Winches

The forces involved in sailing are sometimes more than a single human can handle.

To help we use winches.

A winch is a mechanical device which multiplies the force you can put on a rope. Because of the forces involved, winches can be dangerous.

You should keep your fingers clear of ropes on winches if you don't want to lose them!

Loading a winch

Winches usually work in one direction only.
Generally it is clockwise, but not always. The easiest way to check is to put one hand on the winch before you put the rope on and turn it with your hand. The rope must go on in the same direction as it turns.

To 'load' a winch - wind the rope around the winch in the direction it turns, starting from the bottom and moving up. Each turn must be flat against the surface of the winch and must not 'ride over' another turn.

The more 'turns' or rope around a winch, the more friction and the more holding power there is. You should use a minimum of three or maybe four turns (experienced sailors might use less). The winch pictured here is 'self-tailing'. It has a set of 'jaws' at the top into which the rope may be thrust to secure it. If a winch is not self-tailing the loose end of the rope must be either held or or *secured* to a *cleat*.

Cranking a winch

To supply extra force, you can put a handle on the winch. The handle goes in the top of the winch and it can then be cranked. Generally you can crank the handle in both directions. The body of the winch will still turn one way, but the two directions of the handle will supply different speeds and different forces. If you can't crank a handle one way, try cranking it the other.

Never leave a handle in a winch! They can be knocked overboard and they are expensive. Always take them out and put them away so you can find them next time. Usually there is a lever on top of the winch which you must move or depress to take the handle out of the winch.

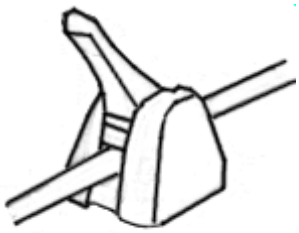
Easing a winch

To *ease* a rope on a winch it is not necessary to take it off the winch. The rope can be eased simply by taking the loose end of the rope and feeding it into the winch. As the coils of rope become slack, the tension on the other side of the winch will pull the coils slowly out, allowing you to ease the rope under control.

Jammers, Cleats and Stuff

Ropes tend to flop around unless they are *secured* or *made fast.*

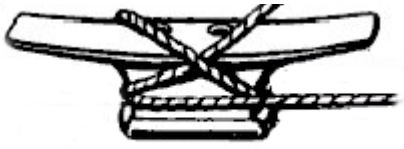
A *jammer* is a mechanical device that secures a rope by clamping it between two jaws. The jaws are activated by a lever on top of the jammer. To open a jammer, lift the lever and push it completely forward until it is parallel with the rope. Halfway is not good enough! To close it, pull it back and down until parallel with the rope.



Jammer

If the jammer won't open normally this means the rope is under tension. You need to take the tension up on a winch before the jammer will open. Trying to open it under tension could be dangerous.

A *cleat* is a metal hook around which a rope is wrapped to secure it. There is a particular figure eight method that is used on cleats which is difficult to show here. Ask someone who knows how to use a cleat to show you. Note that ropes are not tied to a cleat with a knot, they are simply wrapped around them so they can be unwrapped when needed.



Cleat