

SKUD 18

Tuning Guide

January 2012



This tuning guide has been prepared by the IACA SKUD 18 Committee to assist new sailors in the SKUD 18 class to prepare their MkI or MkII boat to a competitive level as quickly and easily as possible. Please note these are recommendations only. To help us improve this guide, please forward any comments or suggestions to info@accessclass.org.

SKUD 18 Models

MkI

SKUD 18 hulls 001 through 039 were manufactured by Xtreme Sailing Products under contract to Bethwaite Design as the principal builder until 2008. These boats featured a dinghy style rollover gunwale and an aluminium mast with a grp tip based on the 29er rig. They were also supplied with aluminium rudder blades and a vertical fixing on the keel bulb.

The amount of built-in buoyancy was progressively increased over this time and it is recommended that all hulls include a total of 580 litres of positive buoyancy. Please refer to the Buoyancy Update August 2010 that can be downloaded from the SKUD website.

MkI hulls can also be modified to mimic the shape of the MkII hulls. This is not generally recommended as the cost of the modification can be significant while the performance gains are minimal, however instructions about the process is available from the SKUD website (Gunwale Modifications for SKUD 18 MkI Hulls – August 2010).

MkII

SKUD 18 hulls 040 and beyond have been manufactured by Xtreme Sailing Products under contract to Access Sailing as the principal builder since 2009. These boats are constructed from modified tooling that provides a keelboat style gunwale, grp rudder blades, lateral fixing of the keel bulb and a more robust keel lock-down system. The original rig was replaced by a composite carbon fibre / grp mast and aluminium boom manufactured by Selden UK.

Hybrid

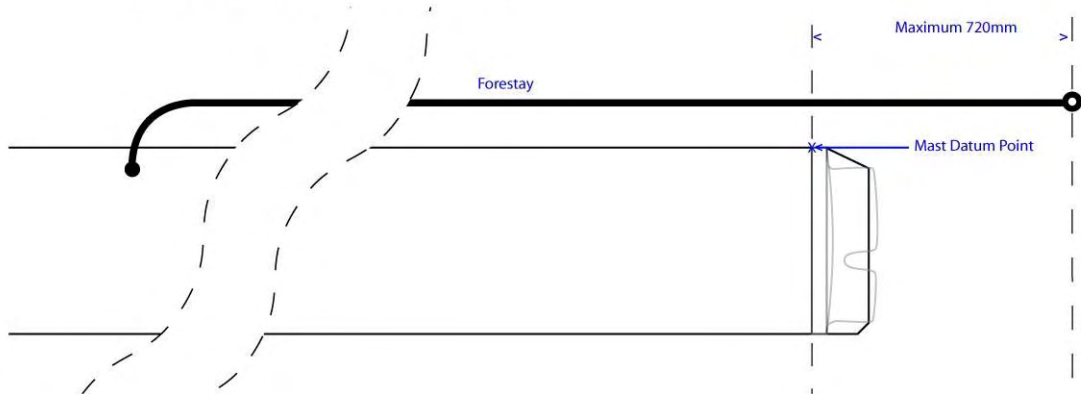
It is not uncommon to combine MkI and MkII components to create a Hybrid SKUD 18. The most common combination is a MkI hull fitted with a MkII mast & boom. All combinations of MkI and MkII components remain class legal provided the measurement requirements are met.

MkI & MkII Sails

Until 2008, sails for the MkI rigs were manufactured by Neil Pryde Sails for McDiarmid Sails and Bethwaite Design to suit the aluminium mast. Since the release of the composite rig, SKUD 18 sails have been manufactured by Horizon Sails for Access Sailing. The MkII mainsail has a modified shape to suit the stiffer composite mast. MkI Pryde sails can be recut to suit the new mast. Instructions are available from the SKUD website (Correcting Luff Curve MkI sail on MkII mast – August 2010).

SKUD 18 Rig

Mast	MkI (Bethwaite Aluminium)	MkII (Selden Composite)
Mast Step	Mast should be stepped as far forward as possible. Use a stainless steel pin to secure the heel in the mast step.	Mast heel should sit centrally in the mast step as supplied with a MkII hull. For MkI mast steps, mast should be stepped as far forward as possible.
Rake	Aim for maximum aft rake by ensuring that centre of forestay attachment point to MDP is as close as possible to 720mm (see Illustration 1 below)	Aim for maximum aft rake by ensuring that centre of forestay attachment point to MDP is as close as possible to 720mm (see Illustration 1 below)
Spreaders	Not Adjustable	Adjust spreader length to 420mm. For moderate to strong breezes, adjust the spreaders aft to produce a transverse measurement close to the minimum of 725mm. For light to moderate breezes, adjust the spreaders forward to produce approximately 760mm. *See Note 1 below.
Shrouds	Suggested Loos Gauge: Light: 20 Moderate: 24 Heavy: 28	Suggested Loos Gauge: Light: 25 Moderate: 30 Heavy: 35
Inners	Light: Firm Moderate: Slightly Loose Heavy: Loose* *Tight enough to prevent the mast collapsing forward under max load	Light: Firm Moderate: Slightly Loose Heavy: Loose* *Tight enough to prevent the mast collapsing forward under max load
Main Halyard	Hauls direct (1:1) from headboard through masthead sheave, running internally and through the mast foot on the starboard side, through the deck to a turning block attached to the king post.	Can be hauled either direct (1:1) or dead-ended at the masthead fitting and looped through the shackle fitted to the headboard (2:1) then through masthead sheave, running internally and out through the lower mast wall on the starboard side, past a clam cleat and through the deck to a turning block attached to the king post.
Gennaker Halyard	Hauls direct (1:1) from headboard through swivel micro-block, then running internally and through the mast foot on the port side forward of the jib halyard, through the deck to a turning block attached to the upper king post then running forward. Gennaker hoist micro-block and small shackle can be replaced with heavier gauge components.	Hauls direct (1:1) from headboard through swivel block, then running either externally passing through the port spreader bracket and through a deck eye, or internally and out through the lower mast wall on the port side, through the deck to a turning block attached to the upper king post then running forward.

Illustration 1**SKUD 18 MkI & MkII Forestay****Note 1 (Spreaders)**

Early MkII masts were supplied with the spreader adjusters located too far outboard, thus limiting the amount of aft spreader rake that could be achieved. This can be corrected by using the existing inner hole as the new outer hole and drilling another further inboard. The inside corners of the spreader arm will need to be ground off to prevent jamming against the mast.

Boom

Boom Vang

MkI rigs were supplied with a conventional vang system whereas the MkII rig incorporates a Selden GNav compression vang fitted above the boom. Either system are permitted although the GNav provides additional cockpit space and avoids friction between the vang and other control lines at the mast step. A bungee running back along the boom from the GNav slider can be added to reduce leech tension in lighter airs.

Batten Popper

When centreline seats are used, a short rope or loop can be added to the boom near or aft of the vang point to enable the crew to pop the battens after a tack or gybe.

Mainsheet Systems

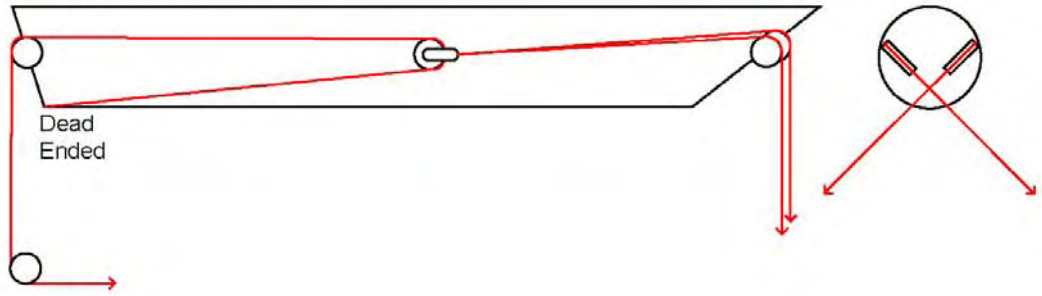
The SKUD 18 mainsheet can be configured in a number of ways. The following are the most common arrangements:

- Paralympic Configuration – Twin Tail 2:1 internal (original Bethwaite Spec)
- Paralympic Configuration – Conventional 2:1
- Open Configuration (double ended) – Conventional 2:1
- Open Configuration (double ended) – Head-Banger

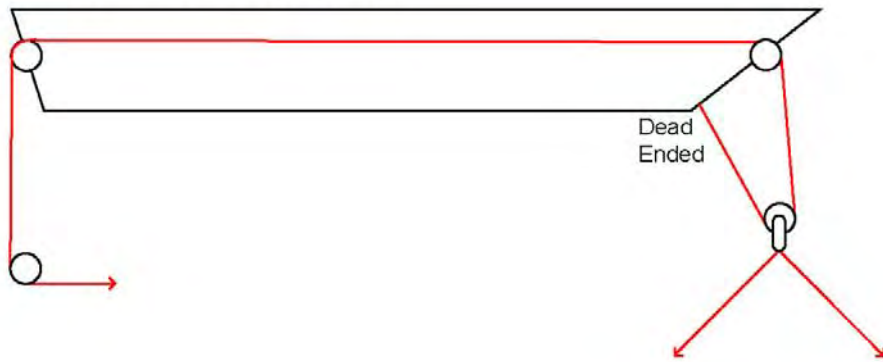
See Illustration 2 on following page.

Illustration 2

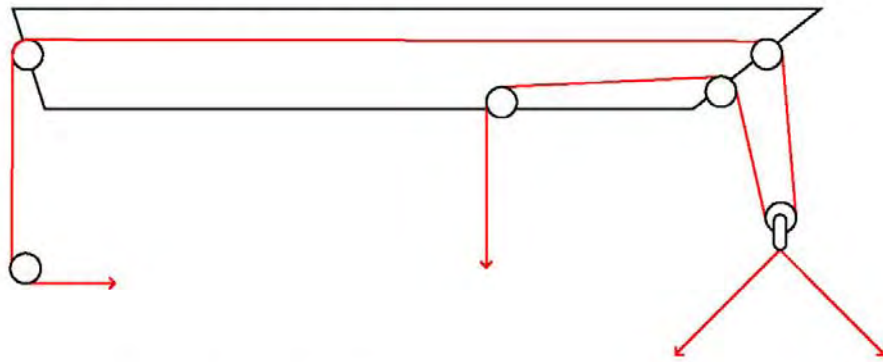
Single Ended Twin Tail



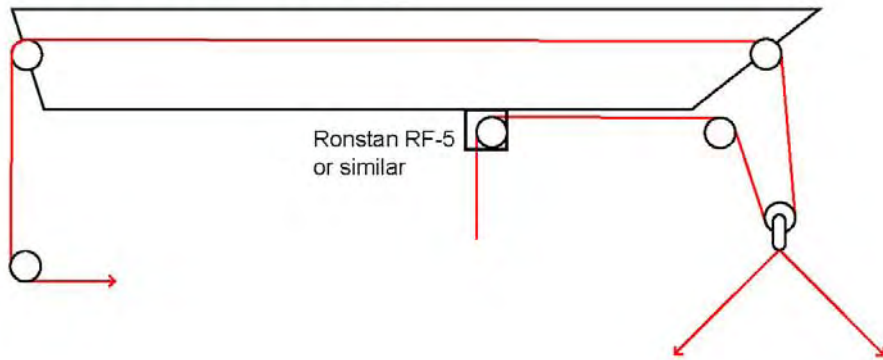
Single Ended Conventional



Double Ended Conventional



Double Ended Head-Banger



Gennaker Pole

The original gennaker pole type fed the tack line through a sheave in the outboard tube wall. From about hull 020, the tack line fed through an aluminium fitting in the tip of the pole. With the first MkII hulls, the gennaker poles are stiffer, with a higher carbon content.

Extension of the pole is adjusted by two lines. The gennaker tack line runs from the tack of the sail, back through the pole end fitting, through the pole and is tied to a shackle at the king post. A stopper knot should be tied into the end of the line, providing enough line to secure the gennaker tack. The other end should be adjusted to stop the butt of the pole passing under the bow lashing when it is launched.

The length of the gennaker pole launcher line controls the distance that the pole moves back into the bow when the sail is retrieved. This can be adjusted at the butt of the pole or at the floating block. Set this so the pole extends slightly less than 100mm from the bow when fully retracted.

SKUD 18 Sails

Mainsail

Mainsail Types

June 2006 – December 2008 Pryde / McDiarmid

January 2009 – August 2011 Horizon (Blue Sailmakers Mark)

September 2011 onward Horizon (Silver Sailmakers Mark)

Battens

2006 – 2008 Un-tapered Pryde

2009 – 2010 Un-tapered Horizon

2011 onward Tapered Horizon

Battens tension is adjusted with the screw fitting at the outboard end of the batten. Tension is generally just enough to remove vertical wrinkles from the batten pockets but as light as possible to assist with 'popping' the battens.

Jib

Jib Tack

An adjustable strop or series of strops of different lengths can be added between the jib tack and the stem-head fitting in order to raise and lower the clew board to the appropriate height for differing wind conditions. When a strop is used, the jib sheet should be attached to the central hole of the clew board.

Jib Clew

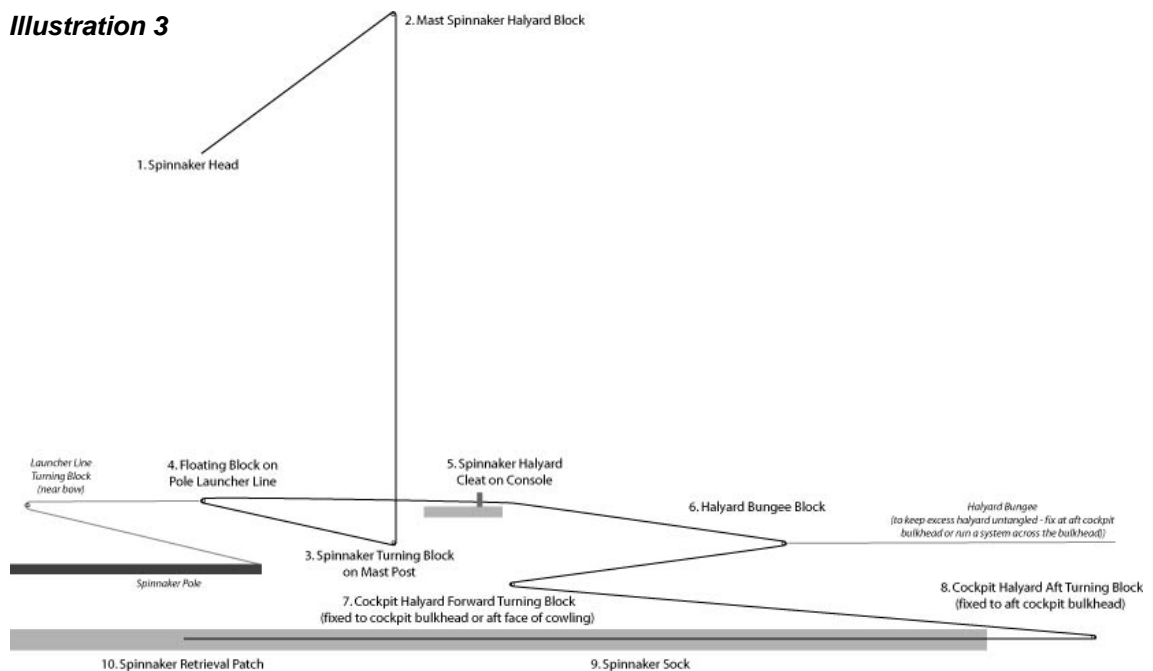
Where a strop is not used, the jib sheet can be attached to any of the various holes in the clew board to open or close the leech. In most cases the leech should be fairly open, so it suggested to start with the sheet attached one or two holes below centre.

Gennaker

Rigging

The gennaker is rigged as per the Illustration 3. Starboard sheets are led around the forestay to facilitate a starboard tack launch. Retrieval line is passed under the foot of the gennaker on starboard tack to make a port tack drop (around the forestay) easier. Blocks may be replaced with those of a larger sheave diameter to reduce friction.

Illustration 3



Gennaker Sheets

Standard gennaker sheeting is a continuous line with each end tied to the clew with a bowline. To prevent the bowlines catching on the forestay, it is recommended that a strop of about 30cm be spliced into the middle of the gennaker sheet with a loop spliced in the end of the strop. The strop is passed through the clew-eye, both ends of the sheet are passed through the loop and pulled through to secure the centre of the sheet to the clew. The ends of the sheet are passed back through the turning blocks to create double-ended sheeting.

Teflon Tape

Teflon tape or patches can be fixed around the throat of the gennaker chute to reduce friction when retrieving the sail.

Sheet Keepers

Gennaker pole extensions may be added to prevent the sheets dropping under the bow but these must be of flexible material and extend no more than 150mm from the end of the bowsprit. In order to prevent the gennaker sheets dragging in the water when sailing upwind, it is recommended that sheets be cleated on both sides after the gennaker is retrieved.

Chute Cover

A retractable chute cover can be fitted to prevent large volumes of water entering the boat through the bow. This is highly recommended when sailing in a moderate to heavy seaway.

Sailing Trim

Upwind

Angle of Heel

In most conditions, it is faster to keep the boat as flat as possible. This is of course difficult to achieve when using centreline seating. Maximum recommended angle of heel is where the gunwale is submerged at maximum beam. When the water is running across the chainplates, it is definitely time to ease off.

Mainsail

<i>Wind</i>	<i>Sea State</i>	<i>Objectives</i>	<i>Sail Trim</i>
Light	0 – 0.2m	Height / Power	Light cunningham (some horizontal creases). Light outhaul. Light vang.
Light	0.2 – 0.5m	Power	Little if any cunningham (plenty of horizontal creases). Light outhaul. Light vang.
Moderate	0.2 – 0.5m	Height / Power	Moderate cunningham (no horizontal creases). Moderate outhaul. Moderate vang (maintaining some leech twist).
Moderate	0.5 – 1.0m	Power	Light to moderate cunningham (a few horizontal creases). Light to moderate outhaul. Moderate vang (maintaining some leech twist).
Strong	0.5 – 1.0m	Height / De-Power	Firm cunningham (no horizontal creases). Firm outhaul. Light to moderate vang (plenty leech twist to open top).
Strong	1.0m +	De-Power	Firm cunningham (no horizontal creases). Maximum outhaul. Light vang (lots of leech twist to open top).

Jib

Adjust the sheeting position (on the clew board or strop) to open and close the leech in line with the mainsail trim. Always aim to keep the slot open between the jib and main.

Downwind

Angle of Heel

In most conditions, it is faster to keep the boat as flat as possible. Maximum recommended angle of heel is where the gunwale is dry.

Mainsail

At the windward mark, release the Cunningham and outhaul. Vang should be firm in light to moderate breezes and eased in stronger winds.

Jib

At the windward mark, release the halyard tension. Jibsheet should set the sail to a broad reach position when fully released.

Gennaker

Where possible, bear away to a $\frac{3}{4}$ run to hoist the gennaker, head up to fill the sail and then bear away as the power comes on. Sailing high and fast in lighter breezes is usually false economy.

Additional Equipment

The International Access Class has established a formal process for owners and sailors to make applications for replacement or additional equipment for their SKUD 18. The application form can be downloaded from the website where a register of previously approved equipment is also displayed.

Previously approved equipment includes custom seating, communications systems, cleat consoles, servo-electric equipment etc. Even if the equipment you have developed is similar to something already approved, it is best to forward an application and seek formal approval of your specific equipment. This could avoid disappointment of arriving at an event to find the equipment cannot be used.

Visit www.skud.org for more information.