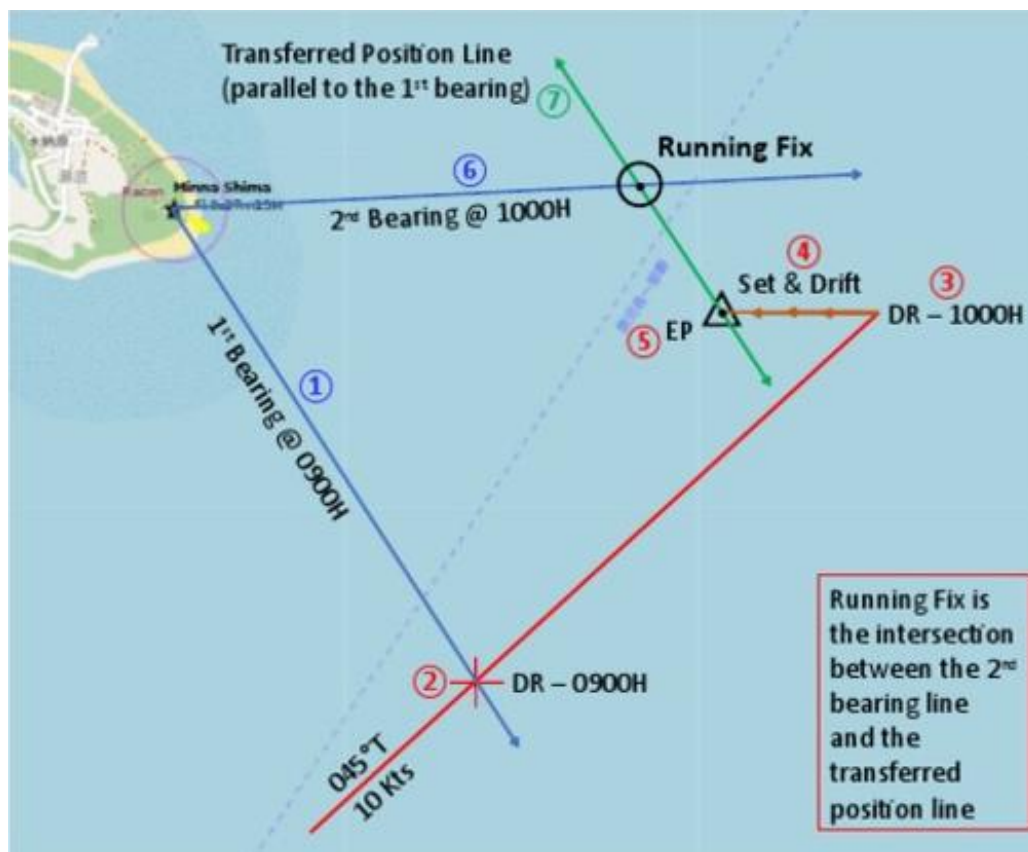


# Running fix with set, drift, and leeway



**A running fix with set, drift, and leeway involves plotting a position on a chart by using bearings of a known object at different times, while accounting for the effects of current (set and drift) and wind (leeway). This technique is used when only one landmark is visible and allows for a more accurate estimation of position than a simple dead reckoning plot.**

Here's a step-by-step guide:

**1. 1. Take the first bearing:**

At a known time (e.g., 0900), take a bearing to a navigational mark (e.g., a lighthouse) and plot it on the chart.

**2. 2. Dead Reckoning (DR) position:**

After a set time interval (e.g., one hour), plot your DR position based on your course and speed.

**3. 3. Apply set and drift:**

To correct for the current (set and drift), determine the direction (set) and speed (drift) of the current. Plot a vector representing the current's effect on your DR position.

**4. 4. Second bearing:**

At the end of the time interval (e.g., 1000), take a second bearing to the same navigational mark and plot it on the chart.

**5. 5. Transfer the first bearing:**

Transfer the first bearing line (parallel to itself) to intersect with the estimated position after the set and drift correction.

**6. 6. Leeway consideration:**

If wind is present, apply leeway (the effect of wind on the boat's direction) to your course and speed calculations. This will affect both the DR position and the transferred bearing.

**7. 7. Running fix:**

The intersection of the transferred first bearing line and the second bearing line represents your running fix.

**8. 8. Repeat:**

For greater accuracy, you can repeat the process with a third bearing.

Key points:

- **Set:** The direction the current is flowing.
- **Drift:** The speed of the current.
- **Leeway:** The sideways movement of a boat due to wind.
- **Water Track:** The path the boat travels through the water.
- **Tidal Vector:** The vector representing the effect of the current on the boat's position.
- **Course Made Good:** The actual path the boat travels over the ground, taking into account current and leeway.
- **Course to Steer:** The direction you need to steer your boat to counteract current and leeway.

Check out the link below for more information.

<https://www.youtube.com/watch?v=aVHY8aA15i4&t=314s>