

Moth Sailing Tips

Launching

When your boat is rigged and you are ready to hit the water you must make sure that everything is in its correct place and that you have not forgotten to do anything. **MAKE SURE YOU HAVE YOUR BUNGS IN!** This procedure is certainly not going to be unfamiliar to any experienced dinghy sailor. Make sure that you have the required amount of tension on your control lines for once you get away from the beach. Less experienced sailors will have their hands full just trying to keep the boat going, so do everything you can before you get on the boat.

The procedure for launching that follows is specifically for launching off of a beach but the same principals apply to any other launching problems that you may encounter. For inexperienced helms it is advisable to stick to such launching conditions until you are confident of your ability to avoid all obstacles. Hopefully your home club has such facilities!

Put the boat in the water at about mid thigh depth. Any deeper and you will have trouble reaching into the boat to grab the foils without having to tip it right on top of you. Put the centreboard into the case and push it down about three-quarters of the way so that it is not going to hit the boom (or the bottom). Now push the rudderblade down, making sure that you are keeping the bow into the wind. If you have a fixed rudder, the best plan is to capsize and fit the rudder, making sure that you are in deep enough water to have the rudder clear the bottom when you right your boat. Don't try to launch like you are recovering from a capsize, that is jumping over the wing bar as it comes up because you will find that the boat will want to sit head to wind. The worst case scenario then is that you find yourself heading back towards the shore!

Now locate the mainsheet and grab hold of it making sure that the sail battens are filling on the correct side. This is not so much of a problem in strong winds when you will have more power than you can handle, but in light winds you need to position the boat 90 degrees to the wind with full power in the sails. Hold the boat with mainsheet and tiller in each hand. Once the sail fills, the boat will want to heel over to leeward and take off from you. This is the point when you swiftly leap onto the boat and move your weight to the middle of the boat or even to leeward if it is really light.

The boat will more than likely heel to windward, but just compensate this with your body weight quickly. The windward wing will probably drag in the water until you have managed to sheet in properly and balance out the boat. Once the power comes into the rig, make sure to head outboard at this point to counteract the tendency for the boat to heel to leeward. This is somewhat of a skillful balancing act and may take some time to learn how to do this without capsizing, but stick at it, as the good stuff is not far away.

On conventional dinghies the stability of the hull slows down the response of the boat. Without that luxury, Moth sailors just have to learn quicker responses. Once you have got the boat underway, you cannot relax, but at least hopefully, you are heading away from the shore and any obstacles such as moored boats or jetties.

Returning to the shore

Returning to the shore should be a case of simply following the above procedure in reverse, but there are some added tips. If you have a rudder box, it is advisable to slow down a good distance from the shore and pull up a fair amount of rudder and centreboard, but not so much that you lose steerage or start to drift sideways excessively. Once you have completed this task, it is best to approach the beach with one of your wings in the water so that you can keep your speed down. Leap off the boat to windward when the water gets shallow enough. Grab the wing bar and simultaneously guide the boat into a head to wind position. One thing to remember is to try and approach the shore as close as possible to close hauled so that putting the boat in a head to wind position is not a battle.

With a fixed rudder, just pull up a bit of centreboard prior to reaching the shore. Then find a gap where you know that you will be able to capsize to leeward without hitting any obstacles. Come into the shore with your leeward wing in the water and then capsize when you are in shallow enough water that your leeward wing will touch the bottom. Heal the boat over by pulling in the mainsheet and when the wing goes under the water, jump out of the boat to leeward. Quickly take off your rudder while the boat is on the side and then right the boat by pulling down on the wing bar (make sure your vang is off otherwise you will find it very difficult to get your boat back upright). Once upright, place your t-foil in the boat and take out your centreboard when the boat is head to wind. Walk the boat in by holding onto your wing bar and keeping the boat head to wind. Find some Laser sailor who is willing to give you a lift in and then expect a comment like "geez, how light is your boat?" You can reply with something like "about 100kgs less than your boat" or "arn't all good boats this light" or my favourite "about 1/3 of my body weight".

Light Wind Sailing

Many helms believe that light winds are boring and offer no challenges. I'm sure that most sailors who excel in light airs have been told by their larger compatriots that light wind sailing is not 'real sailing' and to 'just wait until the

breeze comes up'. Granted, as greater physical fitness is required to get a International Moth around a race course in 15-20 knots, but it is still just as imperative in light airs.

Concentration is probably even more important. An analogy I have used in the past to explain how unstable a modern Moth is that it is similar to riding a bicycle or being on ice skates, once you have some momentum it is easier to balance, but if you stop, you are prone to tipping over.

A fair hull and foils and easily adjustable systems is more important in light airs. But generally, slackness is the key to light air success. The rig tension should be slack to aid mast bend and rotation. Make sure that the rig has only a small amount of rake. The battens should be as flexible as is practical. All of your control lines should be relatively slack on all points of sailing, especially with pocket luff sails because they tend to hold their shape more than bolt rope sails and take longer to slacken off along the luff.

Upwind

Your centreboard should be fully down for maximum power. Body movements should be kept to a minimum, only move around to counteract wind and wave variations. The boat should be heeled about 5 degrees to leeward. This allows for a margin of error for the skipper if the wind drops, or shifts or he or she ends up making too sudden a movement. It also allows for a reduction in wetted surface area and gives the helm the weight of the rig to balance against. The sail should be set-up with a camber depth of around 12% and then adjusted accordingly so that with minimal kicker, all of the tell tales collapse at the same time. You want to keep the tell tales on the verge of collapse at all times, so you should be sailing quite high. It pays to sail a little freer and with less vang if there is any waves or swell around too. With bolt rope sails in light winds you are still able to pinch and still keep your speed up. Pocket luffs need to be sailed freer or you will find that the rig will stall out too early.

Remember to keep your head out of your boat and don't spend too much time looking skywards at your sail. Although great concentration is required just to sail the boat, you must be aware and make use of windshifts. Don't let a sudden knock put you into windward! In puffy conditions, always try to sail in areas with greater wind velocity, even if it is not tactically the best move, you will make much better distance over your rivals if you keep moving and they are caught in a hole but heading the right way. Saying that, it pays to keep in mind that you should try to stick to the side of the course from which any wind increase (e.g. sea breeze) is likely to come.

Reaching

As you approach the top mark, try to adjust your control lines for the reach ahead. You can take many places if your fellow competitors are fiddling around in their boats as they round the top mark and are not looking for any puffs. Remember that being so light the International Moth accelerates very, very rapidly so even just a little puff can make quite a difference. Do not raise your centreboard as you would in other classes of dinghy. Ease all control lines including the cunningham, vang and outhaul. Try to keep body movements and sail trimming to a minimum. You will also want to move well forward in your boat, but do this with caution as it is not pretty when the boat heels to windward and you are stuck in the cockpit in front of the bridle. If this happens, drop everything and leap over mega fast to the leeward wing to push the boat back down to being level, then regain your sheet and tiller when settled.

Running

Running is undoubtedly the most difficult and tedious point of sailing in a Moth. You should sit quite far forward to reduce the wetted surface area, but not so far forward that you are crouching directly behind the bulkhead. The boat must be kept upright, which can prove difficult when you are going very square to the wind, as you will have no weight to balance against. The kicker should be slack enough so that the top battens are roughly parallel to the boom and the leach open. The outhaul and cunningham should also be let off as much as possible to give the sail maximum fullness.

Running very square in light winds is easier to achieve in a boat with a bolt-rope sail as you will have softer battens than a pocket luff sail. One of the inherent traits of pocket luff sails is that they use quite stiff battens in all conditions. This is why you will find that the boom will tend to come in towards the centreline of the boat when conditions are very light. The only solutions to this are to let more kicker off or to use a piece of elastic around the boom and forestay to force the boom to relax.

Medium Wind Sailing

Medium airs provide the best opportunity to go as fast as possible in an International Moth. On a reach in 20 knots you will probably be going faster, but around the course you will find that moderate conditions allow maximum velocity made good. The major distinction is that in heavy airs you will invariably have too much power in your rig and you will be flattening the sail out, whilst in moderate airs, depending on your body weight you can harness the full power of the rig. Depending on your physical fitness too, you may find that you are much more able to drive the boat hard in 10-15 knots than 15-20 knots.

Upwind

You should be able to hike upwind in moderate conditions whatever your bodyweight. If the conditions are marginal and you find that you are just perched on the wingbar. Try to sail a little freer and look for maximum power from your rig.

Tacking



[Click here](#) to see a video of how World Champion, Mark Thorpe tacks in 10-15 knots.

1. Look around to windward and make sure it is okay to tack first.
2. Shift your weight in off the wing so that the boat heels slightly to leeward to aid the boat in roll tacking.
3. Push the tiller away fast enough that the boat turns quick but doesn't stall the rudder and at the same time slide into the boat and let some of your mainsheet out.
4. Ideally position your most forward foot in the middle of the boat and pivot on this with your back to the boom and your bum towards the bow (this keeps your weight forward during a tack and stops the stern from digging to far in). On Mark's video, he tacks here using his back foot to pivot on, twists his body around the bridle while facing forward and follows up with a dynamic jump out on to the wing bar. Both methods are effective but it is personal preference as to which one you use.
5. As quick as possible, get out on to the windward wing trying to make sure that your leeward wing does not dip into the water as it will only stall the boat and slow the tack.
6. Around this time change hands with the mainsheet and tiller.
7. Steer slightly past close hauled to ensure that your sail sets correctly and that it has maximum power to keep you on the wing and not in the water. You will need to have complete control over the mainsheet during this time to make sure that you don't over sheet and get blown over to leeward or under sheet and get dunked into windward.
8. Once hiking and moving again, sheet on, heel to windward and point up to close hauled.

Heavy Wind Sailing



Boat preparation is vital in order to make sailing possible, let alone racing. It is essential to keep everything in the boat as simple and uncluttered as possible. First the rig, I prefer the stiff cruciform battens as this allows the sail to be flattened and being stiffer the sail the sail will not flog. It also holds the leach tighter which is important for control. I prefer a lot of rig tension especially when the sea is very rough, as this will reduce rig movement. It is important that everything is stiff and positive.

The sail should be set up with minimum shape especially in the head (or top 1/4 of the sail), cunningham and kicker pulled on hard and outhaul pulled out so there is minimum shape in the foot. It may also be advisable to put the rig back one notch on the shrouds before tightening the rig, as increased rake is preferable in heavy air. However increased rake can be make tacking difficult for inexperienced sailors,

but this can be compensated by using less vang when tacking.

The boat should feel completely balanced without any weather helm or lee helm. Some helms prefer a small amount of weather helm but in my opinion this can only possible act as drag and must be wrong. The dagger board should be raised approximately 6-10" and left there all race. Check everything in sight to make sure you will not have problems. If it's really breezy don't try to adjust any controls, you will be overpowered anyway, you won't have time and if you are going downwind they will be out of reach. Now having got the boat right you have to sail it, here's how...

Upwind

Keep the boat level at all times, the toe straps must be set up so that hiking is comfortable in such a way that you can easily extend your upper body in and out to help power and control over the waves. The sail power must be set up to match the leverage you apply when hiking. The upper leach must exercise correctly to automatically exhaust excess power in the gusts. Sheeting angle and kicker tension depend on water conditions but the sail

should be sheeted much wider than normal conditions. Do not pinch the boat harder it blows, the wider you must sheet and the lower you sail. Generally in flat-water conditions use the maximum amount of kicker you can without distorting the sail. You may need to slightly reduce kicker tension in rough sea conditions to increase the amount of rig twist; this helps the boat to accelerate over waves and also reduces the amount of sail sheeting necessary to maintain control. Concentrate on keeping the hull moving by accurate steering and use of your body weight to allow the hull to follow the water as naturally as possible. It is essential to watch the waves and the water pattern very carefully to choose the fastest route and to ensure that your body does not slam into the waves as this is very tiring and loses a lot of ground to windward.

Tacking

Try and tack facing backwards (as mentioned above) and practice lots in very rough conditions. You must learn how to pick the correct wave to tack on and only experience will teach you this. You must be bold and once you have started the tack you must go through and get out on the wing as quickly as possible whether you are up to your neck in water or not, it doesn't matter for if you time things correctly when you sheet in, the wind should lift you clear.

Reaching

Tight reaching: The best place to sit is generally about half way along the wing bar trying to keep the front of the boat just in the water. Play the main constantly and try to keep the boat heeled slightly to windward.

Beam/Broad reaching: Sit right at the back of the wing bar, if the nose is still digging in when the wind gusts try, to hike at an angle off the back. Play the main in and out in the gusts so the boat is dead flat. You may have to weave around to prevent the bow digging into the wave in front, bear away going down the back of the wave and luff up just before the front of the boat reaches the troughs.

Gybing



[Click here](#) to see a video of how Mark Thorpe gybes in 10-15 knots.



[Chris Dey](#) shows how it is to be done perfectly with full speed and flat water.

1. Always try to gybe going down a wave, when the boat is going at its fastest.
2. Make a smooth turn keeping the boatspeed up as much as possible.
3. At the same time move into the middle of the boat and bear away slightly so that the boat is heading dead downwind.
4. Heal the boat over to windward slightly so that the windward wing is close to the waters surface.
5. Grab your mainsheet and pull it across to you as you swap sides by pivoting on your preferred foot in the middle of the boat.
6. Duck under the boom with your head facing forwards at all times.
7. Steer the boat through the gybe so that the sail sets on the other side and balancing the boat at the same time.
8. Quickly get out on to the windward wing with the mainsheet and tiller still in the opposite hands and point up to your desired course.
9. Only once the boat is level and fully powered up should you swap hands.

Running

Sit right at the back perched somewhere around the gunwale/wing join and lock your feet out so that you can react to the gusts, lulls and waves. If it gets seriously windy and you are having trouble keeping control, over sheeting the main can help as it reduces the downward pressure that is trying to pitchpole the boat.

Capsizing & Righting Methods



[Click here](#) to see a video of how Michael Boode uprights his boat.

1. As soon as you have capsized try to get onto the centreboard as quickly as you can to stop the boat inverting. This may mean climbing over the wing to land on the gunwales (not the side of the hull), walking around on the mast or just swimming around to the centre board.
2. Grab the righting line if you have got them under your wings otherwise grab the wing or tramp lacings and lean back as far as you can.
3. As the boat rights itself, pull the windward wing down hard to bring it to your body.
4. The first technique suggested involves jumping over the wing bar (if you are agile enough and as Mic demonstrates) and quickly climb into the boat to grab your mainsheet and tiller. At this stage it may help to heal the boat to windward and sheet in so that the wind can push the boat around



[Click here](#) to see a video of how Yumiko from Japan uprights her boat using the alternative technique.

past head to wind to gain speed. As a tip you may also want to tie some shock cord from your tiller to somewhere in the middle of the boat so that the tiller centres itself after a capsize.

5. The second technique involves pulling down on the top of the wing bar so that it actually comes down on to the surface of the water. With you still being in the water, position yourself so you are about half way along the wing. Reach in and grab the mainsheet and tiller, this lifts you partially out of the water and gets the boat moving forward and to leeward. Pull yourself in with the toe straps and the trampoline will scoop you up out of the water.
6. The third technique is quite difficult to master but can be a very quick way to right the boat after capsizing to windward especially in 10-20 knots. Basically you will already be in the water with the sail on top of you. Try and stop the sail from going under the water first and then swim to the hounds on the mast. Kick really hard to push the mast up and as high out of the water as possible. You want to scoop as much wind under the sail as possible. The wind will quickly right the boat but at this stage you have to be quick enough to get to the windward wing bar and stop it from exiting the water. By this stage you can quickly reach in for the mainsheet and tiller and pull yourself onto trampoline. The wind will scoop you and the tramp out of the water and you are away! (video to follow soon)