Rig Tuning - How to Race Tune

Sail Shape and Control
Basic Principles
A different shape is needed for light, medium and heavy winds. There are also different settings for Upwind and Downwind. You can tell if the shape and trim is right when:

1. Tell-tales stream horizontally most of the time
2. The helm feels light and balanced.
3. Sheet tension increases as you pull it in.
4. You are going faster than the opposition in a race.

Battens - only need to be a snug fit in the sail pockets. Excessive tension makes them hard to tack but make sure they are properly seated at the front of the sail otherwise they will rip out of the side of the pockets.

Controls - lines should be as thin as possible and pulleys large. This gives less friction and a lighter pull. Easy movement of the sail corners and edges is important. Lubrication of the spar tracks and ball bearing controls make settings more precise. Mark the position of fast sail settings on the spars so that they can be reproduced easily.

How to Use the Sail Controls
Because the boom is sloping, tensioning the downhaul will also tighten the foot of the sail, which reduces its depth and depowers it. The sequence in which the sail controls are adjusted is therefore an important factor in controlling the sail shape and performance.

Initial Setup for the Beat
1. Pull on the tack downhaul to the required luff tension.
2. Then, pull the foot outhaul to give correct foot depth
3. Then, set the kicker to give the correct leech tension/mast bend
4. Then, pull the sheet in and go!

Adjusting Controls from Upwind to Off-wind Settings
1. Ease the kicker to the required setting. This can be done before letting the sail out as tension will be maintained by the mainsheet
2. Then, slacken the tack downhaul the required amount. This should be done before bearing away, as luff tension will be maintained by friction in the mast luff groove.
3. The foot outhaul will be adjusted automatically but may need more slackening for extra depth in some circumstances.