

Wike RC Products

IBEF (Ignition Battery Eliminating Filter)

Version 2.0

10/10/2010

Overview:

Congratulations on the purchase of a product that saves the weight of an ignition battery and provides a IMAA required transmitter controlled ignition kill switch. The IBEF is designed to be plugged into the receiver and run the ignition from the receiver batteries or power system. This simplifies charging by only having to charge receiver batteries. Ignition power can be turned on and off by assigning the channel the IBEF is plugged into to a 2 position switch. There is only one version 2.0 IBEF as it can work with any battery type from 4.8 volts to 16 volts.

The IBEF has a high efficiency switching regulator that provides power the ignition and also some very good filters that prevent noise and interference from the ignition system from getting back into the receiver. To prove how good the filters work do a range test on your airplane with the engine running at different RPMs with an ignition battery first then do a range test with the IBEF instead and note that you will typically see no difference in range. This will prove the safety of the system.

The switching regulator in the Version 2.0 of the IBEF is factory preset for a 5.0V output but is adjustable from under 5Volts to over 6Volts. The IBEF can accept any voltage from 4.5 to 16 volts. High voltage systems are completely compatible with the IBEF. It is up to 95% efficient unlike linear regulators it can deliver almost 4500mAh at 5V from an 8V 3000mAh battery. Additionally, if the battery voltage falls below the desired regulated voltage output the IBEF will output the battery voltage with no drop in voltage.

There is no heat sink required and the regulator can deliver 5 Amps continuous as well as it is current limited at 5 Amps peak. The IBEF can be used to power n other electronics beside ignitions and provide transmitter switch control such as smoke pumps, motors, lights, etc.

Installation:

The longest lead of the IBEF is to be plugged into the receiver. The shorter lead and the LED is the output side and the short lead should be plugged into the ignition. The LED is on when the ignition is being powered and off when the ignition is off. The IBEF should be mounted near the ignition module and far away from the receiver. The LED is intended to be mounted so that it is visible outside the plane.

If an output voltage other than 5.0V is desired the inside the shrink wrap on the output side of the IBEF is an adjustable potentiometer. With a small screw driver you can turn this adjustment to set the output voltage from less than 5.0V to over 6V.

Specifications:

Input Voltage Range: 4.5 – 16 Volts
Output Voltage Range: ~4.7 - ~ 6.5 Volts
Output Current: 0.1 – 5.0 Amps (continuous and peak)
Temperature Range: -40 to 85 deg C (-40 to 185deg F)

Warranty and Support:

The IBEF comes with a 180 day warranty. The warranty only covers the IBEF. Always perform range tests. Warranty and support is available by emailing Wike RC Products at billw@nc.rr.com.

OPTIONS:

There are a few additional options available for the IBEF. These can be obtained by contacting support.

Intentional Miss

The IBEF can be programmed to cause the engine to miss intentionally if the battery voltage becomes dangerously low. This was not included in the first production Ver 2.0 units due to limited testing of this feature. It is available as an update in the near future.

Operating without using a Receiver Channel

The IBEF can be configured in an Always On state. So when configured this way if the receiver is on then the ignition is on. This mode is intended to allow use of the IBEF when there is no additional receiver channels available. Please contact support for using in this manner.