

# RTG Pivot Point, Balance & Modes

(OR How to 'Foot' or 'Point' in the most efficient manner around the race course)

|                                | Actions to Help Facilitate Modes         | Point  | Speed  | Weather Helm | Notes                          |
|--------------------------------|--|--------|--------|--------------|--------------------------------|
| <b>Aspect of Attack</b>        | weight forward <sup>(1)</sup>            | higher | slower | more         |                                |
|                                | weight aft <sup>(1)</sup>                | lower  | faster | less         |                                |
| <b>Heel Angle</b>              | to leeward <sup>(1)</sup><br>(heeled up) | higher | slower | more         |                                |
|                                | to windward <sup>(1)</sup><br>(flatter)  | lower  | faster | less         |                                |
| <b>Sail Depth</b>              | deep (powerful)                          | higher | faster | more         | narrow/fine steering groove    |
|                                | flatter<br>(de-powered)                  | lower  | slower | less         | wider/easier steering groove   |
| <b>Twist (Leech)</b>           | twist in (tight leech) <sup>(2)</sup>    | higher | faster | less         |                                |
|                                | parallel                                 |        |        |              |                                |
|                                | twist out                                | lower  | slower | more         |                                |
| <b>Sheet (Angle of Attack)</b> | pulled in                                | higher | slower | less         |                                |
|                                | let out                                  | lower  | faster | more         |                                |
| <b>Course Steered</b>          | feather                                  | higher | slower | less         |                                |
|                                | foot                                     | lower  | faster | more         |                                |
| <b>Centerboard</b>             | lower (down) <sup>(2)</sup>              | higher | slower | less         |                                |
|                                | higher (up) <sup>(2)</sup>               | lower  | faster | more         |                                |
| <b>Tuning</b>                  | looser shrouds                           |        |        | more         | more sail depth = tight leech  |
|                                | tighter shrouds                          |        |        | less         | less sail depth = looser leech |

<sup>(1)</sup> Relative to pivot point where everything is balanced.

<sup>(2)</sup> With regard to leech:

- To get leech to twist in: traveller as high as tolerable, sheet in, no backstay, no cunningham, less outhaul
- To get leech to twist out: traveller up, sheet out, backstay on, cunningham on, more outhaul

| High Point (Slower) Mode Tools     |  | Foot (Faster) Mode Tools         |
|------------------------------------|--|----------------------------------|
| Aspect Attack: weight forward      |  | Aspect Attack: weight aft        |
| Heel angle: to leeward (heeled up) |  | Heel angle: to weather (flatter) |
| Sail Depth: deep                   |  | Sail Depth: flatter              |
| Twist (Leech): in                  |  | Twist (Leech): out               |
| Sheet (Angle of Attack): in        |  | Sheet (Angle of Attack): out     |
| Course Steered: feather            |  | Course Steered: foot             |
| Centerboard: lower (down)          |  | Centerboard: higher (up)         |
| Tuning: looser                     |  | Tuning: tighter                  |

NOTES:

- A. **REMINDER:** Fundamentals must be achieved before focusing on subtle nuances. Must always have speed & flow over the foils, then subtly help the boat stay in high point, Best Speed, or low point mode based on strategic (e.g., better puffs, geographic, etc.) and/or tactical considerations (e.g., lanes, location of competitor boat or boats, etc.) of the race.
- B. These are generally subtle activities to help the pivot point. Subtle upwind. More aggressive downwind.
- C. Reality is an ever-changing dynamic, which means pivot point changes – WHICH MEANS YOU MUST ADJUST YOUR TOOLS TOO (see above).
- D. Reality is each boat has its own nuances, which is why you need to test these principles and individual tools to evaluate how to apply them to your boats.