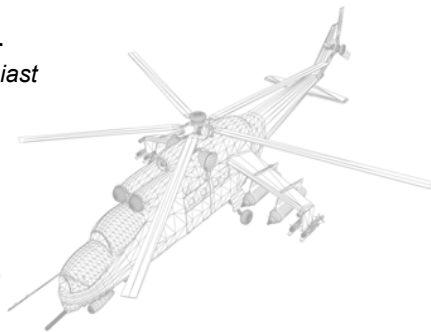
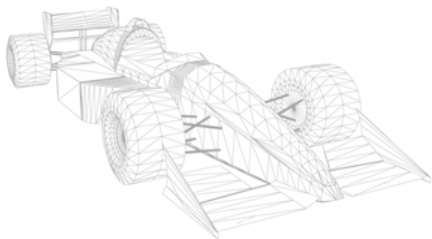




**medusa  
research** Inc.

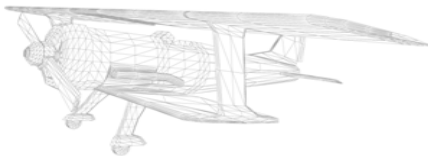
*Engineered Products for the RC Enthusiast*



## OPTO-ISOLATOR

Operation Manual

Model: MR-OPTO-001



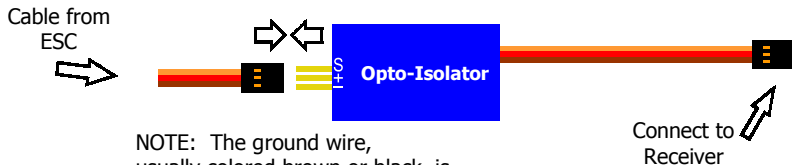
[www.MedusaProducts.com](http://www.MedusaProducts.com)

### FEATURES OF THE MEDUSA RESEARCH OPTO-ISOLATOR:

- **Converts any ESC with a BEC to an Opto-Isolated input**
- **Isolates potentially harmful electrical noise** from your ESC and motor, away from your sensitive receiver
- **Allows the use of a separate receiver battery** in systems where the ESC has a battery eliminator circuit, *without modifying any wiring!*
- **Allows the use of a separate BEC**, such as the Medusa Research **Potencia BEC**, by isolating the ESC's power supply from the receiver's power supply.
- **Simple connection**, inline with your ESC and receiver with no wiring modification

NOTE: The Opto-Isolator requires that your ESC is equipped with an on-board BEC circuit, and that your receiver has its own separate power supply, such as a flight pack or a **Potencia BEC**.

<b>CONNECTION</b> .....	1
Connecting the Opto-Isolator to your system.....	1
Operating the Opto-Isolator.....	2
Before Opto-Isolator installation.....	2
After Opto-Isolator installation.....	3
<b>SPECIFICATIONS</b> .....	4
<b>SUPPORT</b> .....	5
<b>WARRANTY</b> .....	6
<b>RETURNS</b> .....	8



NOTE: The ground wire, usually colored brown or black, is connected to the pin marked "-" on the bottom.

### CONNECTING THE OPTO-ISOLATOR TO YOUR SYSTEM

To install the Opto-Isolator, connect the ESC's receiver cable to the connector pins on the Opto-Isolator. Connect the receiver wire to your receiver where your ESC was previously connected, and you're ready to fly!

Your ESC must be equipped with a BEC for the Opto-Isolator to work. You will also need a second power source for the receiver and servos.

To deal with noise problems it is recommended that you use a flight pack battery as the receiver power source. This will completely electrically isolate the receiver from the ESC.

The Opto-Isolator is also used to isolate the ESC's on-board BEC so that a separate BEC, such as the **Potencia** BEC, can be installed. This is useful if your model's servo or battery size exceeds the ESC's BEC rating.

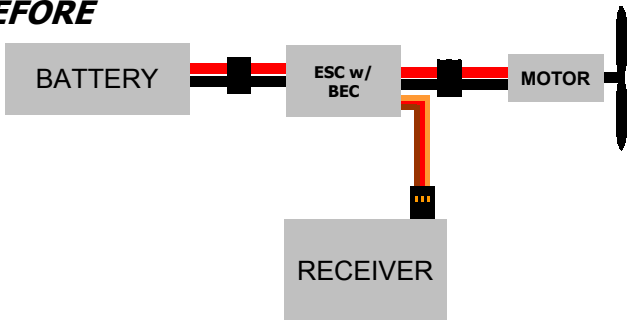
### OPERATING THE OPTO-ISOLATOR

Whenever you add parts or make changes to your model, perform a *range check*. Ensure the receiver, servos, and ESC will operate smoothly with the transmitter a good distance away from your model, **before** you start flying.

### BEFORE OPTO-ISOLATOR INSTALLATION

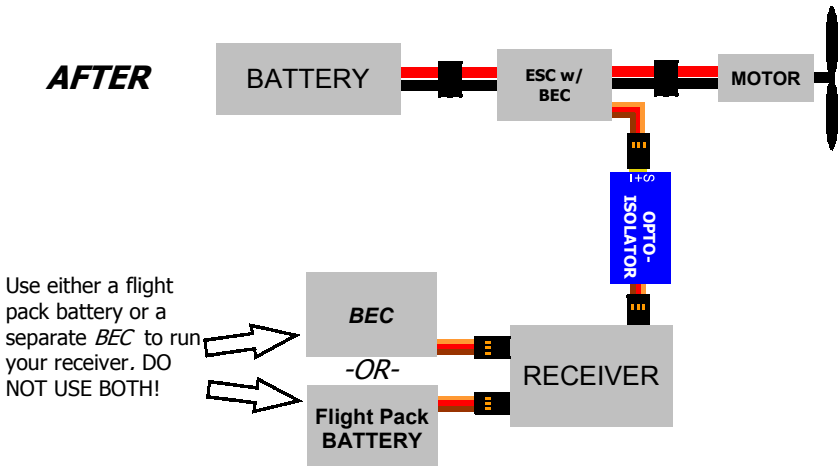
Below is a diagram of how a typical model would be set up, before installation of the *Opto-Isolator*. Page 3 shows the typical layout of a model with the *Opto-Isolator* installed.

#### ***BEFORE***



**AFTER OPTO-ISOLATOR INSTALLATION**

Below is a diagram of how a typical model would be set up after installation of the *Opto-Isolator*. You will need a flight pack battery *OR* a separate BEC (such as a Medusa Research *Potencia* BEC) to run your receiver and servos.



**Weight and Dimensions**

<b>Parameter</b>	<b>Value</b>
Length	18 mm
Width	12 mm
Thickness	5 mm
Weight (with wire)	4 g

## **SUPPORT**

If you are still having difficulties, or have questions that aren't covered in this manual, you can contact Medusa Research for support.

Our contact information is:

### **World Wide Web**

<http://www.medusaproducts.com>

### **E-Mail**

[support@medusaproducts.com](mailto:support@medusaproducts.com)

### **Telephone Support**

Hours: Monday-Friday 10am to 5pm eastern time, excluding business holidays

Phone Number: 508.675.0200 (in Fall River, Massachusetts)

## **LIMITED WARRANTY**

Medusa Research Incorporated warrants this product to be free of manufacturing defects in material and workmanship for a period of 12 months from the original date of purchase. Should any defects covered by this warranty be found, this product shall be repaired or replaced with a unit of equal performance by Medusa Research Incorporated. In the event of a product defect during the warranty period, see the directions in the "Returns and Return Authorization."

## **LIMITS AND EXCLUSIONS**

This warranty may be enforced only by the original purchaser, who uses this product in strict accordance with the information provided in this operation guide.

This Warranty does not apply to:

1. Damage resulting from failure to follow instructions provided in this operations guide-line
2. Damage resulting from misuse, reverse polarity on input or output wires, abuse or neglect.
3. Damage occurring as a result of connector incompatibility, or of mechanical failure of user installed input and output connections.
4. Damage resulting from any repair or alteration performed by someone other than Medusa Research Inc.

**LIMITATION OF LIABILITY**

- (i) UNDER NO CIRCUMSTANCES WILL MEDUSA RESEARCH, INC. BE LIABLE FOR ANY INDIRECT, THIRD PARTY, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY EXPENSES, COSTS, LIABILITY, LOSS, OR DAMAGE WHATSOEVER IN ANY CONNECTION WITH THE USE OR MISUSE OF, OR INABILITY TO USE THIS PRODUCT;
- (ii) that Medusa Research, Inc. shall not be liable for any harm, loss, damages, expenses, costs, suit, claim or demand whatsoever against the user of this product;
- (iii) that neither Medusa Research, Inc., nor any of its representatives, employees, officers, directors, agents, distributors, affiliated corporations or any other person, shall be responsible for nor shall incur, any liability, damages, loss, obligations or responsibility whatsoever (whether in equity, contract, tort or otherwise) for any harm, loss, reliance, or damages, whatsoever, that may arise in any connection with or result from any promise, advice, arrangement, agreement, statement, technical support or maintenance, representation, warranty, or information whatsoever, that may have been made to by Medusa Research, Inc.;

**RETURNS AND RETURN AUTHORIZATION:**

For warranty and repair returns, please download a *returns form* from our website. Instructions for packaging and shipping returns are also on our website.

If you do not have access to the internet, please call or fax us at the number below.

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Fax: 508.675.0202  
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## ***Engineered Products for the RC Enthusiast***

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