



## Section 9: Anchoring

# Lesson Outline



- Lesson Objectives
- Introduction
- Types of anchors
- Ground Tackle
- Scope
- Procedure (Anchoring and Weighing)
- Summary
- Quiz

# Lesson Objectives



- In this lesson you will learn the different types of anchors and their purposes.
- The proper ground tackle and scope for various types of boats and weather conditions.
- Finally the helm and crew's roles in the anchoring and weighing procedure

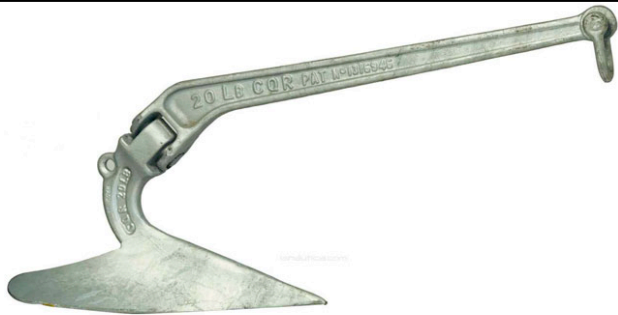
# Introduction



## Anchoring

- Anchoring is a skill that requires ALOT of practice. There is a general procedure that can be followed but the method depends on the location and varying circumstances.

# Types of Anchors



CQR or Plough: A good all purpose anchor. Best in mud and clay. Reasonably good in weed. Not great in sand or rocks.



Fisherman: Good in rock and weed. Used as a secondary anchor.



Bruce: A good all purposed anchor. Good in silt bottoms. May hold in rock. Not good in weed



Grapnel: Good in rock. Useful for grappling for lost items. Used as a secondary anchor.

Danforth: A good light-weight anchor for use in soft seabeds, such as sand, mud and clay. Not effective in weed or rock



# Ground Tackle



## Ground tackle: Anchoring equipment.

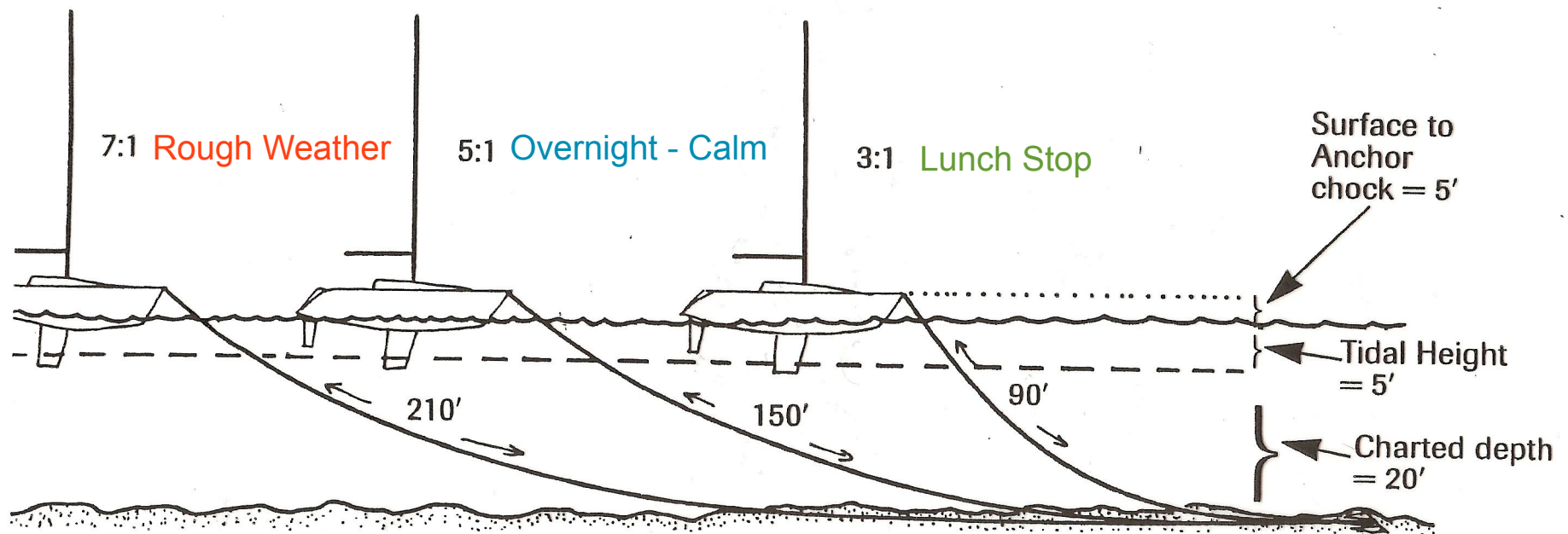
- The ground tackle requirements depends on type of boat. (i.e. anchor weight and breaking strength of lines)
- Rode: The chain, cable or rope (usually nylon) attached to the anchor
  - Rode on most small cruising boats are a small length of chain (3-15m, 10-50ft.) and a long length of line.
  - The chain in the anchor rode has several purposes.
    - 1.increase holding power by keeping the pull on the anchor horizontal. The more horizontal the pull the better the anchor holds
    2. serves as a shock absorber by causing the rode to sag, lessening sudden loading due to the boat raising and falling with the waves
    3. Keeps the rope portion from chafing on rocks or sharp seabed

# Scope



**Scope:** the ratio of the length of the rode deployed to the total depth of the water (taking into account tidal range) measured from the deck to the bottom.

- The more scope the better the holding power of the anchor.



# Anchoring Procedure



Before anchoring:

- **Get a weather forecast**
- **Check the chart and tide table**
- **Foresail should be lowered and bagged, & the foresail bag pushed up to the pulpit to clear foredeck**
- **The main sail can be furled before OR completely eased during anchoring if you wish to furl it at rest.**



# Anchoring Procedure



## Helm:

- Turn on engine and depthsounder
- Commands “READY TO LOWER THE ANCHOR”

## Crew:

- Goes forward and readies the anchor for lowering (making sure bitter end of rode is secured to boat & rode is free to run)
- Responds “READY”

## Helm

- Turns into the wind, coming to a stop head to wind in the desired anchoring location
- Commands “LOWER THE ANCHOR” & notifies crew of depth so they know the scope to lay out. (The scope is not laid out at this time)

# Anchoring Procedure



## Crew:

- Lowers the anchor, **UNDER CONTROL** (no tossing!!), to the seabed. Handle the anchor and rode to protect the bow, and their back.
- Notify helm when the anchor is on the bottom.

## Helm

- Put the engine in revers and motor astern **SLOWLY**

## Crew

- Lay out the recommended scope as the boat moves astern.
- Notify helm when all the rode has been laid out and is cleated off to a **LARGE** cleat on the bow

# Anchoring Procedure



## Helm:

- When the rode is taut, run the engine in REVERSE at half throttle for about 30 seconds. Watching abeam to see when the boat stops
- This will set the anchor. Often you can feel the anchor set. The wheel or tiller will jerk suddenly.

## Crew

- Feel the anchor rode when engine at half throttle. If the anchor is setting the rode ahead of the boat will rise out of the water and become taut. If the anchor is not setting it can be felt bumping over the bottom

If after 30 seconds the anchor is not set you will have to re-anchor.

# Anchoring Procedure



After boat has settled to her anchor:

- Shut off engine and lower and furl mainsail (if not already done)
- Take bearings so you know if the anchor drags.
- If anchoring for the night, display your all-round white light
- If necessary increase scope according to weather.

# Weighing Anchor Procedure



**Weighing anchor means to raise it.**

**Helm:**

- Order for mainsail to be raise (if desired). The mainsheet **MUST** be completely **EASED** until the anchor is up or the boat will sail over the anchor.
- Turn on engine
- Commands “READY TO WEIGH ANCHOR”

**Crew**

- Makes prep to raise anchor: removing the half hitch and figure 8 from cleat but keeping a full turn around the cleat
- Responds “READY”

# Weighing Anchor Procedure



Helm:

- Commands “RAISE THE ANCHOR”

Crew:

- Raise the anchor, FLAKING the rode neatly.
  - If the wind is strong or extra assistance is needed, the helm, guided by the crew motors gently towards the anchor to take the strain of the rode. The rode is hauled in until anchor line runs vertical. Then the boat should be stopped.
- When the anchor clears bottom, crew notifies helm so they can avoid any other boats or shallow waters.
- Finish raising anchor & stow/secure it. If the anchor is coated in mud or clay it will need to be washed before stowed

# Quiz



## TRUE/FALSE

1. When helm commands “lower anchor” the crew should throw the anchor as far as the can abeam to boat.
2. For a windy overnight stay a scope of 5:1 is sufficient.
3. Nylon is usually the line of choice in the anchor rode.

# Quiz



## TRUE/FALSE

1. When helm commands “lower anchor” the crew should throw the anchor as far as the can abeam to boat.

- FALSE: anchors should never be thrown! They should be lowered in a controlled fashion

2. For a windy overnight stay a scope of 5:1 is sufficient.

- FALSE: In windy or rough weather a scope of 7:1 is needed

3. Nylon is usually the line of choice in the anchor rode.

- TRUE: