the number of ignition pulses.

Battery replacement: The remote helmet shift light runs from two CR2430 Lithium coin cell batteries. When these need replacing, use a thumb nail in the small indent to prize off the back of the case. Now carefully use your fingers to prize up each battery from its holder. Insert one end of the each new coin cell battery and then press it down and it will snap in place.