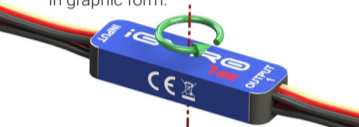# PowerBox Systems

iGYRO 1e

These brief instructions show the procedure for installing the **iGyro 1e** in just a few minutes, without any PC programming. If you need to access additional functions, they can be set up using the USB lead and a PC or laptop. The **Terminal Program** required for this is available free of charge, and includes a **Quick Tip** function which explains all the gyro's features in detail. The procedure for setting up the **iGyro 1e** using the **USB interface** and the **Terminal program** can be found in our **PowerBox Support Forum** at forum.powerbox-systems.com

1. The effect of the **iGyro 1e** is shown here in graphic form:

The **iGyro 1e** must therefore be installed in such a way that the device's rotational axis (shown red) lies parallel with the axis of the model which you wish to stabilise.

Note: Do not fix the **iGyro** in place until you have checked its direction of effect.

2. Connect the **INPUT** lead to the receiver's control channel, then connect one or two servos to **OUTPUT 1** and **2**.

3. At the transmitter assign a gain channel to a rotary knob or linear slider, with a working range of -100% to +100%. Connect this channel output to the **GAIN** input on the gyro.

4. Switch on your transmitter and receiver, and check the appropriate control function: if you need to reverse an output, or adjust the servo centre or endpoints, you can carry this out conveniently using a PC, the **USB Interface Adapter** and the free **Terminal Program**.

5. Turn the gain control to the 100% end-point, and check the gyro's direction of effect on all axes.

6. If the direction of effect is reversed, you can correct it in either of two ways:
a) Turn the **iGyro 1e** round, and secure it. However, this only works if you are only using one output, or if the direction of effect is incorrect for both outputs.
b) Connect the **iGyro 1e** to a PC using the **USB Interface Adapter**. You can now adjust the direction of effect for both outputs using the **PowerBox Terminal program**.

7. The **iGyro 1e** is now ready for use. First disable the gyro by moving the slider or knob to centre.

8. Launch the model, and fly parallel to the runway. Increase gyro gain until the aeroplane just starts to oscillate, then turn the gain control back until the model shows no tendency to oscillate at any speed. If you are flying the model in flat calm conditions, it can be helpful to give the gyro a little "work" to do: flick the sticks a little, and check that the model accurately maintains its heading, and does not oscillate after the movement.

The **iGyro 1e** has two ranges which can be adjusted:

Range A, gain control 0% to +100%: by default this is set to Rate mode only.
Range B, gain control 0% to - 100%: by default a value is set here for Attitude Assist mode in addition to the Rate value.

-100%	0%	+100%

Range B   **Range A**

Attitude Assist Mode: The **iGyro 1e** assists the model maintain the attitude of the model in the attitude it was positioned in roll or pitch or yaw (depending on which axis you are using the iGyro) at the last given control input. As any control input in pitch or roll or yaw is applied by the pilot the Attitude assist will gradually phase out. This highly developed stick authority software is what provides the 1e with unprecedented levels of control and moves away from gyro interaction that some other lesser gyros suffer from.

Note: Both ranges can be configured in any way you like using the **Terminal Software**.

Note: Once you have test-flown the model to establish the correct gyro gain values, you can substitute a three-position switch for the rotary control, and use the switch to set the **iGyro 1e** to your preferred settings.

Example:
- Switch position 1: gain ± 0%, gyro off
- Switch position 2: gain +45%, gyro in Rate mode
- Switch position 3: gain -40%, gyro in Attitude Assist mode

Naturally your own values may differ markedly from those stated, as they need to be established individually for each model.

Another feature of the **iGyro 1e** is that it always stores the current gain value. This means: if you do not have a spare channel, you can use a channel once to set up the gyro to a particular gain value, and then switch it off; disconnect the gain input from the receiver. The next time you switch on, the **iGyro 1e** will operate with the last gain value you set, so you can re-use the receiver channel for another purpose.
The second option is to set a fixed gyro gain value using the PC and the **Terminal Program.**

⚠ **CAUTION**

Two important rules for using the iGyro 1e in everyday flying:
1. Always switch the transmitter on first, and wait until the boot process is complete before switching the receiver on.
2. Always carry out a check of the control surface movements, taking care to move the sticks to both end-points.

SERVICE NOTE

We make every effort to provide a good service to our customers, and have established a Support Forum which covers all queries relating to our products.
Please use the Support Forum:
www.forum.powerbox-system.
before you telephone us.

GUARANTEE CONDITIONS

That is why we are able to grant a **24 month guarantee** on our **iGyro 1e** from the initial date of purchase. The guarantee covers proven material faults, which will be corrected by us at no charge to you.
The guarantee does not cover damage caused by incorrect usage, e.g. reverse polarity, excessive vibration, excessive voltage, damp, fuel, and short-circuits. The same applies to defects due to severe wear.

LIABILITY EXCLUSION

We are not in a position to ensure that you observe our instructions regarding installation of the **iGyro 1e**, fulfil the recommended conditions when using the unit, or maintain the entire radio control system competently.

For this reason we deny liability for loss, damage or costs which arise due to the use or operation of the **iGyro 1e**, or which are connected with such use in any way. Regardless of the legal arguments employed, our obligation to pay damages is limited to the invoice total of our products which were involved in the event, insofar as this is deemed legally permissible.

We wish you every success using your new **iGyro 1e**!

Donauwörth, April 2024