

Instructions



Welcome to the wot-tac.

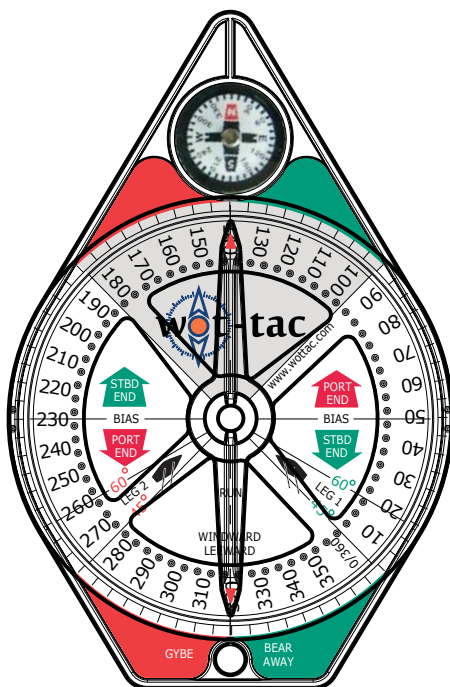
Wot-tac is a boat shaped device. It has a compass mounted on the bow, and a centrally mounted dial etched with 360° markings. Please note that the dial has anti-clockwise markings – this is deliberate. The wot-tac can be used by dinghies and keelboats.

Wot-tac will predict

- start line bias,
- wind angles over the side of a boat (where bearings between the marks are known)
- Olympic and Trapezoidal courses and
- whether a gybe or bear away set is preferred on a windward/leeward course after a wind shift.

Wot-tac will take away the guesswork from knowing where the wind will be – saving you precious minutes.

Before you start it is best to read these instructions carefully and then watch the animation on the web site.



Step One – Setting up the wot-tac

1. In the starting area put your boat head to wind and read the head to wind bearing from the boat's compass, or read the bearing from the wot-tac compass (a bigger compass will be more accurate).
2. The true wind bearing is then dialled into the wot-tac. Imagine the wot-tac as your boat. Move the circular dial so that the bearing lines up - at 12 o'clock - against the line running down the middle of the wot-tac.
3. In the example on this page the bearing of the wind is 140°.
4. The pointer [with the red coloured tips] should also be positioned to the same bearing
5. Remember do not change this setting on the wot-tac unless there is a wind shift.

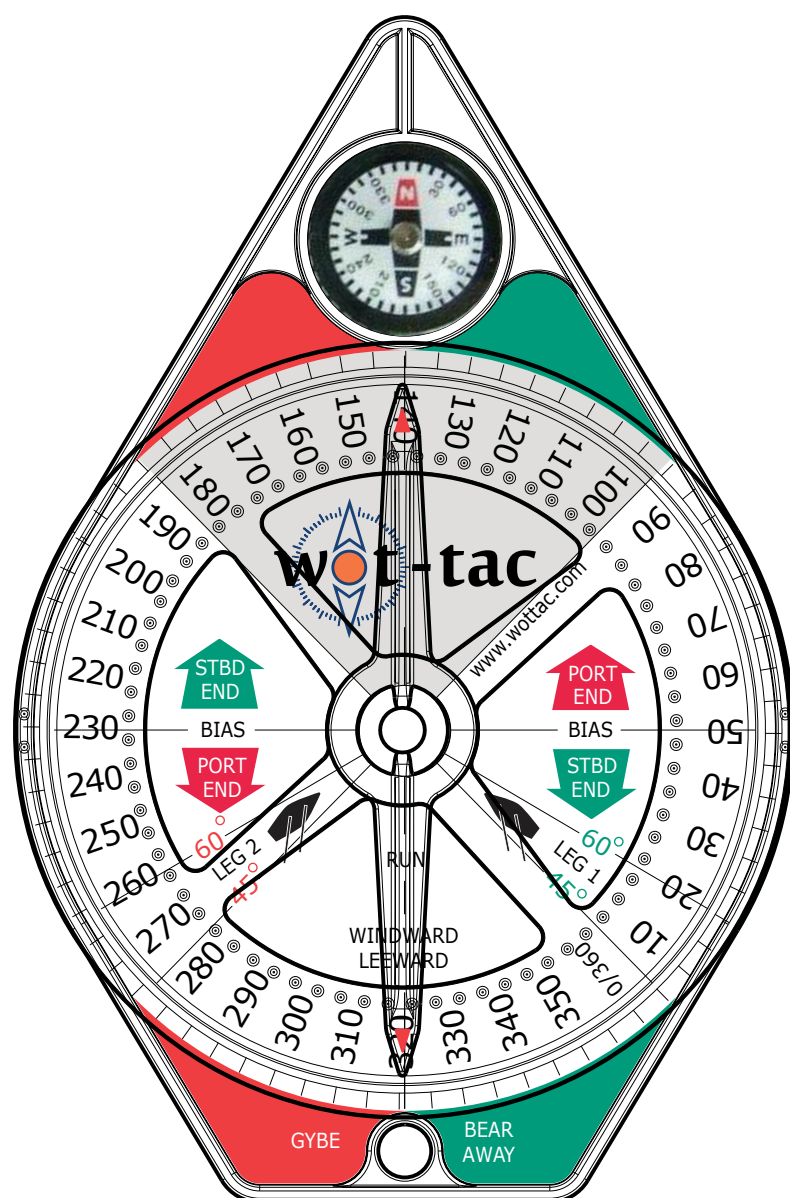
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Step Two - Start line bias

The wot-tac is now ready. Sail to one end or other of the start line. Then sail down the transit of the start line. Make a note of the heading which should then be used to determine bias.

There is an illustration in the animation on the website of how the wot-tac predicts start line bias.



Step by step guide

Follow these instructions to establish the bias

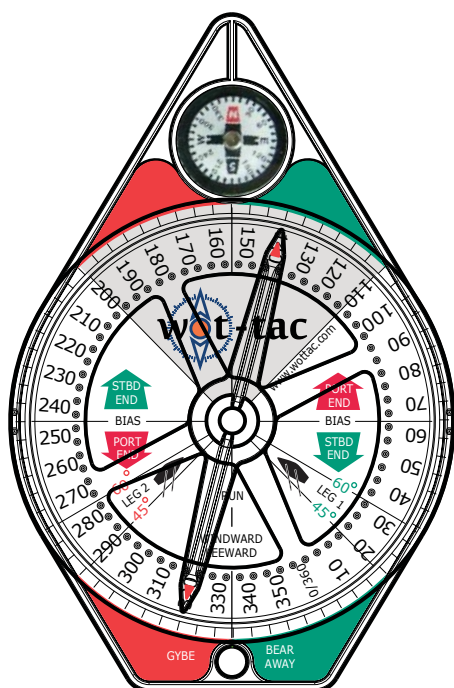
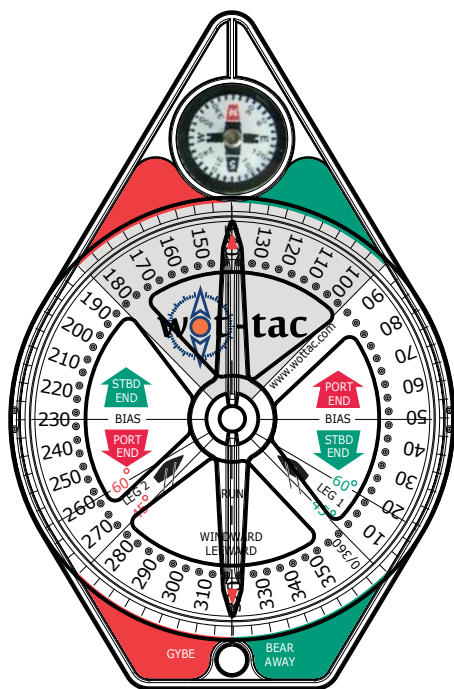
1. The true wind direction of 140° has been dialled into the wot-tac.
2. If the start line were square the bearing of the start line would be $230^\circ/50^\circ$.
3. Assuming for this example that the transit bearing is 245° - look for 245° and its direct opposite - 65° on the wot-tac dial.
4. Drawing an imaginary line between these two figures and this line crosses the face of the wot-tac in the port end bias sector, indicated by the red arrows.
5. This indicates a port end bias.
6. Note – ensure that if the wind changes before the start you adjust the head to wind bearing on the wot-tac.

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Step Three - Windward / Leewards Keelboat and Dinghy Section

For the racer doing a windward / leeward course the wot-tac can prove to be an invaluable tool in predicting whether a gybe set or bear away set should be used on the windward mark if there has been a wind shift. All you need to do is to determine the new wind bearing as you sail up wind. The keelboat animation on the website has a detailed explanation



Step by step guide

1. Set up the wot-tac with the true wind direction by following Step One of these instructions. Also set the red tipped pointer to the same so that it lies directly along the main axis of the wot-tac.
2. In the example opposite the wot-tac has been set to a wind direction of 140° with the tack angles at 185° port tack and 095° starboard tack.
3. As you sail up wind determine the new wind bearing.
4. This bearing is then dialled into the wot-tac. BUT take care to ensure that you move the pointer with the main dial. This means that the pointer will be moved away from its vertical position on the face of the wot-tac.
5. In the example opposite the wind has shifted 15° and the dial and pointer have been adjusted accordingly. Port heading is now 200° .
6. The base of the pointer will indicate that a gybe set is preferred at the windward mark.

Instructions



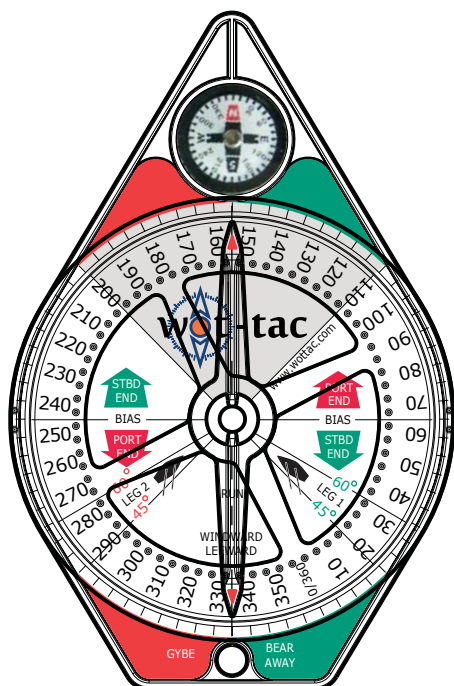
Step Four - Olympic and Trapezoidal courses

Dinghy Section

After setting the true wind angle Wot-tac will allow you to calculate the bearings of an Olympic [45°] and a Trapezoidal [60°] course. Use the leg 2 and leg 3 sectors on the face to determine the bearing to be sailed. Please read these instructions and watch the animation on the website.

For Olympic courses read off the 45° line.

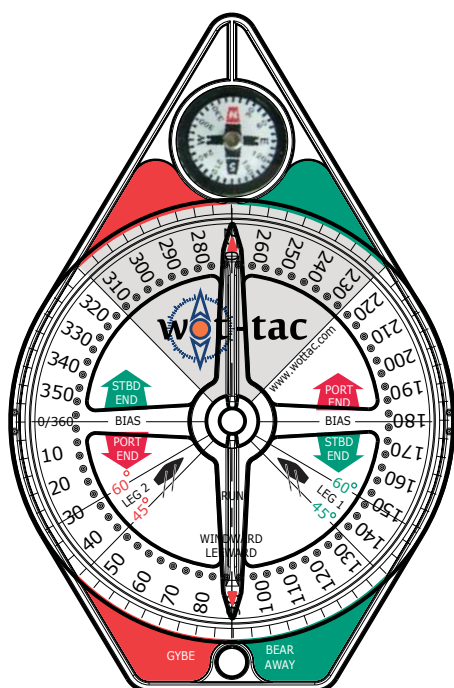
For Trapezoidal courses read off the 60° line.



Step by step guide

Olympic course

1. The true wind direction of 155° has been dialled into the wot-tac.
2. The first reach on starboard has a bearing of 020°. This can be read from the wot-tac 45° line.
3. The second reach on port tack 290° – again read from the 45° line on the wot-tac.
4. Run = 335°



Trapezoidal Course

1. The true wind direction of 270° has been dialled into the wot-tac.
2. The first reach on starboard has a bearing of 150°. This can be read from the wot-tac 60° line.
3. The second reach on port tack 030° – again read from the 60° line on the wot-tac.
4. Run = 090°