

# Kit 1 Intelligent FBH Controller Details

Wires to be connected:

Red= 12V Positive battery, always live

Black = Ground

Green= FBH pin2

Antenna = Brown

Ign sense: *(optional, will turn off FBH when ignition is on) wires to be added by customer*

SIR/AUX line: *(optional, see below) wires to be added by customer*

SW1 & SW2: used for customers own GSM module *(wires to be added by customer)*

To start FBH: press on "TRIANGLE" button on the RF plip and release. *The green led will flash until the FBH has fully started and then lights continuously.*

To stop FBH: press off "CIRCLE" button on the RF plip and release. *The heater will then stop running.*

## Fuel pump prime sequence

When you press and hold the off button (about 6-7 seconds) the green led will come on and go off, wait until it has come back on and is continuously lit then release the off button and press and release the on button.

This will clear any faults and then prime the fuel pump for 20 seconds and you should here it ticking if you listen under the drivers side on the car in the centre.

## Master/manual fault clear sequence

Press and hold the off button, the green led will come on and go off, wait until it has come back on and is continuously on (about 6-7 seconds) then release the off button The led will then indicate the number of faults as short flashes or orange in between long orange flashes. If you press the off button during this sequence the controller will go back to the idle state. If you let it time out (ie press nothing) then any faults present will be cleared.

## In shorter words. there are three things possible:

1 view number of faults

2 view number of faults and then clear faults

3 view number of faults and then clear faults and then do fuel prime

1= you press and hold the off until green led continuous, view the faults and then press off

2= you press and hold the off until green led continuous, view the faults and let it go back to idle by itself

3= you press and hold the off until green led continuous, view the faults and then press and release the on switch

Led's

1x long then 2 x short green flashes	Power up procedure completed and communication with FBH established
3 x green flashes	Communication with FBH not possible, check wire to pin 2 of FBH
Flashing green ½ sec on ½ sec off	FBHIC is trying to start the FBH, this may take some time as the FBHIC sometimes waits for the FBH to reach the correct state before triggering a start sequence
Continuous green	FBH is running
Short green flash every 15 seconds	Normal off state
Continuous red	This occurs after a timed run of the FBH has terminated and indicates that the SIR/AUX line is grounded. This is enabled by dip switch 2 = ON and operates for 5 minutes
DIP switches	
DIP1	off: run time is 30 minutes on: run time is 45 minutes
DIP2	off: sir/aux line grounded briefly twice when FBH is started and once when it stops, <i>intended for controlling an external buzzer or bleeper</i>  on: sir/aux line will be grounded for 5 minutes at the end of a timed run, provided that the car voltage is above 10.2 volts AND the temperature before the run was 3 deg C or less, <i>intended for a circuit to control EG heated front screen via suitable (not supplied) relay and wiring.</i>
DIP3	the FBHIC measures the car voltage at the point that the FBH was started and if it then increases to 1.5 volts above that level the FBH will be switched off. <i>This is to detect that the engine has been started. If DIP3 is ON then this function is disabled.</i>