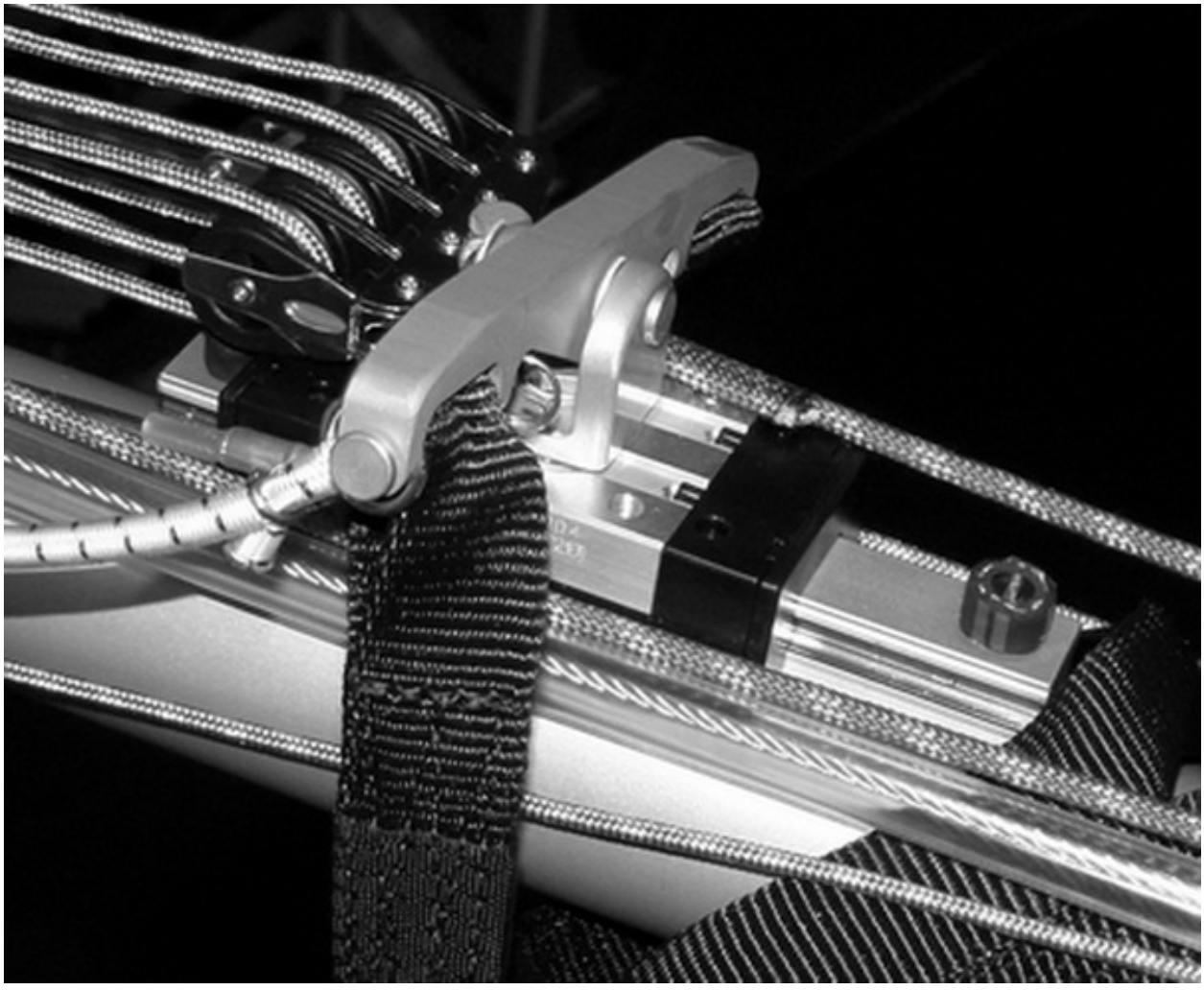
MOVABLE HANG POINT SYSTEM

OWNER / SERVICE MANUAL



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DEFINITIONS

Definitions used in this Manual such as WARNING, CAUTION and NOTE are employed in the following context:

WARNING
OPERATING PROCEDURES, TECHNIQUES, ETC. WHICH IF NOT FOLLOWED CORRECTLY, MAY RESULT IN PERSONAL INJURY OR DEATH.

CAUTION
OPERATING PROCEDURES, TECHNIQUES, ETC. WHICH IF NOT STRICTLY OBSERVED, MAY RESULT IN DAMAGE TO THE AIRCRAFT OR ITS INSTALLED EQUIPMENT.

NOTE
Operating procedures, techniques, etc. which considered essential to highlight.

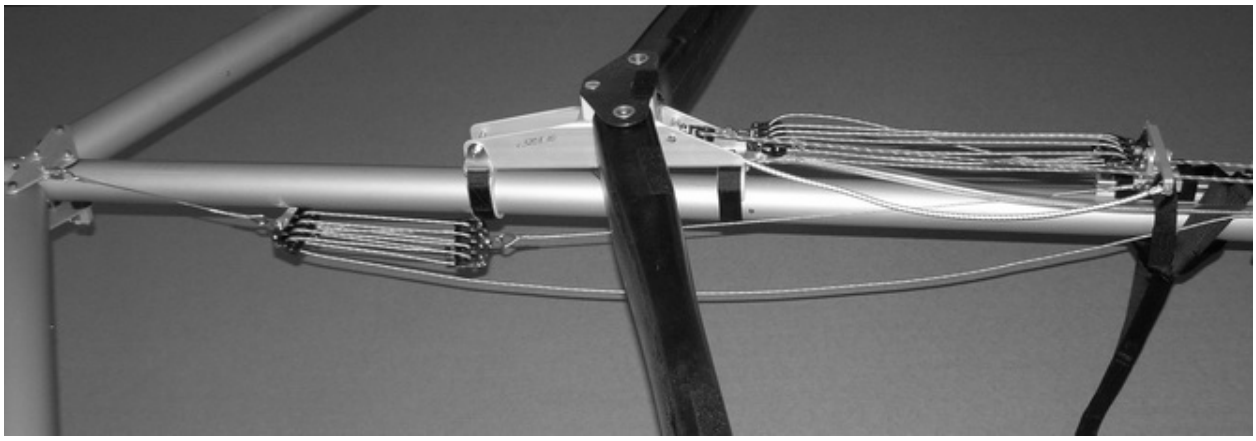
Please read and be sure you thoroughly understand this manual before operating your trim system. Be sure you are thoroughly familiar with the trim system and the contents of this manual before initial operation.
It is important that you visit us regularly at http://www.aeros.com.ua
In case of any doubts or questions contact your local dealers or Aeros.
We wish you a safe and enjoyable flying career.

Aeros Ltd.

INTRODUCTION

The movable hang point system (hereinafter referred as trim system) is designed and developed by our Swiss dealer Markus Eggimann. The trim system enables to move the hang point along the keel tube, allowing the pilot to vary CG of the glider in flight from aft to forward position. The aft CG is good to maximize the climb rate when climbing in relatively weak thermals. The forward CG position enables to increase safety when climbing and gliding, specially in strong and rough conditions and increase comfort on glide by reducing the bar pressure. Positioning the CG in between aft and fwd position and using different VG settings at the same time will give a pilot a wide range of trimming possibilities.

The trim system consists of the ball rail system, pulleys, wires, the rope and the clam cleat.



INSTALLING THE TRIM SYSTEM ON THE HANGGLIDER

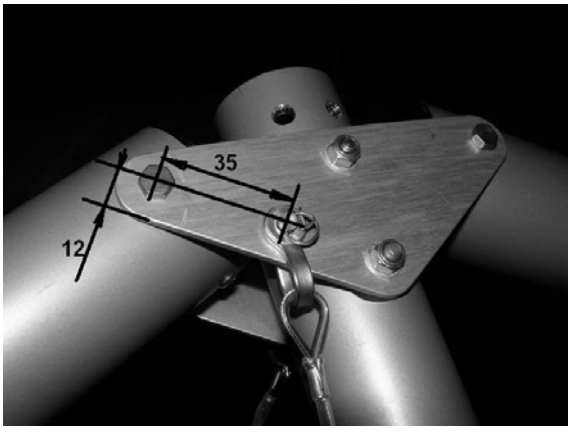
The trim system designed in such way that the travel range of the hang point locates within the operational CG position range. This allows installing the trim system on any Combat glider.

WARNING
BEFORE INSTALLING THE TRIM SYSTEM ON YOUR HANG GLIDER CHECK THE SPROGS ANGLES AND BRING THEM, IF NECESSARY TO STANDARD SETTINGS.

NOTE
We suggest removing the sail from the frame before installing the trim system on your glider. It is possible to install the trim system with the sail on the frame, but it will be not so easy.

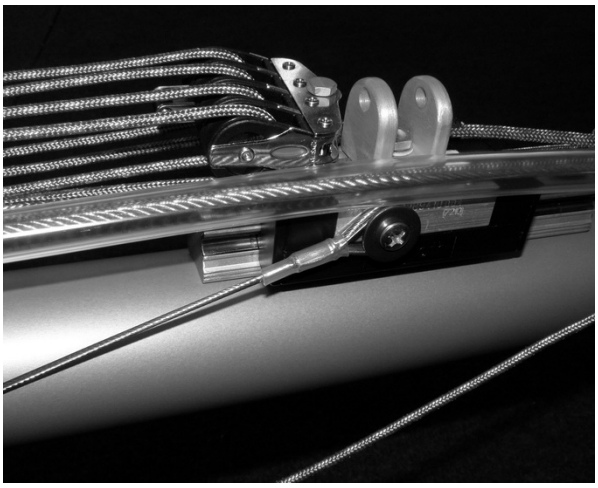
To install the trim system on the glider proceed as described bellow.

Drill additional 6 mm diameter hole in the top nose plate. Position of the new hole is shown on the photo.

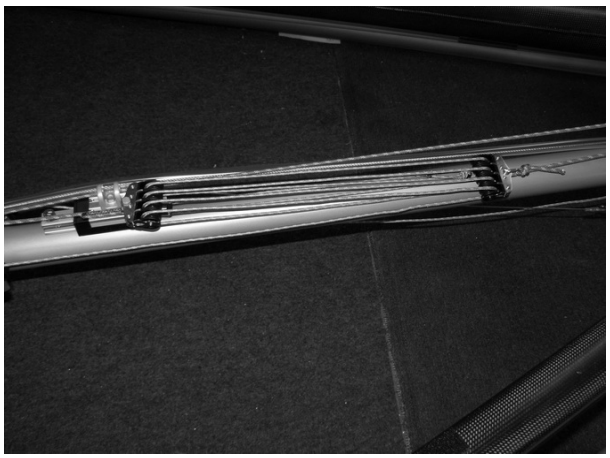


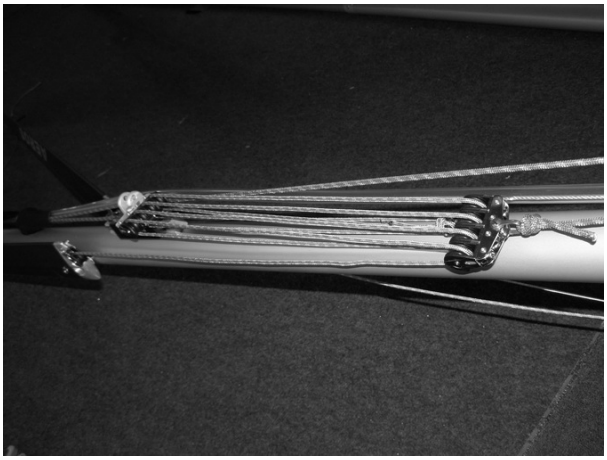
Remove the VG pulleys from the hang point tower. Remove the hang point tower with the rocker arm from the keel tube. Remove the rocker arm from the hang point tower. Take the VG rope out from the pulleys, leaving it in the right hand side down tube.

Install the ball rail system assembly on the keel tube with two bolts, matching the front and rear holes of the keel tube with corresponding holes of the ball rail system.
Attach the VG pulleys on to the ball rail system.
Attach the rear wire of the trim system (if it has not been pre-installed) to the ball rail system as shown on the photo.



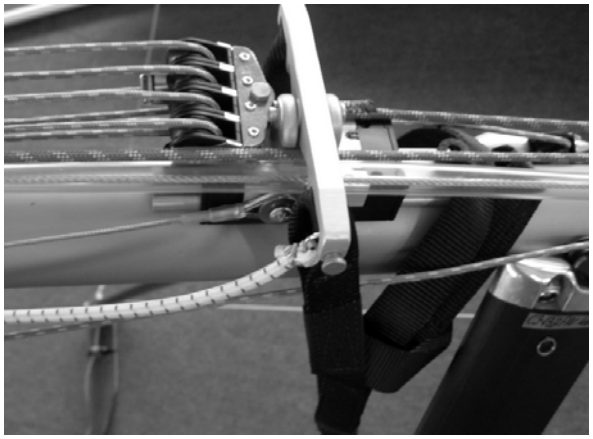
Feed the VG rope through the VG pulleys as shown on the photo. Note that now the rope goes differently into the front VG pulleys: coming up from the down tube it comes to the right pulley of the front 4-block VG pulley from beneath.

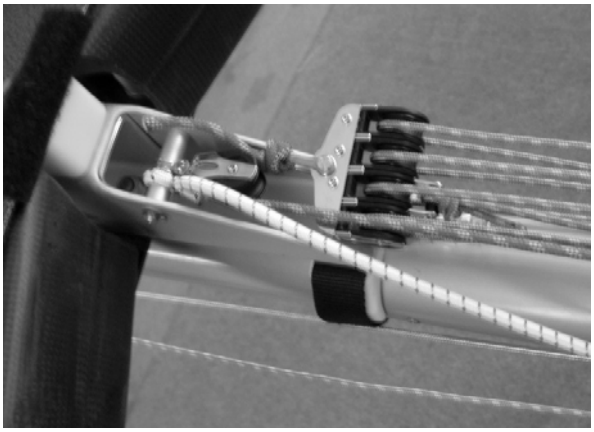




Attach the front wire of the trim system to the top nose plate as shown on the photo.

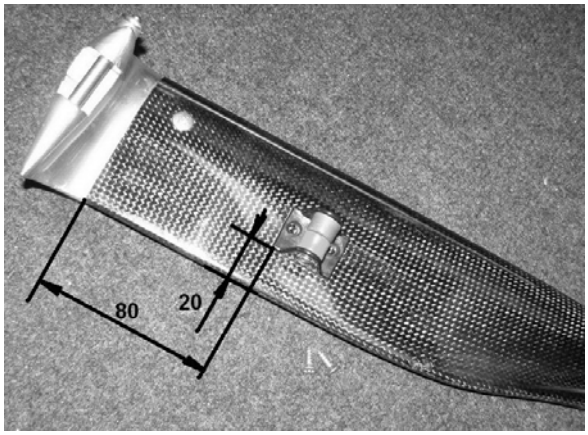
Replace the hang loop with the new one, supplied with the retrofit kit. Attach the rocker arm with the new hang loop to the rocker arm channel. Reinstall the rubber bend from the right side to the left side as shown on the photos.





On the left down tube replace the upper and lower brackets with the new brackets, supplied with the retrofit kit. Feed the trim system rope through the upper pulley of the left upright all the way down and through the bottom pulley in the A-frame corner as shown on the photos.

Position the clam cleat on the left side of the speed bar and mark on the speed bar position of the holes for the fixing screws (see the photo below). Drill in the speed bar two holes 2.6 mm diameter and fix the clam cleat to the speed bar with the two screws.



Re-install the sail back on the frame if you have chosen to remove the sail for installing the trim system. Rig the glider and conduct a complete preflight inspection of the glider and the trim system (see the glider manual and the trim system manual for details).

THE TRIM SYSTEM OPERATION

The trim system is easy to operate in flight by engaging the additional rope and the clam cleat on the left side of the speed bar.
Pulling the trim rope along the speedbar will move the hang point forward and trim speed of the glider will increase. To return the hang point to the aft position set the VG to off position and release the trim rope from the clamcleat. The hang point will move backwards automatically.
The recommended trim speed with the trim system in aft position is 32 – 35 km/h.
The recommended trim speed with the trim system in forward position is 40 – 50 km/h.

NOTE: With the VG on, the sail pressure on the hang point may not allow the hang point to return backwards in flight. It is recommended to release the VG off first to be able to set the hang point to aft position.

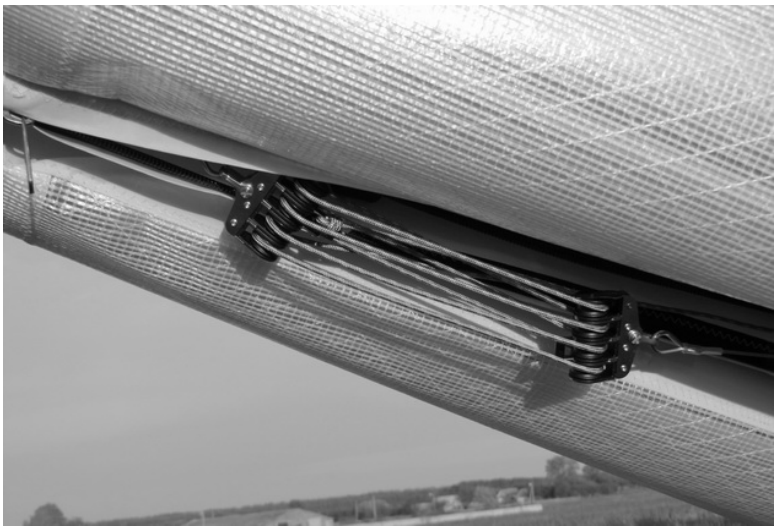
Rigging the glider with the trim system is not different from rigging any other glider. After the glider is rigged conduct a preflight inspection of the trim system in addition to the glider preflight procedure.

With the center zipper fully open check that the routing of all trim system ropes and cables are clear and straight.

Make sure there are no kinks or twisted thimbles of the trim system cables.

With the VG set to off position check the trim system operation. Pull the trim rope along the speed bar – the pull should be moderate. The hang point doesn't return backwards on the ground. When on the ground return the hang point backwards, if necessary, by pushing it along the keel tube by hand.

CAUTION
BEFORE DE-RIGGING THE GLIDER MAKE SURE THAT THE PULLEYS OF THE TRIM SYSTEM STAY OUTSIDE THE SAIL (SEE THE PHOTO BELOW), OTHERWISE THE PULLEYS MAY BE SQUIZED BETWEEN THE KEEL TUBE, THE LEADING EDGE AND THE CROSS BAR WHICH MAY CAUSE THEIR DAMAGE.



MAINTENANCE

The trim system doesn't require special maintenance except taking care to keep it clean.
When you set up or break down your glider, take care not to allow sand, soil and dirt to enter the sail. Keep all pulleys, especially the ball rail system thoroughly clean as moving the hang point will become difficult or impossible if they are dirty.
The trim system cables must be maintained in good condition.
The trim system is a part of a hang glider. See in the hang glider Manual the chapter "Maintenance" for more detailed maintenance description.

With proper care and maintenance, your trim system will retain a high level of airworthiness for many years.

Have fun. Fly safe.

Aeros Team