

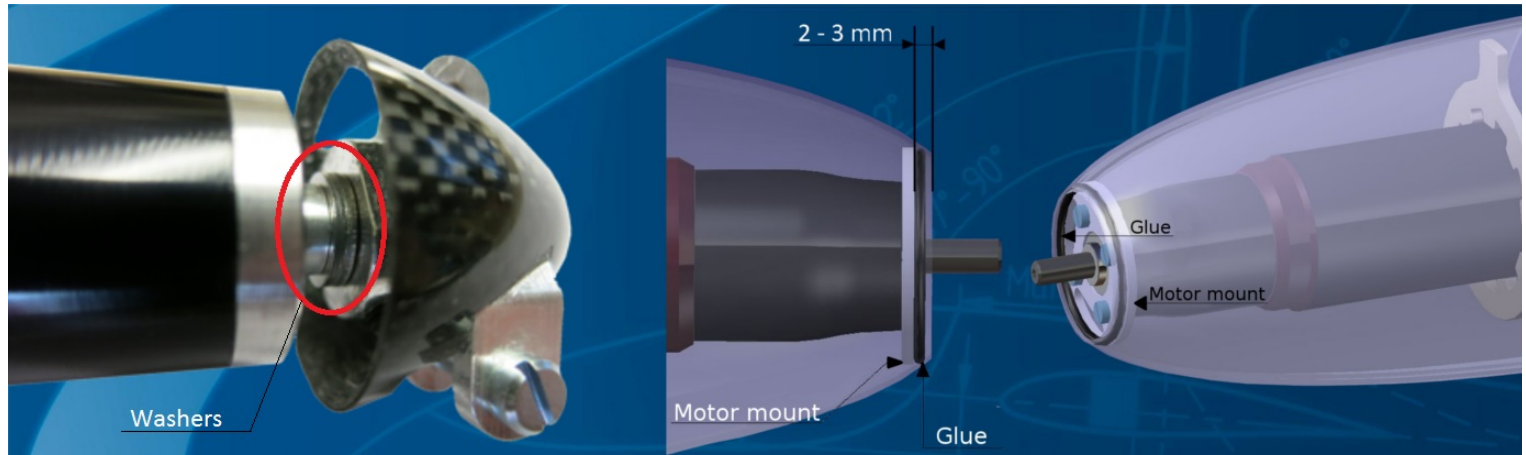
POWERLINE micro

INSTRUCTION MANUAL

MOUNTING INSTRUCTIONS

Firewall Mounting:

To help with attaching the motor and gearbox to the fuselage, we offer a range of CNC cut carbon fibre firewalls, to suit most spinner sizes. If you build a motor mount yourself please ensure sufficient cooling air holes are cut, to avoid motor overheating. The motor mount should be installed rebated about 2 - 3 mm back from the front of the fuselage. The fuselage must be well roughened at the adhesive joint. Please glue the motor mount to the fuselage with thickened (with cotton flocks or carbon powder) UHU Plus Endfest 300 or a similar high strength slow-setting two part epoxy.



Attention!

Our new gear shafts have no failure-inducing groove for a shaft lock ring. This results in a much greater strength and stability compared with usual 6 mm shafts. It is possible that a hard or dorked landing can force the rear of the spinner into contact with the front of the fuselage. This may bind the spinner in position, causing the motor to burn out. To prevent this, the gap between the gear locking ring and the prop driver should be filled with the supplied washers. The photo above shows you where the washers have to be placed.

Select the number of washers so that the propeller driver/ spinner cannot drag on the fus.. However, the distance to the fus. should not be too large, -1 mm gap is a pretty good clue.

Plugs are not supposed to be soldered directly to the motor. Please provide at least 3 cm flexible cable between the motor and the plug.

Spinner fitting:

Gently push the prop driver back onto the gearbox shaft, until there is no gap between the washers. Now rotate the prop driver so the one set screw is located over the flat machined into shaft - slowly tighten the set screw, ensuring the screw acts as a key so the prop driver cannot physically rotate on the shaft. Finally fully tighten the set screw to ensure the prop assembly cannot move forwards or backwards on the gearbox shaft.

Propeller fitting:

1. Trim the spinner cone with a file until the propeller blades can swing freely. The propeller blades need to be able to move in front of the plane of rotation by at least 5mm.
2. When tightening the mounting screws it is important that the propeller blades remain easy to fold.
3. The stop nuts may only be used once! Once you have removed the nuts, you will need to use new ones or re-fix them with Loctite 243.

Speed control:

To protect the drive, the engine brake and the start-up delay should be set to at least 0.5 seconds. To prevent the powertrain being started to quickly (and pulling too much current) experience has shown that a delay of one second is required. For most controllers this will be achieved by setting the acceleration and braking to slow or medium. The timing should be set at about 15°.

Our YGE controllers are by default programmed to 18° timing, the brake and the start-up delay to 1.1 seconds. This needn't to be changed any more. If the direction of rotation wrong, simply swap two of the three motor connections. If you still need to reconfigure the controller, here are the required parameters for Powerline drives:

Pole quantity:	2
Timing:	15 - 18°
Frequency:	8 kHz
Gear ratio:	1 : 6,75
Break:	Medium

OPERATING INSTRUCTIONS

The batteries may not exceed the below named capacity or cell count. Batteries with higher capacity may cause overheating due to the voltage curve. The specified propeller may not be replaced by a larger one. The maximum engine runtime amounts 30 seconds, followed by a cooling phase for 10 minutes. After shorter runtimes the cooling phase need to be adjusted accordingly (e.g. 5 minutes cooling phase after 15 seconds runtime).

Powerline micro 1010

Controller: YGE 30
Propeller: 12*6 / 12*8
Battery: LiPo, maximal 3s 600mAh

Powerline micro 1015

Controller: YGE 40LVs
Propeller: 16*8 / 16*8,5
Battery: LiPo, maximal 3s 1000mAh

Powerline micro 1025

Controller: YGE 60LVs
Propeller: 16*8 / 16*8,5
Battery: LiPo, maximal 3s 1300mAh



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SAFETY INSTRUCTIONS

The commissioning of a drive is dangerous. Improper handling with a drive that transmits up to 10 kW to the propeller may cause considerable damage. Our engines are very powerful. Therefore expertise, discipline, regular service and periodic maintenance is required. Errors and defects in the mounting or operation of a model with such a strong engine may cause property damage or physical injury.

Attention! Before you take a model airplane with this engine in operation, you must find out about the legal regulations in your country. Legally, a model aircraft is an aircraft subject to relevant laws that must be observed at all times. Please notice rules like start-permissions or insurance obligations. In addition legal requirements that relate to the radio control system need to be considered. The regulations of the respective country must be observed accordingly.

Warning!

It is your responsibility to protect others from injuries. The minimum distance from residential areas to ensure the safety of people, animals and buildings must be at least 1.5 km.

Keep distance from power supply lines. Do not fly the model in bad weather with low clouds or fog. Never fly against direct sunlight because you may lose the eye contact with the model. To avoid collisions with manned or unmanned aircraft, please land immediately when approached by such aircraft.

Attention!

People or animals must observe the following minimum safety distances from the aircraft engine:

- Before engine 5 m
- On the side of the engine 10 m
- Behind the engine 2 m

Warning!

Commissioning and operation of the Model and / or the engine under the influence of alcohol, drugs, medicines, etc. is absolutely forbidden. The operator must be in the best physical and mental condition and also well concentrated. This applies both to the operator and any assistants.

Warning!

This engine was designed exclusively for the radio controlled airplanes and is not suitable for any other purpose. Any other uses may result in property damage or personal injury!

Warning!

Note on the propeller:
From time to time, you should clean the propeller with a damp cloth. If the propeller is damaged or unbalanced, stop operation immediately! In addition, the general safety instructions for propellers apply.

Warning!

Any deviation from the instructions in this manual, the use of other parts or materials and changes in construction, may impact adversely the functionality of the engine and must therefore be avoided under all circumstances.

Warning!

The operation of the engine may only occur if the instructions in the manual are attended strictly. Please pay also regard to the CG and steering information for your airplane. The prescribed settings are to be observed. Before starting a model with this engine, all the features and all the controls/steerings and the remote control range with activated remote control equipment has to be checked. This operational check must be repeated with the engine running, and the model must be fixed to the ground so long. Furthermore the references of the remote control system must be observed.

GENERAL INFORMATION

The maximum lifetime of the drive assuming good care is 5 years from date of purchase. The gear grease should be replaced once a year. The screws of the motor and propeller must be checked regularly for tightness.

Exclusion of liability and damage

Compliance with the installation and operating instructions in conjunction with the model and the engine, as well as the installation, operation, use and maintenance of associated components can not be monitored by Luftsporttechnik Schambeck. Therefore, Luftsporttechnik Schambeck assumes no responsibility for any loss, damage or costs arising from the erroneous operation, erratic behavior or anything connected with the foregoing. Unless otherwise prescribed by law, the responsibility of the company Luftsporttechnik Schambeck (resulting from the use of the model and the engine) to pay damages for any reason is excluded (including personal injury, death, damage to buildings, as well as damage caused by revenue or loss of business, interruption of business or other indirect or direct damages). The total liability under any circumstances and in any case is limited to the amount that the buyer has actually paid for the airplane or the engine. Commissioning and operation of the model and the engine is done solely at the risk of the operator. The buyer agrees that Luftsporttechnik Schambeck is not able to monitor or control whether this manual - regarding the installation, operation, use of aircraft, engine and use of the remote control - is followed appropriately. From Luftsporttechnik Schambeck neither promise, contract agreements, guarantees or other arrangements to any person or entity with respect to the functionality and commissioning of the model and the engine were made. At acquisition of the model or the engine, the customer has to rely on his own expertise and judgement and take on responsibility for it.

Terms of guarantee

The guarantee consists of free repair or replacement of any parts that have proven manufacturing or material defects during the warranty period from the date of purchase. Further claims are excluded. Transport, packaging and travel costs are at the expense of the buyer. We accept no liability for damage in transit. When returning to Luftsporttechnik Schambeck or to the approved service center for the country, a description of the fault and the invoice with the purchase date is needed. The warranty is void if failure of the component or model is caused by an accident, improper handling or incorrect usage.

