CAUTION WATER

LASER RIGGING GUIDE

Possibly the most popular dinghy in the world, with hundreds of thousands out there, many people will learn to sail in a Laser, but that's not all there is. A very popular boat for racing, Lasers are even sailed in the Olympics and have a range of different rigs for different capabilities. Find out how to rig the Standard Laser rig in our handy guide.

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Why a Laser?

One of the most popular dinghies in the world, there are loads of Lasers out there - older models are cheap to get hold of, relatively easy to maintain and cheap to run, with plenty of spares available. If you want to get into single handed racing - it's one of the best solutions around. There are fancier options such as the XD kit available, and there are different arrangements for control lines you can do - but we're going to look at the most common "Standard" rig.

What You Need

Mast (top and bottom sections), Boom, Main sail and battens, Rudder, Tiller and Extension, Daggerboard, Outhaul (long length of rope), Cunningham (medium length of rope), Clew tie down (short length of rope), Mainsheet, Kicking strap, Painter rope, Horse (a rope for the rear rigging arrangements), Bung.

Photo 1, All the Parts

Photo 2, The hull

Let's Get Started!

Before you start, gather all the pieces you need using the list above. Remember to keep a spares box handy with extra lengths of rope. Make sure the boat is clean - even an older boat will last longer if you look after it! In Photo 2 above, notice the grab rails on the sides of the cockpit - these are to help you pull yourself into the boat when sitting out.

1. Bungs and Bailers!

Make sure the bouyancy tank is empty (by taking out the bung if it is in, and lifting the front of the boat), then screw the bung in tightly (Photo 3). Also check any inspection hatches are screwed tight on older boats as these will let water in quickly if they come open. Make sure the self-bailer (the rubber bung in the back of the cockpit) is pushed in tightly.

Photo 3, Insert the Bung

Photo 4, Assemble the two mast halves

2. The Mast

Put the mast halves together as in Photo 4 (the biggest pieces of the Meccano kit you have in front of you), and don't worry about them coming apart - the sail and gravity will hold them together in a moment.

Photo 5, Insert the battens

Photo 6, Pull the sail over the end of the mast

3. The Sails

A Laser sail has battens (stiff pieces of plastic) to help it keep its shape and curve more aerodynamically. Slide the sail over the end of hte mast carefully, making sure that the foot (the bottom) of the sail is in line with the gooseneck (the multi-directional joint partway up the bottom section of the mast). The top of the sail should fit snugly over the top of the mast.

3. The sails continued...

Photo 7, Inserting the mast

Photo 8, Through the top

Photo 9, Through the top

4. Raise The Mast

Carefully raise the mast and place it into the mast step (the round hole in the deck) in the boat (Photo 11) , making sure there is no dirt or grass on the bottom of the mast which would damage the bottom of the mast and the mast step (Photo 10).

Photo 10, Clean the mast foot

Photo 11, Insert the mast

5. Add The Boom

Insert the boom onto the gooseneck, making sure it's the correct way up (the two pulley blocks should be underneath), ready for the next step.

6. The Outhaul

Tie the outhaul rope onto the eyehole on the topside of the end of the boom, using the loop of a bowline (Photo 12 and 14), then feed it through a shackle or straight through the clew of the sail (Photo 13), then back through the eyehole. This forms a simple pulley system. Feed the rope along the top of the boom, through the jam cleat (Photo 15), and secure with a stopper knot.

Photo 12, Start the outhaul

Photo 13, Attach to the sail

Photo 14, Back through

7. Tie down the sail

Tie the clew (the hole in the bottom corner of the sail) down to the boom with the clew tie down, using a reef knot.

Photo 15, Securing the outhaul

Photo 16, Clew tie down

Photo 17, Clew tie down

8. The Cunningham

Use the loop of a bowline to secure the end of the cunningham to the gooseneck (Figure 19). Take the working end of the rope through the eyehole in the tack (front) of the sail (Figure 20), and through the eyehole on the deck just in front of the mast (Figure 21).

Photo 18, Start the downhaul

Photo 19, Through the sail

Photo 20, Through the eyehole

Then finally through the jam cleat on the deck, and secure with a stopper knot (Figure 22).

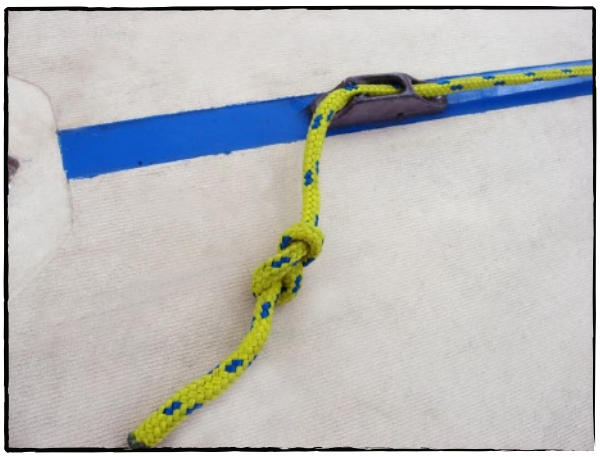

Photo 21, Securing the downhaul

9. The Kicking Strap

Attach the kicking strap (otherwise known as the kicker). Assemble the kicking strap as shown in the picture. Secure the bottom end to the mast with a shack or clevis pin (as shown), and the top end to the fitting on the underside of the boom.

9. The Kicking Strap continued...

Photo 22, Kicker bottom

Photo 23, Kicker Assembly

Photo 24, Kicker top

10. The Horse

Next, to attach the horse, check out the pictures below. To start, tie a bowline in one end of the rope (Photo 25). Next, take the working end through the eyehole on one of the sides of back of the deck (Photo 26). As you take it across the back of the boat, pass it through the bottom half of the one mainblock (Photo 27), and then through the eyehole on the other side of the boat (Photo 28).

Photo 25, Bowline to start

Photo 26, Through the eyehole

Photo 27, Mainblock

The working end of the rope should then go through the loop in the bowline, forming a triangle shape (Photo 29) and through the clam cleat at the edge of the cockpit, and secure with a stopper knot (Photo 30).

10. The Horse continued...

Photo 28, Other eyehole

Photo 29, Through the loop

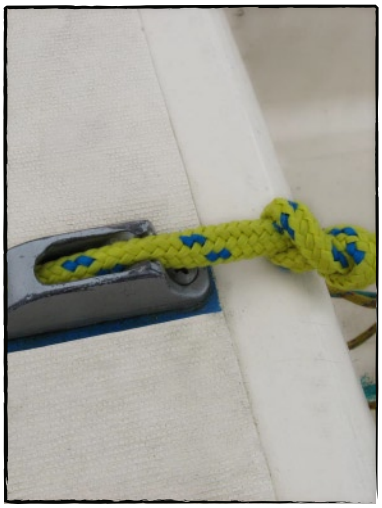

Photo 30, Cleat and secure

11. The Mainsheet

Secure the end of the mainsheet to the block on the underside of the end of the boom, using a bowline loop around the becket on the block. (Photo 31).

Photo 31, First block and bowline

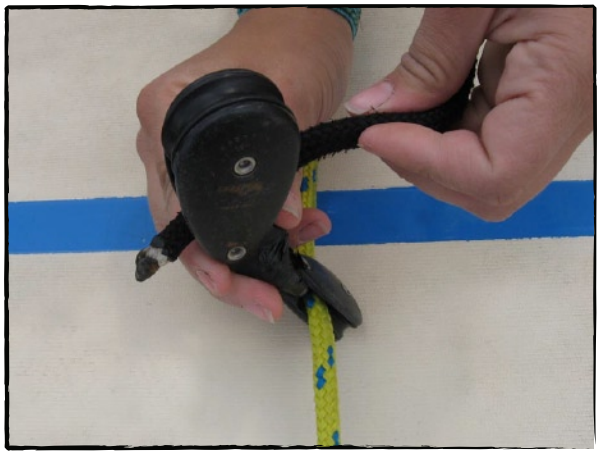

Photo 32, Second block

Take the working end of the rope through the block on the horse/traveller, making sure it goes from front to back (Photo 32). Next, take the rope up and back through the first block, from back to front (Photo 33). The rope goes along the boom, through the eyehole (Photo 34), then through the block halfway along the boom (Photo 35).

11. The Mainsheet continued...

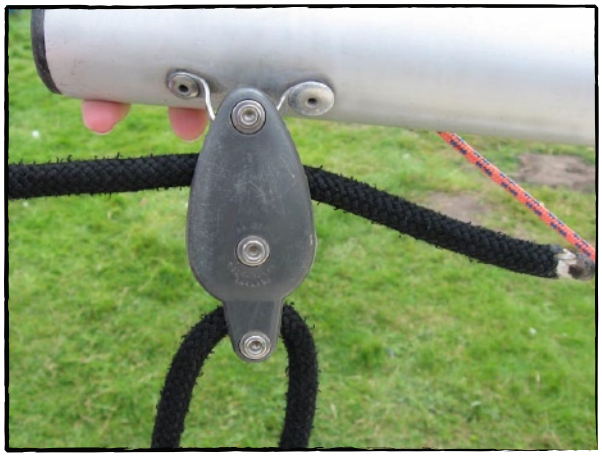

Photo 33, Back through first block

Photo 34, Through eyehole on boom

Next it drops down and goes through the rachet block at the front of the cockpit (front to back) (Photo 36), and is secured with a knot in the end of the rope.

Photo 35, Through block on boom

Photo 36, Through main block

12. The Rudder

Attach the rudder by placing the two pins on the rudder into the two matching holes on the stern (back) of the boat, as in Photo 37. It's always a good idea to tie it on, with some rope attached around the rudder stock and tied to the pintle. Rudders don't always float when they fall off!

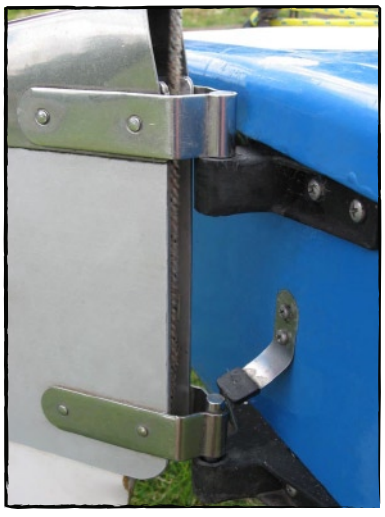

Photo 37, The rudder

13. The Tiller and Tiller Extension

Insert the tiller underneath the horse (Photo 40) into the rudder block (Photo 38), and secure it with a split pin (Photo 39).

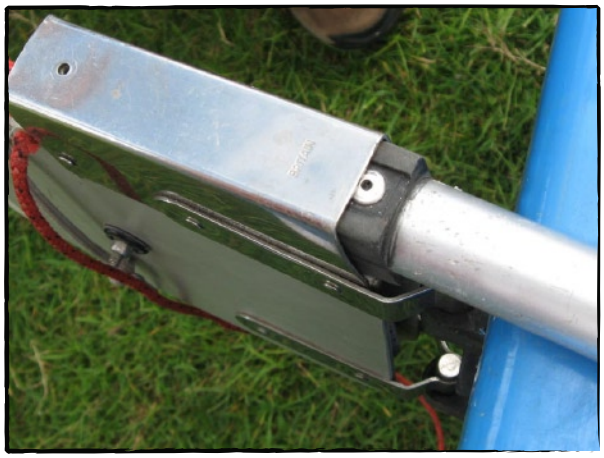

Photo 38, Insert the tiller

Photo 39, Secure the tiller

Feed the rope from the rudder into it's jammer on the tiller - this is used to pull the rudder down into position when you're on the water.

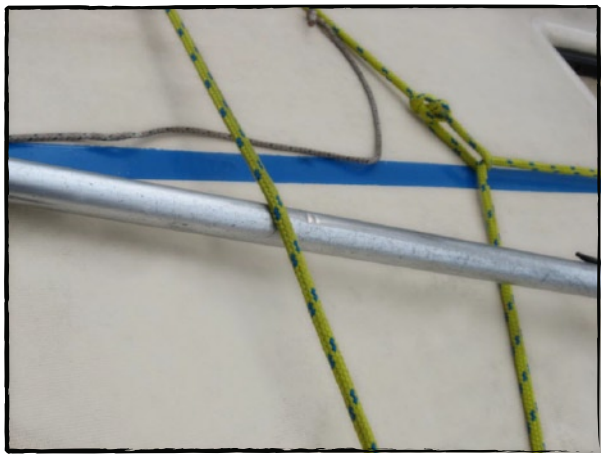

Photo 40, Extension under the horse

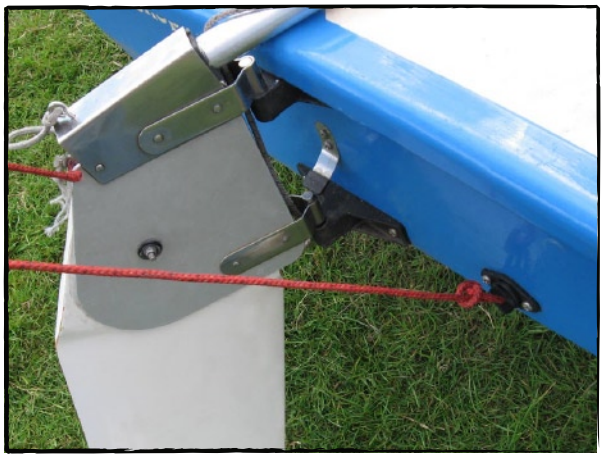

Photo 41, Secure the rudder

Its always a good idea to take a rope from the rudder stock to another point on the boat; here we've drilled a small hole through the bung and attached the other end of the rope to it. It won't take much weight - but it'll stop the rudder sinking or floating off if it detaches during a capsize.

14. The Daggerboard

Attach daggerboard to mast using the shock cord (elastic bungee), by running it around the mast (Photo 42) and attaching it back on itself, so it doesn't float off and sink when you're shocked and drop it.

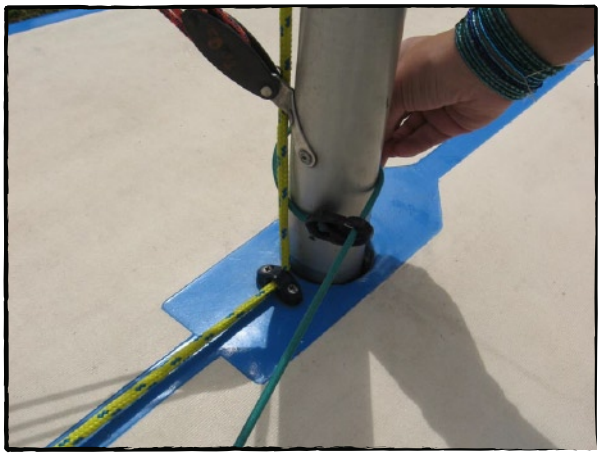

Photo 42, Attach the centreboard

Photo 43, Nice and safe!

This is just the standard rig for a Laser I - if you're really keen you can get the XD rig with all it's multi-purchase control lines, or you can do a hybrid version yourself, and make your own multi-purchase control lines.

But for now - this is enough to sail the Laser. Now you can go for a sail!