vspars

(Visual Sail Position And Rig Shape)

VSPARS RigTune

Whilst it's possible to compare roughly the shape of a rig from tack to tack with a trained eye, it is impossible to judge the true position and symmetry when loaded.

VSPARS Rig Tune is a rig shape analysis system which uses customised cameras to capture rig shape and deflection in real-time. The software interprets images sent from the cameras approximately every 3 seconds, and automatically finds coloured patches on the rig tube and spreaders. By knowing information about the camera location and orientation, and the height of each patch, the software calculates the true rig position. In addition, the deflection of the rig from the "unloaded" condition is determined, resulting in the full 3D position of the rig.

Camera Units:

The VSPARS hardware includes high resolution cameras with high quality lenses and multi-degree of freedom bases with deck mounts. All camera units are individually calibrated for lens distortion, specific to the camera and lens combination being used. The deck mounts can easily be permanently or temporarily attached to your chosen deck location.

Features:

An annual software license package comes with 1yr full email support and includes software updates.

- Automatic rig tracking giving dynamic bend, sag and twist while sailing
- Manually click on repeatable locations giving dynamic bend, sag and twist while sailing whilst negating the need for installation of rig patches
- Boat data feed gives dynamic rig variation against wind speed, forestay load etc.
- Easy tack to tack rig comparison
- Save rig shapes and load them as bend, sag and twist targets
- Save photo and results log for further analysis on-shore

Automation:

VSPARS can be run fully automatically. When the PC is switched on, VSPARS can be configured to start up and stream the cameras. With appropriately sized and located rig patches, VSPARS automatically tracks the rig position.

Manual mode: If there isn't time to fit the rig patches, exactly the same results can be achieved by manually clicking on recognisable repeatable parts of the rig, for example a spreader base or end. Whilst this clearly means more user input, the results, plots and outputs are still achieved without the need to install rig patches
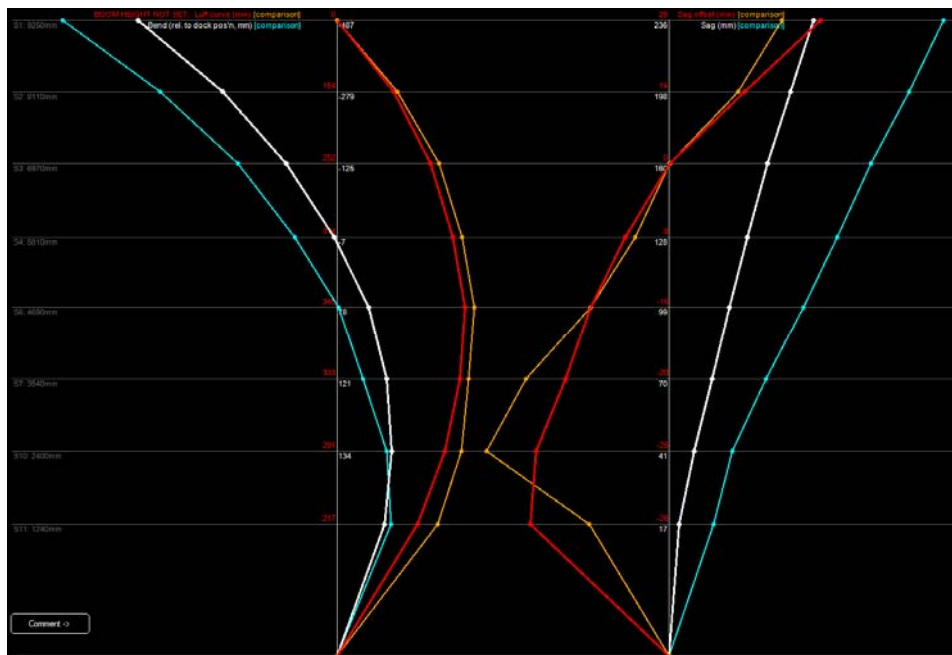
System:

A laptop or desktop PC is required to run the software. A minimum of a dual core 1.6GHz processor and 1.5GB RAM is recommended.

The software is designed to be displayed on almost any remote wired or wireless display module (eg. iPad) as well as the main laptop screen.

Outputs include:

- Rig bend, sag and twist over its full height
- Rig bend and sag plots allowing quick analysis of dynamic rig stability and symmetry
- PDF report export including presentation of rig plot comparisons and analysis of dynamic effects over time (min, max, average, standard deviation)
- PDF report of tack to tack comparison plots highlighting pre and post tune differences in rig symmetry

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