

the
COXSWAIN
Café

Coxswain



Handbook

4th Edition



www.coxswaincafe.com

Table of Contents

The Role of a Coxswain	3
The Art of Coxing	3
Equipment	5
The Shell	5
The Oars	6
Coxswain Equipment	7
Training Equipment	8
Boat Handling	9
The Basics	9
How to Steer	10
Steering for the Advanced	10
When to Steer	10
Stopping the Shell	10
Practice	11
Racing	11
Sprint Racing	12
Head Racing	13
Commands	14

The Role of a Coxswain

In the sport of rowing, the coxswain is the individual responsible for the steering of the shell and also gives commands to the rowers in order to facilitate the safe and efficient operation of the crew as a unit. The coxswain is the leader of the crew while on the water. Some rowing programs also traditionally extend the coxswain's leadership roles to include operations off the water.

The coxswain is an integral part of the crew and can have a large effect on the success of the crew. Unprepared coxswains have played a large part in many races lost, and on the contrary, races can and have been won with the help of well-prepared ones.



The coxswain is typically small in size. At some regattas there is a minimum weight requirement that each coxswain must meet in order to compete. It should be noted that while there are set minimum weight requirements, there is no set maximum weight that a coxswain must be. The following table lists the different weight minimums:

	Men	Women
FISA	55 kg	50 kg
USRowing	120 lbs	110 lbs
EARC / IRA	125 lbs	110 lbs

The role of the coxswain can vary greatly from one program to another, but there are some common responsibilities that are usually standard. On the water the coxswain acts as an in-the-boat-coach. They are responsible for watching the rowers' technique, analyzing it, and then providing feedback to the rowers on how they can improve, or maximize boat speed and efficiency. The coxswain also acts as a source of motivation for the crew. The coxswain is the voice telling the rowers to drive hard and go beyond their limits, and the coxswain is the slave driver who uses their voice as a whip to make sure the crew puts in maximum effort every single stroke.

The Art of Coxing

Coxing can be considered an art. It takes experience, intelligence, and common sense to become a master. The following information contained in this guide will provide some tips for mastering this art.

- Learn from other coxswains -

Other coxswains can be a very good resource. Chances are other coxswains in your program will know something about the role. Talk to them and watch them. If they don't mind, ask them to make a recording of a race or even a practice. If you have the chance, go to a camp or a coxswain clinic. The more knowledge and experience you have, chances are the better you'll become.

- Learn how to row -

One of the most important things that one must do if they are to master the art is to learn how to row. Don't just watch videos or other people row. Jump in the boat and do it! If you can't row yourself, your abilities will be limited. You could know the correct technique, and everything there is to know, but it's not the same as actually doing it. Physically taking strokes on the water will help you to better understand the movements involved which will help you in correcting the oarsmen with their strokes.

- Motivational skills -

You must be able to motivate your crew. During the last 200 meters of a race when your boat is right next to your opponent, you have to say the right things to get your crew rowing to their fullest, giving it all they have. Your words have the power to make them pull ahead. This also holds true for the entire race. Tell your crew where they are in the race, "500 meters left to go, pick it up for a ten!" Tell them where other boats are, "Our bow is on their stern, let's hit it with the legs and walk up on them!"

Develop your own style and ask your crew what motivates them. There is no one simple "magic call" which will make a boat move faster. All crews respond to different things. What works for one boat may not work for another boat. You should develop a broad base of knowledge so that you can put together the right thing to say at the right time. Don't be afraid to make mistakes, sometimes calls just don't work. Learn from your mistakes so you can come up with better calls next time.

- Earn respect -

As a coxswain you have responsibility. Don't go on a "power trip". Learn how to work with the other members of your team. If your crew respects you and trusts you, you will have a much better experience and will be more likely to win.

- Know your crew -

Know the names of every oarsman in your boat. Don't just use their number when talking to them. Sometimes rowers forget where they are sitting. During a race they will respond better to their own name rather than to a number. Also, try to build a relationship with the rowers on your boat. It's a big plus if your rowers like you. In addition to knowing the rowers, talk to them specifically about what they like to hear from their coxswain. Feedback from rowers is sometimes the best tool for improving your coxswain skills.



- Personality -

Personality is an important issue. Oarsmen tend to like it if their coxswain has a personality. Be able to be serious but have a sense of humor at the same time.

- Style -

Style is another important part. Style is what you say and how you say it.

Some coxswains like to verbally attack their opponents during a race. Some coxswains swear every other word. Some are able to stay calm the whole race, but still have the control and burning desire. Some are true motivational masters. And some simply talk calmly to their rowers. Style is up to you. Find what works with your crew.

Equipment

The Shell

The most important piece of equipment in the sport of rowing is the boat. This watercraft is known as a shell. There are many different types of shells that vary in both size and shape. There are shells that are used for recreation and there are those that are designed to be fast racing craft. This handbook will focus on those shells used for racing. There are different types, or classes of racing shell. The following tables give the symbol for each of the most common types of boat, the name, and the description of the crew.

Sweep Boats - 1 oar per rower

2-	coxless pair or straight pair	2 rowers
2+	coxed pair or pair with	2 rowers, 1 coxswain
4-	coxless four or straight four	4 rowers
4+	coxed four or four with	4 rowers, 1 coxswain
8+	eight	8 rowers, 1 coxswain

Sculling Boats - 2 oars per rower

1x	single	1 rower
2x	double	2 rowers
4x	quad	4 rowers
4x+	coxed quad	4 rowers, 1 coxswain
8x	octuple	8 rowers, 1 coxswain

Some of these shells have coxswains while others do not. In the boats where there is no coxswain, there is a steering mechanism attached to the shoe of one of the rowers, most commonly stroke seat or bow. Some doubles and all singles do not have any steering mechanism at all. In these boats the course is adjusted by the amount of force applied to the oars on either side of the boat.

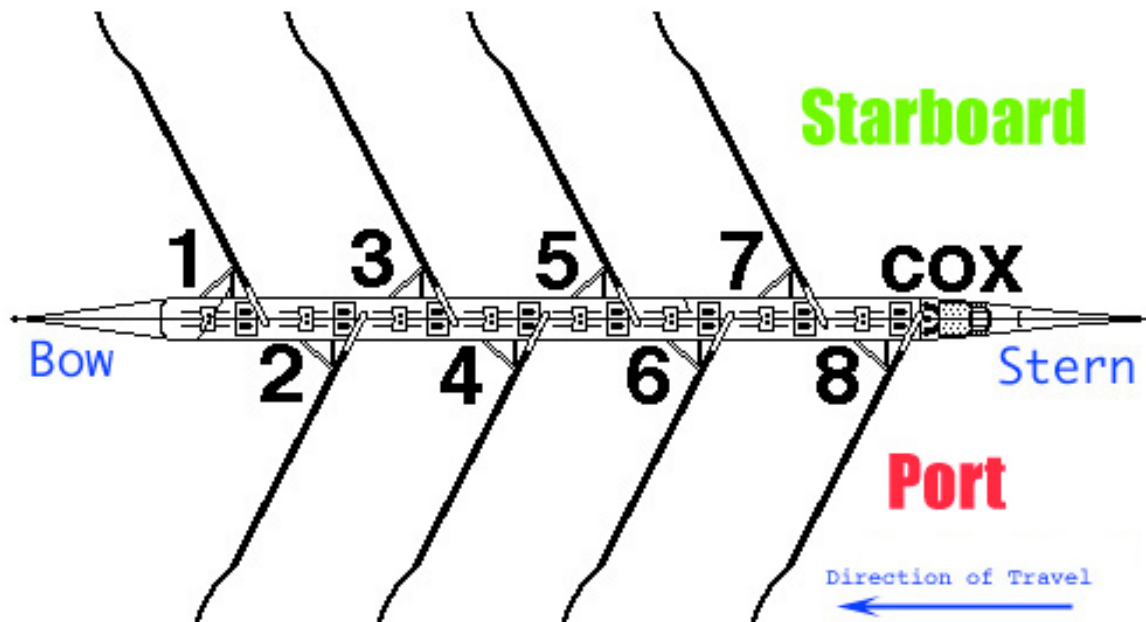
In boats that do have a coxswain, there is a special place just for them. In most eight-oared shells, the coxswain's seat is located in the stern, or back, of the shell. In this position the coxswain faces the rowers and is the only member of the crew who faces forward, or in the direction of travel. In most fours and pairs, the coxswain lies down in the bow, or front, of the shell. In this position the rowers are not in the coxswain's field of vision. The coxswain still faces forward, but this time with an unobstructed view.

Positions in a Rowing Shell

In a rowing shell, each seat has a specific name or number. In an eight-oared shell, for example, there are eight rowers and one coxswain. Each seat, or position, is given a number. The seats are numbered 1-8 starting from the bow position. The coxswain has no number and is just referred to as the cox, coxswain, or coxie. Seat

number 1 and seat number 8 have special names that can be used. Seat 1 can be called “bowman” or just “bow”, and seat 8 can be called “strokeman” or “stroke”. Boats can also be divided up into sections of six, four, or two rowers. Seats 1-6 are known as “bow six” while seats 3-8 are known as “stern six”. When divided up into fours, seats 1-4 are called “bow four”, seats 5-8 are called “stern four”, and seats 3-6 are sometimes called “middle four” or “engine room”. When divided up into pairs, only seats 1-2 and 7-8 have special designations. Seats 1 and 2 are known as “bow pair” and seats 7 and 8 are known as “stern pair”.

There is no “right” or “left” in rowing, just “port” and “starboard”. From the coxswain’s point-of-view all the rowers with their oars on to the left are considered to be on the port side. All the rowers who have their oars extending towards the right of the coxswain are considered to be on the starboard side.



Oars

Oars are the objects that are used to move the shell. The oars are attached to the boat via the riggers. Riggers are wing-like extensions that are attached to the hull which are usually made out of metal, but sometimes carbon fiber is used. At the end of these riggers is a pivoting piece that is called an oarlock. The oarlock is what holds the oar in place and allows it to follow the rower as he moves through the motions of the rowing stroke.

In the past oars were made out of wood. Most oars in use today are made out of composite materials such as carbon fiber. These carbon fiber oars range in length from about 280cm-300cm, close to ten feet, for sculling oars, and about 360cm-390cm, nearly twelve feet, for sweep oars.



The oars, as with just about anything else, have specific named parts. The oar blade is the part of the oar that enters the water. It is a large, slightly concave surface. There are different blade shapes, two of which are most often used are the “spoon” blade

and the “hatchet” blade. The spoon blade is a symmetrical surface that resembles a spoon, or a standard canoe paddle shape. The hatchet blade is an asymmetrical surface that is used by most programs. The hatchet gets its name because it is thought by some to resemble the head of a hatchet or axe.

The next part of the oar is known as the shaft. The shaft is the long narrow cylinder that connects the blade to the handle. On the shaft, at the point where it passes through the oarlock, is an object that wraps around it. This is known as the sleeve. On older Concept 2 oars this is the white part, newer Concept 2 oars have since changed it to green, on oars made by Croker this part is pink. Attached to the sleeve is the collar. The collar is what holds the oar against the oarlock. Without this part the oar could slip through the oarlock making it very difficult to use.

The final part of the oar is the handle. The handle is at the opposite end from the blade. This is what the rower holds on to while rowing. Handles are usually either wood or composite materials. Composite handles will have either a foam or rubber grip attached for comfort. Some rowers sometimes prefer one handle type to another. As an example, during the 2003 FISA World Rowing Championships the Canadian National Team men’s eight had seven rowers rowing with wood, while the stroke had a composite handle.

Coxswain Equipment

Voice Amplification

It is important the crew hears the coxswain. There are three ways by which this can be achieved. The coxswain can yell really loud, use a plastic or cardboard megaphone, or use an electronic amplification device. Today most programs use electronic amplification.

The dominant manufacturer of coxswain voice amplification equipment and rowing electronics is Nielsen & Kellerman. Nielsen & Kellerman are the manufacturers of the “Cox-Box”, a device used by most programs which amplifies the coxswain’s voice, counts the number of strokes taken, displays the number of strokes taken per minute, which is called the stroke rate, and also includes a timer. Cox-Boxes run on a battery that must be recharged after every outing.



There are also some recent additions to the coxswain voice amplification market, an Australian company: CoxMate, and a British company: CoxAmp.

If these electronic devices are too expensive, megaphones are an inexpensive alternative. They can be made of anything. Usually they are made of plastic or cardboard. A megaphone must be cone shaped with a hole at both ends.

Speed & Distance Measurement

SpeedCoach is a device made by Nielsen & Kellerman that calculates the 500 meter split times of a boat and the distance rowed. The SpeedCoach also has a timer feature for use when doing pieces. The SpeedCoach is able to record the data obtained so the coach can view it.

The Coxswain's Tool Bag

It is a good idea for the coxswain to carry a tool bag. You may need to fix minor problems on the water when the coach is not around. Some coaches expect the coxswains to carry tools in the boat and may even ask the coxswain for a tool if something needs to be fixed. The toolbag can be in the form of a small bag such as a waist pack or something similar. Some coxswains use just a carabiner with wrenches on it. The basic items that the coxswain's toolbag should contain are:

- wrenches (7/16", 1/2", 5/8", & 3/4" or 10mm, 11mm, & 13mm)
- An adjustable wrench
- white athletic tape

Some other items to consider include:

- a flash light (if you row in the morning or late evening)
- spare parts (nuts, bolts, washers)
- screwdriver
- small notepad and pencil
- band-aids

Some rowers feel the coxswain should also be responsible for carrying their water bottles. This is not part of the coxswain's job description. A coxswain may choose to be nice and carry the water, but the coxswain may also decide the rower should carry his own water. Either option is fine. The coxswain is there to help out the rowers, but that does not mean the coxswain is the crew's servant or waterboy. It should be noted however, that if a coxswain is preoccupied with juggling eight bottles of water it might distract from the more important job of making sure the boat is maneuvered safely while on land.

Training Equipment

Ergometers

Ergometers, or ergs, are machines that attempt to simulate rowing while on dry land. Outside of the rowing community they are referred to as rowing machines and can be found at most local gyms. In the world of rowing these machines are used for testing and training oarsmen. Ergs have a built in computer that calculates time, distance, and 500 meter split times. Coaches will sometimes use information provided by these ergs in deciding who will be on what boat and to determine the effectiveness of training



Ergometers are also a good tool for teaching the basic motions of rowing. They can be used to work on the technique of an individual rower. That technique can be easily observed and corrected by the coach standing next to the rower.

Tanks

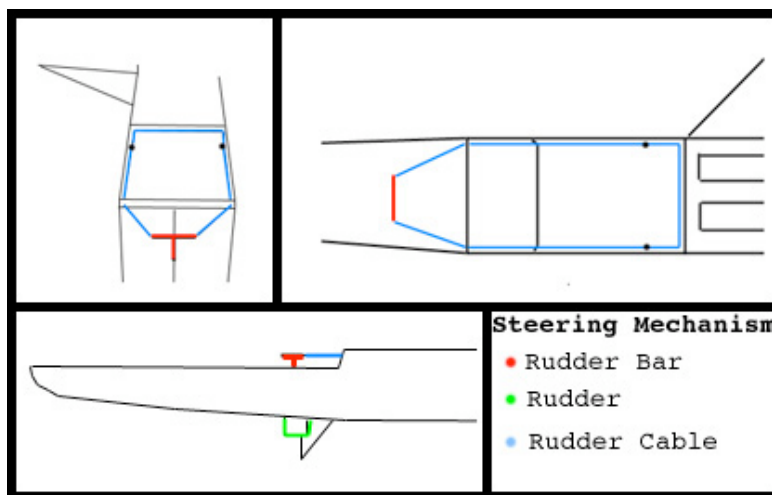
Tanks simulate on water rowing indoors. Rowing tanks are basically cement tanks of water that have sliding seats and oarlocks that represent a boat running parallel to the tank. These tanks aren't an exact simulation because real on-water issues such as balance don't apply, but an oarsman can learn a lot about style. Coxswains can also learn a lot because the tanks allow them to walk around and observe the different rowers from every angle.

Boat Handling

The coxswain's primary responsibility is the navigation of the shell. It is the coxswain who is at the helm and must be able to maneuver his craft whether it is in a race situation or an emergency. This section will provide information about many issues dealing with this important part of the coxswain's job.

The Basics

In most boats where the coxswain sits in the stern, facing the crew, there is a cable that makes a rectangle around the coxswain's seat that is attached to a bar behind the coxswain that in turn is connected to the rudder on the underside of the hull. This mechanism is what the coxswain uses to control the path of the shell. The following diagram shows three views of the coxswain's seat and the steering mechanism.



To steer using this mechanism, the coxswain would simply push his hand forward in the direction he wishes the shell to go.

On some boats, such as shells where the coxswain is positioned in the bow of the boat with no rowers in his field of vision, the steering mechanism is slightly different. On most of these boats there is a bar mounted in the center of the boat in front of the coxswain. This bar is what the coxswain uses to steer. In some boats, the coxswain would push the bar in the direction he wishes to go, but there are also many boats where the opposite is true.

How to Steer

The most important skill a coxswain can master is how to steer in a straight line. Coxswains should pick a point in the distance for which they want to aim. After picking the point, small adjustments might need to be made to correct the path of the shell to get back on the point. Whenever the rudder is not completely straight, the set, or balance, of the boat is affected. Big movements of the rudder can throw the boat off set, which in turn may disrupt the rowers' focus and ability to row well. While we are on the topic of set, it should be noted that the coxswain should keep his body weight centered in the boat and not shift his weight from one side or to the other, as this will also affect the set.

Steering for the Advanced

There is a slight delay between when the rudder moves and when the boat responds to this movement. This delay can be anywhere between one half of a stroke to two strokes. Keeping the rudder turned until the boat returns to its point will result in the boat going past the point and towards the opposite direction from before.

When to Steer

Although this is a topic of much debate, we present the method that seems to be most accepted.

The shell is much more stable when the blades are in the water and much less stable as the blades are out of the water. Using the rudder while the blades are in the water is usually the best way of not disrupting the set of the boat and thus keeping the rowers happy.

If the coxswain needs to use the rudder to make a large turn and keeps it applied while the blades are out of the water he should tell the crew that he is “on the rudder”, and then inform the crew when the rudder is straight.

It is possible that the coxswain may not need to steer for a good number of strokes at a time. If a crew is rowing well and the water is flat, it is very possible for a shell to naturally go straight. The coxswain should only move the rudder if needed.

Stopping the Shell

The command for stopping the rowers from doing anything is “[weigh-enough](#)”. As soon as this command is given the rowers will stop rowing and the boat will glide to a stop. If you need to stop the boat immediately, after the “[weigh-enough](#)” command tell the rowers to either “[check it down](#)”, “[drag it](#)”, or “[hold water](#)”.

Practice

Practice is a very important time used for developing the technique and ultimately the speed of a crew. Practice is the most important time for the coxswain to act as the in-the-boat-coach. Practice is the time where all the kinks in the rowers' technique can be ironed out. The coxswain must aid in this progressive environment by setting a positive and focused tone for the practice. Once the crew gets "hands on" and hits the water, everything is serious. The crew must use their time wisely and not waste it. Wasted time in practice could mean lost seconds during a race.

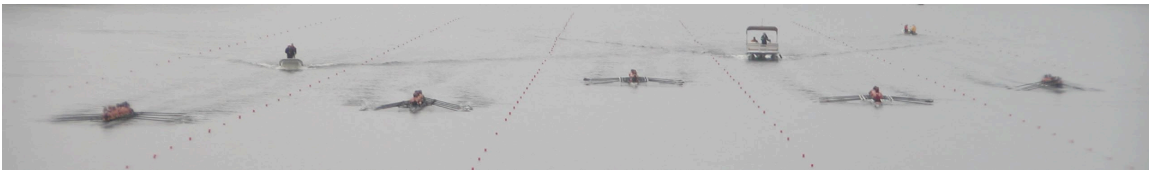
Most programs have coaches who are on the water with the crews providing instruction. The coxswain should listen to the coach. The coach will tell the coxswain what the workout will be, so he should pay attention, for coaches don't like to say things more than once. If the coxswain needs the coach to repeat something he should just ask. It is better to have the coach repeat his directions than for a coxswain to begin a workout when he does not know what he should be doing. The coxswain should just not make a habit of asking the coach to repeat himself.

The coach will also provide feedback to the rowers while on the water. The coxswain should listen to what the coach tells each of the rowers and watch their oars so he can learn more about how to fix certain technique issues. While the coach is talking to the crew, whether to provide workout instructions or technical feedback, it is a good idea for the coxswain to remain silent, so the instructions of the coach can be heard.

If there are multiple crews on the water working with the same coach, the coxswains of each crew should work to keep the boats close together, unless instructed otherwise. If one boat gets ahead, the coxswain of that crew should tell his crew to ease up on the pressure, slow down the stroke rate, or even add a pause in the stroke. For crews that are behind, the coxswain should have the crew increase the pressure, or increase the rate.

Racing

Racing is the test of all that has been learned in practice. Before the race itself, the crew will have to row to the starting line. The crew will use this time to warm-up for the race. In other words they will get their bodies ready to perform. A warm-up will usually consist of brief technical work and then end with short, full pressure pieces. During the warm-up, the coxswain should maintain a positive and calm atmosphere in the boat. The rowers may be nervous and it is up to the coxswain, no matter how nervous he himself may be, to calm the crew. Before the race is not the time to add anything new or to try and fix problems which were unable to be fixed in practice. The crew must focus on doing the best they can with what they have and should not expect any major changes or improvements just moments before the race. Attempting to fix too much on race day can have a negative effect on the performance of the crew.



Sprint Racing

Sprint races are the type of racing that take place during the spring and summer months. The distance of these races is 2000 meters for college and elite rowing, 1500 meters for high school rowing, and 1000 meters for masters rowing. Each race can have between two and six crews racing at the same time. The crews start even with each other. Each crew is assigned their own lane, which they must stay in for the entire race. Some sprint races may make use of a starting platform where a person holds the stern of the boat in place and makes certain each crew is aligned.

The Start

The coxswain must line the crew up on the line when their event is called for. If the boat must be backed into a starting dock, the coxswain should do so carefully and slowly! If not pointed correctly down the course once on the line, the coxswain should raise his hand until he is straightened out, then lower it. The coxswain should have bow or 2 seat row shortened strokes (i.e. arms only) to straighten the boat. Full strokes are not advised, especially if on a starting dock, full strokes make it very difficult for the person holding the stern to hold on. When using a stake dock, it is advised to have either 2 row with 1's oar or 3 row with 2's oar to straighten the boat. This is called "pinching it" sometimes it's also called "sculling it".

If there is no stakedock, the official will give commands to the boats racing in order to get them aligned. If the official says "touch it up stern pair", the crew should row lightly 7 & 8. If the official says, "check it down"; the crew should angle the oars into the water to slow the boat's forward movement.

When the official asks the crew if they are ready, the coxswain should raise his hand briefly and have the crew sit ready to row. Sprint races are started by an official who gives starting commands to the crews. Most sprint races begin with either a countdown start or a two-command start. An example of a countdown start is "5...4...3...2...1...ATTENTION!.....ROW!". A two command start would just be "ATTENTION!.....ROW!"

The Body

Sprint races are a straight shot from the starting line to the finish line. Coxswains should steer as straight as possible. What commands should one use in a sprint race? There are some very basic commands like calling the racing start, calling power 10's, and calling the sprint. All coxswains should know these commands before racing. Besides these basic commands a coxswain should be able to motivate the crew. The coxswain should tell them where they are in a race, "300 meters left". Tell them where the competition is, "We're even with our opponent, let's take a 10 to walk through them." The coxswain should give encouragement to the rowers and tell them that they can do it. It is important the coxswain stay positive. The coxswain should also try to stay relaxed, yet confident and aggressive. Sometimes if a coxswain goes wild and starts to yell like a madman, especially in inexperienced crews, the crew can get overexcited and lose

control, which can slow the boat down. Keep that wild fire saved away for when the crew gets experienced, it can work wonders then.

The Finish

The finish is a very important part of a race, especially in a very close race. During the last 500 meters, the crew's power will be used up. All that will be pulling them through is technique. It is the job of the coxswain to make sure that they have that technique. The coxswain should remind them to sit-up, breathe, relax, and to keep rowing full strokes.

A very important part of the finish is the sprint. Many races have been lost by boat that had the lead for the whole body of the race because a boat behind them had a better sprint. Sprints are fast and the rowers must give everything that they have. They should push themselves past their limits. All that matters is getting over the line first. The coxswain should make sure that the boat is together and at the same rate. Inexperienced crews can fall apart very easily during the final sprint.

After the race, congratulate the winner (if it's not you), and thank the losers for a good race.

Head Racing

Head races are usually three miles and contain turns. They are more of a challenge for a coxswain's steering abilities. Coxswains have to steer the shortest course possible. Coxswains should watch for obstacles, other boats, and they should pay attention to their course.

The Start

Head races begin with a rowing start. The boats are lined up in order of their bow numbers (numbers assigned to each crew before the race begins). There is usually about a 10 second space between each boat's start.

As the crew approaches the line they should be rowing with all oarsmen. The coxswain should have them build up to full pressure at race pace, the referee will then tell the crew when they cross the line.

The Body

Unlike sprint races, there is no sure way to tell how good a boat is doing. The coxswain and oarsmen should be concerned if a boat closes in from behind. This means the approaching boat is faster. If the boat is being passed, the coxswain should steer out of the way of the approaching crew. The objective of most crews during a head race is to pass other boats.

Technique is more of an issue in head races. The coxswain most likely will have up to 15 minutes or more to talk during the race. He must make sure that he reminds the oarsmen about their technique. Technique is very important during a head race. The coxswain should also not forget to motivate the crew during head races, this is very important. However, this does not mean the coxswain needs to talk the whole race. If everything is going well and he doesn't have anything to say, he can keep quiet. Silence can help the oarsmen focus and feel what the boat is doing. Silence can be very valuable.

The coxswain should just make sure that he does talk when needed. He shouldn't let a severe problem with an oarsman's technique go unnoticed, he'll regret it when he find out he lost the race.

The Finish

Sprint. This is very important. A good sprint at the end of a race can shave seconds off a crew's time.

Commands

On Land Commands

"Hands On" or **"Lay Hold"** - given when the coxswain wishes the rowers to grab onto the shell before moving it.

"Waists" - telling the rowers to hold the boat at their waists

"Shoulders" - telling the rowers to carry the boat with the gunwales at shoulder height (most common way of carrying a shell while walking)

"Heads" - rowers carry the boat over their heads with their arms straight (used when placing the boat into the water, or placing it on a high rack)

"Weigh-enough" or **"Let it Run"** - a.k.a. STOP!

A sample of commands given when moving a boat from a rack over heads in the boathouse to the water:

"Hands on!"... "Ready to lift...Ready!...Lift"

(after the rowers remove the boat from the rack)

"Shoulders...ready...down" ... "Walk it out"

(on the dock)

"Weigh-enough" ... "Up and over heads...ready....up!" "roll to waists...ready....roll!" "out and in together!"

On Water Commands

"Row" - command given to make rowers start rowing.

"Check it down" or **"Drag"** - while the rowers are not rowing they place their blades at a 45-degree angle in the water to slow it down.

"Hold Water" - similar to **"check it down"**, but the blades are now at a 90 degree angle which will stop the boat.

"Weigh-enough" or **"Let it Run"** - see above

A sample of commands given on the water to get the boat moving:

"All 8 sit ready!" ... "Ready....row!"

There are more on the water commands that coxswains give. Many of which are learned along the way with experience. When delivering commands, the coxswain should do so with a precise and confident tone. The coxswain should at all times maintain control, or at least lead the rowers to believe everything is under control.

When counting strokes, such as during a "power 10", the coxswain should always count at the moment strokeman's blade enters the water.

Copyright © 1998-2006, The Coxswain Café
Last Revised: March 6, 2006

*Cox-Box image is property of Nielsen & Kellerman.
Ergometer and oar images are property of Concept II.*

<http://www.coxswaincafe.com>

