EBC COXES GUIDE 2003/4

1. Basic intro + Safety

What is a 'cox'?

The cox (coxswain) is the person who sits in the stern of the boat, facing in the direction of movement (unlike the rowers!). She or he has control of the rudder, enabling her or him to steer, and also has a microphone, wired to a 'cox-box'. She or he (from now on she, for convenience) can therefore command the rowers without having to shout.

What does she do? What is her role in the boat?

The cox has three responsibilities:

1) Firstly, and most importantly, she is responsible for the safety of her crew. This means that in an emergency she must command them so that nobody is harmed (perhaps by quickly asking certain rowers to row on, or by giving the emergency stop command). It also means that in less dangerous situations she must have her crew's well-being as her first priority. E.g., if she steers wrongly so that the blades (oars) of some of the rowers are about to hit a barge, she will tell them to bring their blades in so that their shoulders are not wrenched by the impact. She might also be responsible for checking that all the rowers have warmed up properly before an outing (and especially before a race). She may also bring the crew doughnuts to cheer them up!

2) Secondly, she is responsible for the safety of the boat she is steering. An eight, brand new, costs well over £10,000; and although you may not be steering any of the new boats, this is what it will cost to replace any boat that you write off. It won't be you making the payment, since EBC is generous like that, but you might not be allowed to cox again for the club (depending on the circumstances of the crash). Also, if you cox for another club after university, many require coxes to pay for their own mistakes. You have been warned… Anyway, this responsibility basically requires you to be constantly conscious of the boat and its place on the river. You should be aware of the position of all the other boats around you, at all times, and know the river rules very thoroughly (see below). Also,

you should carry spanners (10ml and 13ml) with you, or a rigger-jigger, and check all the nuts before a race.

3) Thirdly, she has a contribution towards making the boat go faster – the ultimate aim of the rowers! This contribution is two-fold. In the first place, a good cox can reduce the distance of a race by her steering. For example, the Cam is very bendy, and if your crew is competing in a head race on the Cam they will thank you for cutting corners. On the Thames, however, a crew would prefer it if you stay in the fastest stream, which is usually not very close to any bends. Lastly, a cox will improve her boat's speed by coaching the rowers during training, and encouraging them in races with her voice. The cox is often required to come up with a race plan (which details where pushes and focuses will be in the race), and then, obviously, to carry it out. It should be emphasized, however, that this last point is very much the last of the cox's responsibilities, although it's probably the one coxes feel most pressured about. At EBC we'd rather see all novice coxes worrying about responsibilities 1) and 2) before they start to think about 3).

What are the river rules?

Please refer to the map included when reading these. When you go out for the first time, try and match the names to the places, and call them out to the crew. They need to know them as well, for the races ahead.

- Keep to the right of the river at all times.

  a) When you boat from Emma boat house, as soon as you push away from the bank you need to get the boat over to the right hand side. First, before you push away (and remember that it is you who gives the command to push away), check that there are no boats coming in either direction. When it's clear, push away and then ask 2 to take a very light stroke.

  b) Make sure that in narrow areas (i.e. most of the river!) you are well over on the right. Don't let the boat drift over into the middle of the river, but equally don't push your boat into the bank! This takes practice, but persevere. If you do go too close to another boat, and it's your fault, then ask the relevant side (strokeside or bowside) to pull in their blades so that they don't hit the other boat. Make sure they get used to this call and carry it out immediately!

  c) This rule does not apply between the crossing over points – see below.

- Cross over just before the Plough pub onto the left side of the river, and then cross over again onto the right just before First Post Corner.

  a) The Plough pub is the pub on the right side of the river just past Ditton Corner. There is a big sign telling you to cross over there.

  b) Stay on the left until you are round Grassy Corner (a difficult corner to steer!), and then cross over when you see another big sign.

  c) Don't just cross over without any regard for other crews. Crews going upstream (back to the boathouses) have priority, so if you are travelling downstream, easy (stop) the crew at the crossing over point and wait until the river is clear.

- Crews travelling upstream (back to the boathouses) have priority at all times over boats traveling downstream (away from the boathouses), unless they're in the wrong place on the river.

- You can spin almost anywhere where it is safe, i.e. when the river is clear. However, you are not allowed to spin in the Gut, or after the last blue post on the Long Reach just before Ditton corner. Generally, it's a very bad idea to spin too close to any corners.

- Do not easy along any corner, unless you are in a queue and it's unavoidable. If you are going to be easied for some time along any bank, then pull into the bank and bring the blades in.

- Faster crews have priority over slower crews. So, if you are stuck behind a crew that's going very slowly, you can overtake. However:

  a) You must ask to 'come by'. Say: '**Can we come by, Selwyn** [or whoever]**?**' Say it loudly and persistently. They will either answer, '**Yes, come by Emma**' or, '**No, you may not come by**'.

  b) If they say yes, then pull out into the middle of the river and come past, making sure that you do not clip their blades with yours. On the Long Reach, where there is room for 3 crews abreast, make sure that you're watching both strokeside and bowside blades.

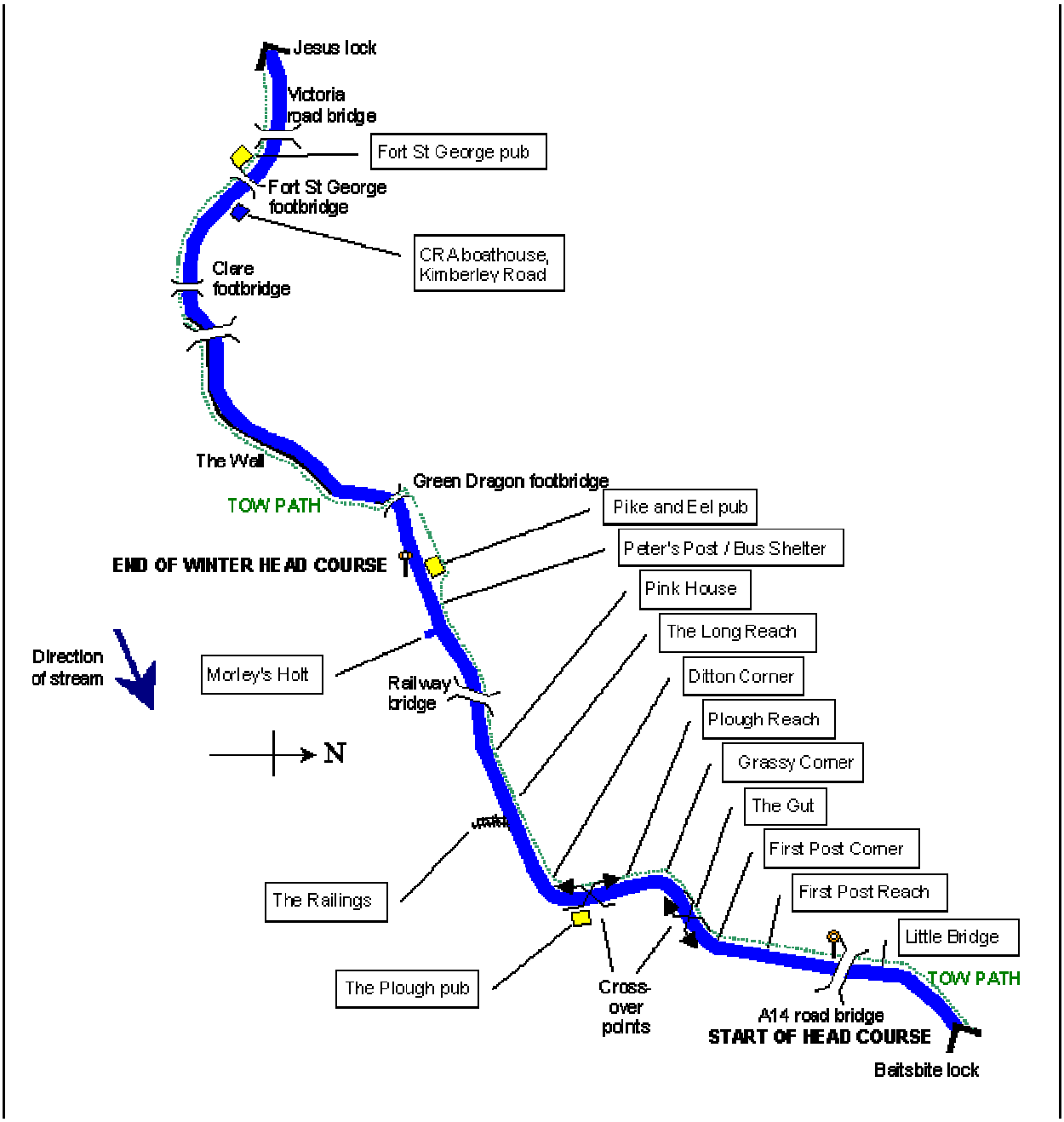
  c) Bear in mind that lots of dappy coxes say 'Yes', but don't check that the river's clear. If in doubt (i.e. near a corner), ask your coach if it's clear. Alternatively, ask the cox of the boat ahead. Call out, '**Is it clear to come by, Selwyn?**' Remember your first responsibility (safety), and don't pull out until you're certain.

  d) Do NOT overtake on a corner or in the Gut.

  e) If you are being overtaken, remember that they have priority, so if necessary pull in blades on the relevant side. However, if the river is not clear, then tell them firmly that no, they may not come by.

  f) In time you'll learn the different colours of college blades. This is how you'll know how to address a boat you'd like to overtake. For starters: Emma is blue with diagonal pink stripes (very stylish!), Downing is maroon, King's is purple, 1st and 3rd (aka Trinity) is dark blue.

Map of the Cam



(from www.cantabsrowing.org.uk/images/image004.gif)

Getting started… What to wear (!)

Firstly – warm clothes. It gets really cold out there. I recommend thermal underwear and a huge puffa coat. Waterproof trousers might be a solid investment, since when it rains the cox is basically sitting in a shallow bath…
Secondly – a lifejacket. This is mandatory for all coxes everywhere, no matter how well you can swim. They're in the drying cupboard in the boathouse, and inflate when you un-velcro the left or right side (check which one before the outing) and pull the cord.
Thirdly – equipment. A cox-box, unless you watch to stretch your vocal cords, a library card to get back into the boathouse afterwards, some electrical tape (handy for lots of things) and your spanners/rigger-jigger.

Getting started… Commands

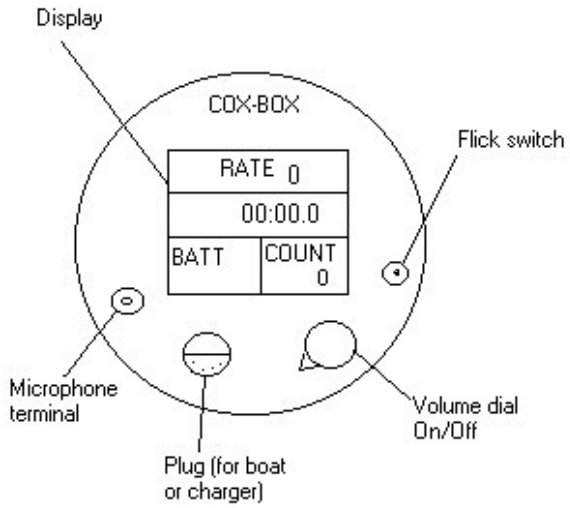
Ok, so we said that what you say to make the boat go faster is the least important of your responsibilities now. But you do need to learn certain things to say, such as commanding the crew to take the boat out of the boathouse and onto the water, without killing themselves or dropping the boat. So…

Stage 1. Get everyone lined up (in the right order, ie. Stroke, 7, 6, 5, etc) next to the boat. Shout **hands on** and they will grip the boat ready to slide it out. Then shout **pull it out** and they will slide the boat out on the rack. Next, **lifting, ready… go!** and they will lift it off. (Make sure you don't say **go!** until everyone is in position and ready.) Then, you need to turn the boat on its side so that you can walk it out without hitting the riggers. If the boat is on a low rack, and so everyone's holding it at waists, then one side will need to take it up to shoulders. So shout **bowside/strokeside take it to shoulders… go!** Or, if when you lift the boat off the rack everyone's at shoulders, then get one side to take it to waists. **Bowside/strokeside take it to waists… go!** Then they'll start walking out of the boathouse.

Stage 2. Once the stern is clear of the boathouse, get the boat horizontal again. If the boat's old and heavy, then ask the side holding it at shoulders to take it to waists. Say **bowside/strokeside take it to waists… go!** Or, more quickly, **level it out to waists… go!** If the boat's light, however, then ask the side holding it at waists to take it to shoulders. **Level it out to shoulders… go!** Then they'll walk it round until they're parallel with the river. If the boat is light then they'll take it up to shoulders (**take it to shoulders… go!**), and then heads (**to heads… go!**), and then over into the river (**and over!**). If it's heavy, then the side next to the river will have to run around, one by one. **Bowside/strokeside running round, from bow/stroke… go!** Then they'll walk forwards and lower the boat in.

Stage 3. You need to hold the boat while the rowers go and collect their blades. The easiest way to do this is to put a leg through a rigger. When the rowers are back and their oars are laid over the riggers, you need to say, **strokeside hold it, bowside in**. Strokeside will hold their riggers down while bowside get in. (If nobody holds it, then bowside could end up tipped into the water.) When all the bowside oars have been fastened into their gates and pushed out over the water, then say, **strokeside in**. Then get in yourself and attach up the cox-box. When it's working, ask, **Can you hear me at bow?** When he/she shouts yes, tell them to **number off from bow when ready**. They'll call out their numbers. When stroke's ready, check the river to see if it's clear. If it is, say, **Pushing off**, and then ask **2, tap it**. Ready for the outing!

Getting started… getting to know your cox-box



The cox-box is an invaluable piece of equipment. It's also a valuable one; they each cost over £1000. So look after it! (Nb. The coach will tell you which cox-box to use before each outing, until a cox-box allocation is drawn up. Make sure you do not take the wrong cox-box, because it will annoy the senior coxes!)

The microphone, detachable from the box, is the most immediately significant part. You hold it to your head with an elastic strip or a baseball cap. The volume can be turned up, down, or off with the dial on the right of the box. (Turning it off also turns off the display.) Turning it too far up usually results in feedback, however. At the end of each outing you must switch it off. Never pick the cox-box up using just the microphone, because this damages the connections. Always use the cord handle.

In the top display is the rate meter. The number displayed here is the number of strokes per minute, calculated using a magnet on the bottom of stroke's seat. Normal paddling usually has a rate of 18 – 22, with race ratings of a good crew being 34 – 38. The coach will advise on ratings, and may well ask you for the rate on a regular basis.

The next display down is a stopwatch. The flick switch next to the volume dial will reset this to 00:00.0. If you need to time a piece, this is how.

The two displays below that are the information display and the stroke count. The information display (on the left) will say if the battery is low – every cox's nightmare during a race! – by displaying BATT. The stroke count displays the number of strokes since the cox-box was last switched on or reset. This is useful if the coach wants to do 10 strokes at firm pressure, for example. (Remember: since the cox-box works by using a magnet on the stroke's seat, the stroke count will not help if only bow four are rowing!)

After the outing plug the cox-box into a charger. Check that the red light is on. You should put it back into the numbered slot it was taken from.

Getting started… basic steering

- Sitting in the cox's seat, take hold of the handles in your hands. They are connected to the wire that is attached to the rudder.

- Steering a boat is opposite to steering a car. If you push your right hand forward, or pull your left hand back, the boat will turn to the right. If you push your left hand forward, or pull your right hand back, the boat will turn to the left.

- The boat pivots around the three seat, not the middle, so the angle taken by the boat may not be what you expect. It also operates on a time delay, i.e. it doesn't turn as soon as you move your hands. It takes up to three strokes to turn, and will continue turning after you have put the rudder back to neutral. This means that you need to look ahead, anticipate bends and corners, and steer in advance. This is something that only practice can achieve.

- The novice boats all have massive rudders on them, so you should be able to get the boat round all the corners of the river without too much trouble. However, bear in mind that the angle at which you approach a corner has an effect on how well you'll get round it. Again, this is a trial-and-error process. If you think the boat is about to crash or clip the bank, then ask one side to put more pressure on (**Stronger on bowside, lightly strokeside**) or ask some rowers to drop out entirely (**2 and 4 drop out… go!**). Be cautious to begin with.

- Also bear in mind that the speed you are moving at affects the effect of the rudder. A fast-moving boat can turn through a larger angle in a shorter time than a slower boat. Obviously if the boat is stationary, the rudder has no effect at all. So make allowances for these changes around corners. For example, perhaps make sure that you are rowing in sixes by the time you get to Chesterton bridge, so that you can take the sharp angle without having to drop rowers out or ask one side to pull harder.

- When you're more confident in the cox's seat, try to refine your steering slightly. Every time you move the rudder, it creates drag on the boat and slows it down. It also affects the balance. So try to steer gently, without any sudden changes, and in anticipation of corners. This will help your crew to sit the boat and move faster.

Getting started… emergency drill

There are a few commands that you need to be able to give in an emergency. (An emergency counts as any situation likely to result in boats crashing, a situation unfortunately quite common on the over-crowded Cam.)
At all times a cox needs to keep a cool head. Even when the situation is your fault, your first priority (thinking about safety again) is to resolve any danger. So don't sit in the boat, flapping your arms, going, 'I don't know what to say! Er, er…' Keep calm, work out what to call, then give the commands in an authoritative and calm voice.

'**Bowside/strokeside blades in!**'
If you have strayed over to the wrong part of the river, or another boat has, then use this call. Make sure that they know to bring their blades right in on this command. The other side should keep the boat stable by resting their blades on the water – if both sides bring their blades in, the boat could well capsize!

'**Hold it up!**'
This is the emergency stop call, and when your crew hear this they will square their blades in the water – whatever part of the stroke they're in – to stop the boat. Don't ever use this call unless you're about to hit another boat, or the crew won't do it properly in a genuine emergency.

'**Everyone grab hold of the boat!**'
Well, I've put this one in to scare you… because it's what you should call if the boat capsizes. Capsizing is rather rare, but it can happen to inexperienced crews, often when getting into the boat (when one side doesn't hold their riggers), pulling in blades (when both sides do it at the same time), or spinning (when the crew doesn't know how to sit the boat properly). It is much more common in a four than an eight. Anyway, if it should ever happen, as soon as you've come up for air you should shout for the crew to hold onto the boat. They're not wearing lifejackets like you are (!) and the boat will be the most buoyant thing around. Then check to make sure all the crew are there and uninjured.

Further reading:
T. Hooper, Coxing: Surviving the Wilderness Years (Cambridge, 1999) – *good general guide*
www.coxswain.com - *a forum for (mainly novice) coxes*
http://pbc.petrean.net/guide/coxing_the_cam.php - *interesting summaries of coxing skills*
http://www.mit.edu/~cbatten/advice.htm - *useful general advice*

2. More steering stuff

a) Getting it straight…

It's important not to use the rudder very much, for two reasons. Firstly, because the water resistance will slow the boat down; and secondly because the water will pile up on one side, causing the boat to lose its balance. In a more senior crew, where good balance is a given, a cox who continually wrecks their hard work will not be looked upon favourably.

So… here are some tips for using the rudder less, or less obtrusively.

1. Make sure that when you go off from stationary that the boat is lined up. Ideally you don't want to steer for as long as possible, so ask bow and 2 to tap it until you're perfectly straight. In races, this will become very important, as steering during a start can sometimes kill a crew's rhythm completely!

2. The rudder has more influence on the balance and speed of the boat at different times in the stroke. If you push one of the rudder handles just after the catch, for example, then the boat will turn more effectively than if you put the rudder on just after the finish. The rudder will also disrupt the balance less if you put it on just after the catch, in the 'drive phase' of the stroke. So, if you're coming up to a corner and need to turn, try putting the rudder on just after the catch. And then try and do that every time you need to steer. After a while, it becomes subconscious and you will hardly need to think about it.

3. Taking the rudder off (i.e. putting the handles back to the neutral position) should also be done during the drive phase, but not necessarily during the same drive phase as when you put the rudder on. You can hold the rudder on for as many strokes as necessary.

4. Try not to 'pulse steer', where you steer a little bit on every stroke. This usually results in a snaking pattern, where you steer, overcorrect, overcorrect, overcorrect, etc. It helps to find a landmark in the distance which you can line the boat up with, and then just make occasional adjustments when necessary. On many parts of the Cam this isn't entirely practical, as there are certain places (e.g. the end of 1st post reach, by 1st post corner) where you need to stick very closely to the bank. But you'll need this skill for races (particularly any off-Cam races), so try it out on the Long Reach.

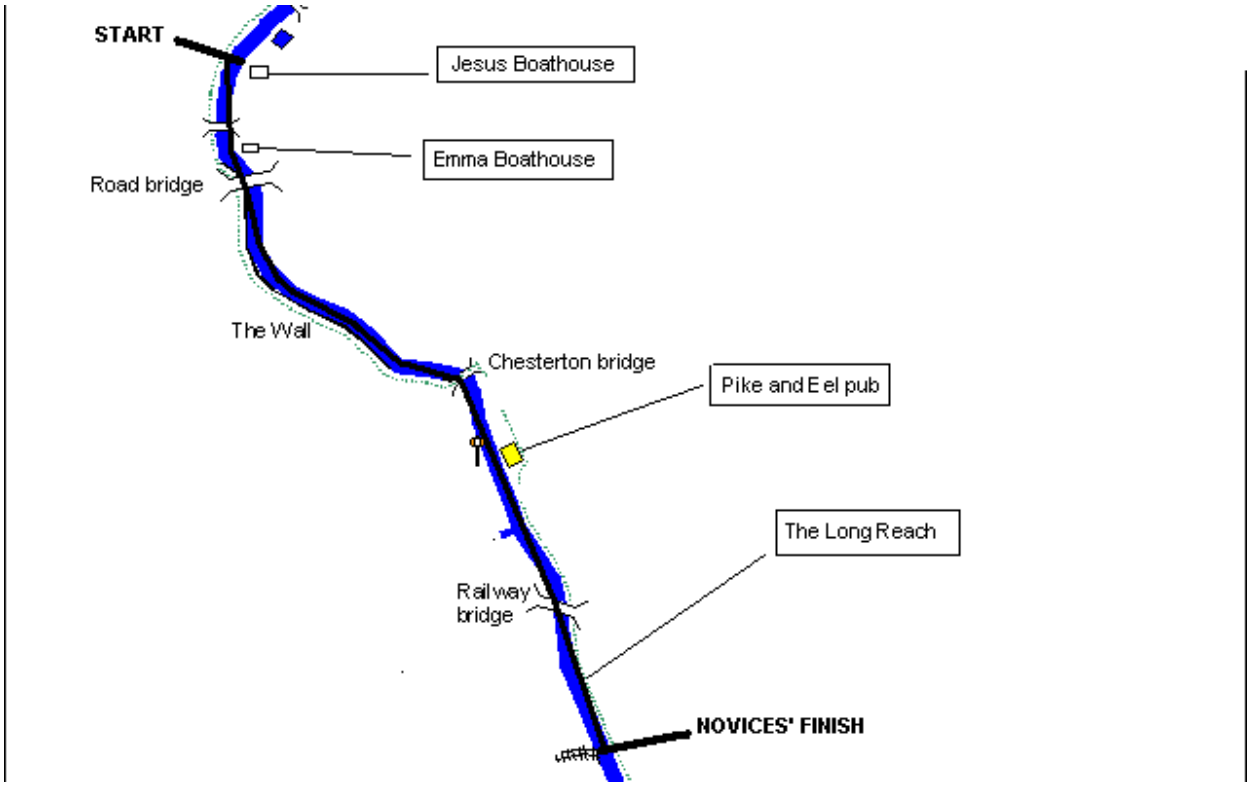
b) Cam specifics

Anticipate, anticipate, anticipate. The Cam has several sharp corners (Chesterton corner and Grassy corner being the worst) but you should be able to get round all of them with the rudders on Emma boats. The only reason it could all go horribly wrong is if you do not steer in time. So… steer early!

RACE STUDY 1: NOVICE FAIRBAIRNS

The biggest race of Michaelmas term, a head race (2700m long) held over two days. The marshalling area is down towards Jesus lock (your coach will guide you), and you have to pull into the bank until it is time to start. You must perform a rolling start and timing begins when the bowball crosses the start line (timing likewise finishes when the bowball crosses the finish line). The start line is at Jesus boathouse and the finish is about 2/3 down the Long Reach. There will be marshals at both points. You must continue rowing after you have finished because there will be crews behind you. When the whole division has finished, you will be allowed to return to the boathouses. Results are posted later that evening.

You may overtake during the race, but you must warn the slower crew. The faster crew has priority over the racing line, so ask them to move and give you the best water. If you are being overtaken, however, then make sure you clear the line. The racing line is shown below:



Basically, it involves steering a straight line between corners. As the stream in the Cam is negligible, the fastest course is also the shortest.

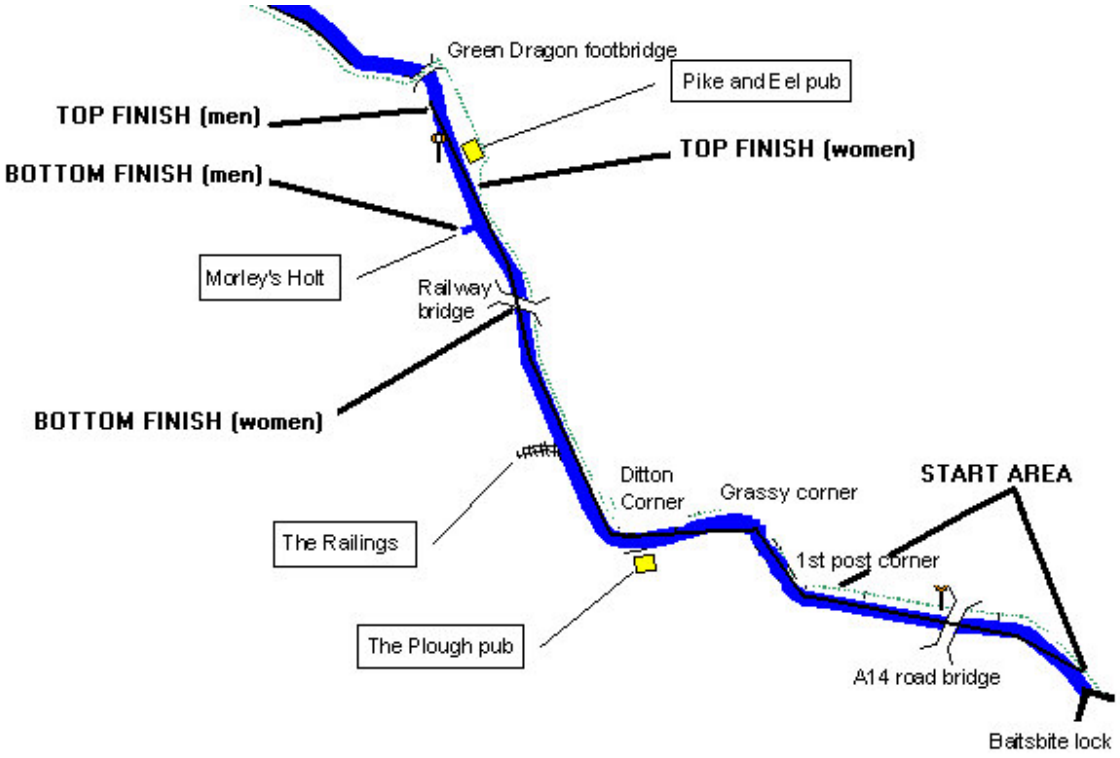
From the start, aim to be closer to emma boathouse than the opposite bank when you pass. Then, steer closely to the inside of the corner under the big road bridge. Again, take the corner round by Churchill and King's boathouses tightly. The next part of the race – by the 'Wall' – is packed with barges, so just steer straight down the middle, trying not to use the rudder too much. Take the corner under Chesterton footbridge tightly, then go past the Pike and Eel slightly closer to the left bank than the right. When you can see the railway bridge, aim for the right hand bank under it, and from there aim for Ditton corner. As you can see from the map, it's almost a straight line from Chesterton footbridge to Ditton corner, passing under the right side of the railway bridge.

Further reading: http://jcbc.jesus.cam.ac.uk/fairbairn_cup_races/index.html

RACE STUDY 2: LENT/ MAY BUMPS

Lent and May bumps are the most important races of Lent and May terms, and overall May bumps are the most important set of races of the year. Lent bumps are held over five days (although each division has a day off) and May bumps over four. Each division marshals around the Pike and Eel pub, and pulls into the side in an allotted space, dependent on where last year's crew finished the bumps (i.e. fifth in the division, or wherever). Crews row down to the start in reverse order, then spin and pull into the side on their station. Head station is near 1st post corner; the last place of a division is near Baitsbite lock. There are 1½ boat lengths between each boat. A cannon is fired at four minutes to go, one minute to go, and on the start. On the start cannon the crews begin racing, aiming to bump (physically make contact) with the boat ahead before the boat behind bumps them. If you bump or are bumped, you stop racing and pull into the bank. The next day you swap places with the crew you bumped or were bumped by. If you neither bump nor are bumped, you row to the finish, and resume your place the next day. If you bump every day then you win 'blades': the right to purchase a college oar painted with your crew's names and the boats you bumped. (For more comprehensive info, find an old bumps guide or wait until they're published – about a week before bumps start.)

Here is the course, with the racing line:



If you start near Baitsbite lock, aim in a straight line to take the first corner tightly. Be aware, however, that the inside of the this corner is very shallow, so leave about 1 metre between the blades and the bank.

From here, aim straight for 1st post corner, bearing in mind that the outflow just beyond the A14 road bridge will throw you slightly off course for about 1 stroke. Do not steer to compensate; the same outflow will kick out your stern on the next stroke, putting you back level. As you come down 1st post reach, be sure not to hug the right bank too tightly. When you

come past 1st post corner from the opposite direction, you may have noticed that a straight line will leave you almost touching the greenery on the far bank – i.e., when you approach 1st post corner in the bumps, you should be closer to the left bank than the right about 2/3 of the way down.

1st post corner must be taken very tightly. You should be aiming to be about 4 inches away from the bank with bowside's blades. No closer, in case you clip the bank, but no further away, or you'll be losing a lot of distance per stroke (several feet, actually).

Coming into the Gut, don't aim straight for Grassy corner. Grassy is a double apex, so if you aim straight at it from 1st post, you'll end up going wide coming into Plough reach. This is a crucial area, where many bumps happen, so you can't afford that. Instead, go down the middle of the Gut until about 2/3 of the way down, then steer over. This way you'll miss the first apex and just steer the second. (This area of the course is very difficult to steer – in fact only about 4 or 5 of the 1st division coxes get it right – mainly because it's almost impossible to practise due to the river rules during training. Just do your best on the first day and then learn from that.)

Coming into Plough reach, steer straight for Ditton corner. Ditton should be steered like Plough reach, i.e., 4 inches away from the bank.

In the Long reach, aim for the point of the little headland about 1/3 of the way down the reach. This is in a straight line with the left side of the railway bridge, which is where you should aim for next. From there, aim for about 1 metre away from the headland before the bay beside the Pike and Eel pub. Then straight to the top finish.

The three things most needful for you to remember:

1) Do NOT follow the boat in front. If you're gaining on a crew it is very tempting to focus solely on their stern, and follow their wiggly course down the river. DON'T DO IT! Stick to the racing line, and you will bump them in the end.

2) 1st post corner and Ditton corner need to be steered tightly – no more than 4 inches away from the bank.

3) Grassy corner is a double apex and thus the angle at which you start to steer is crucial. Don't aim for the first apex, but the second.

<u>A note about tactical steering…</u>

If a crew is closing in on yours, generally you should continue to steer the racing line, especially on corners. However, on the Long reach it is sometimes a good idea to 'drift' to one side. The rudder slows down the boat, so should only be sued sparingly, but if you are aware that a crew is close as you round Ditton corner, you can consider using some rudder to gently steer over to the far side. Hopefully the cox of the chasing boat will continue to steer the racing line, so that the crew has overlap but no bump occurs. You can then use the extra time to spur your crew on to clear water!

Further reading: <u>http://dcbc.dow.cam.ac.uk/cucbc/races/bumps/coxing.asp</u> - *all the bumps info you need*

3. More technical stuff

It's difficult to give good calls and help out the coach if you don't know much about technique. So, here's a quick guide (just the basics), to get you started. Please follow up on the further reading to learn some more.

A. *The stroke cycle: The Finish*

Body position: Legs are flat.
Back is about 5° past the vertical, in a position which the rower could comfortably hold for 30 minutes or more.
Shoulders are low and relaxed.
Head faces forwards and does not move.
Elbows are past the body but do not stick out.
Hands are relaxed.
Body weight: On the seat, evenly on each buttock. Central. *No weight on the handle!*
Other stuff: This is the backstops position. *Make sure that on every finish the crew returns to this position.*

The stroke cycle: The Recovery

Body positions: a) hands away. The back and legs remain in the backstops position, but the hands move away. The wrists are flat. The hands are relaxed. *Make sure the backs remain still as the hands go away!*
b) bodies over. The arms are fully extended. The backs rock over to their full leaning position. *Make sure the crew take all their body lean at this point!*
c) slide. The knees come up and body moves forwards. *Feel the pressure building on the footplate as a crew. Both feet!*
Body weight: The weight shifts onto the front of the seat (as opposed to the back) during bodies over, and then onto the footplate as the knees come up. Central.

The stroke cycle: The Catch

Body position: Shins are vertical.
Arms are fully extended.
Shoulders are rotated with the angle of the blade (outside shoulder slightly higher than inside shoulder).
Back is rocked over.
Eyes look up.
Body weight: On the footplate, evenly on each foot. Not quite central due to the rotation of the shoulders.
Other stuff: This is the frontstops position.

The stroke cycle: The Drive

Body positions: a) push. The legs push on the foot stretcher. The back remains rocked over, and the arms remain fully extended. *Make sure the arms stay extended!*
b) draw. The back opens out to its backstops position.
c) pull. The arms bring the handle up to the chest.

Body weight: During the push, the pressure increases on the footplate as you push on it. *You should feel the weight lifting off your seat.* During the draw, the weight is suspended between the handle and the feet. During the pull, you should aim to hold this suspension for as long as possible. Finally, at the finish, the weight comes back onto the seat.

B. *Technical exercises*

(The following is paraphrased from J. McArthur, High Performance Rowing (Marlborough, 1997)).

a) Slidework. (Either working up or down the slide.)

Position	**Technical focus**
Arms only	Drawing the blade up at the finish; Roles of the hands (outside hand taps down, inside hand feathers)
Bodies over	Pivoting from the hips; Timing the transfer of weight onto foot stretcher
¼ slide	Timing the hands, body, legs as a crew
½ slide	Correct height of oar handle; Steadiness of slide movement
¾ slide	Preparation for the change of direction at the catch
Full slide	Rotation of the body from the hips; Outside shoulder remaining higher than inside one

b) Square blades.

The main focus of this exercise is to develop consistent acceleration to the finish. A drop in acceleration causes problems with the blade extraction, and thus with the balance and recovery timing. Areas of emphasis (and useful ideas for calls) include:

- Maintaining the acceleration of the blade.
- Feeling the 'weight' of the oar in the hand. *Rowers should appreciate how light it really is, and that they therefore don't need to exert much pressure to extract it at the finish.*
- Carrying the blade at the correct height during the recovery. *Not too high. The rowing stroke should include as little vertical movement as possible – more movement wastes energy.*
- The role of the outside hand and shoulder at the finish of the stroke. *The outside hand taps down swiftly, releasing the pressure.*
- The movement of the hands at the moment of blade entry. *Quick and light. The blade doesn't need much force to enter the water! In fact, dropping the blade would be quicker – so rowers should think about not slowing the blade down, rather than speeding it up.*

c) Roll-ups.

These are used to develop correct placement at the catch. Focuses include:

1. Relaxed body as the blade enters the water. *Preparing for the catch early plays a part in this – make sure that the rowers are preparing to change direction from the finish of the previous stroke.*
2. Body remains still while the hands rise upwards. *The shoulders should NOT rise at the catch!*
3. Quick and subtle movement of the hands. *Make sure that the hands rise to the catch, so only a small movement is needed for placement.*

d) Single strokes/ pause paddling.

This is usually done to correct timing during the stroke cycle. E.g., if the finishes are not together, the coach or cox might call for single strokes at the tap down position. Single strokes are also often used to diagnose a problem. 'Wobbles' on the way forward are often due to timing discrepancies on the recovery, for example.

Single strokes can also be used to emphasise the acceleration of the blade through the stroke. The loss of momentum during pause paddling requires the rowers to accelerate more forcefully (*remind them whenever the power drops off!)*.

e) Single hand rowing.

- Outside hand only.

Focuses in this exercise include: the role of the outside shoulder in maintaining pressure on the blade at the finish; the role of the outside hand in covering the blade at the catch; relaxed grip during the recovery.

- Inside hand only.

Here the focus is mainly the role of the inside hand in feathering and squaring the blade (*this should never be done with the outside hand!)*.

f) Eyes closed rowing.

This exercise aims to communicate the 'feel' of the boat, and develop rhythm. Expect the timing to be sloppy at first! Then encourage the rowers to use their senses of hearing and touch to sharpen the timing. In particular, the rowers need to listen out for when the crew leaves backstops and begins to travel up the slide. Ask them to keep their movements quiet, especially at the catch, so that they focus more on the feeling of placement and drive.

g) Feet out rowing.

This is used to develop coordination at the front end of the stroke, and effective weight transfer at the back end. In the initial phase of the drive, the legs and body must be coordinated to maximise the rower's power. At the finish, the stroke should keep flowing – i.e. the hands must not 'stick' but continue to move, and the body then rock over to get the weight onto the footplate. If the rowers fail to do this, then their feet will lift up from the footplate at the finish.

C. *Training levels*

Name	Heart rate	Stroke rate	Description	Typical session
UT2 (Utilisation 2)	130 – 150	18 – 20	Lowest intensity. Easy conversation. Aim: to train and improve oxygen utilization by the muscles.	60 minutes continuous paddling
UT1 (Utilisation 1)	145 – 165	20 – 22	Intermittent conversation. Aim: to improve oxygen utilization and widen aerobic fitness base.	2 X 30 minutes paddling slightly harder than UT2
AT (Anaerobic threshold)	170 – 180	24 – 28	Uncomfortable exertion. Aim: to increase the amount of power you produce at your anaerobic threshold.	3 X 15 minutes rate 28 – 30
OT (Oxygen transport)	28 – 32	28 – 32	Painful exertion. Aim: to improve the transport of oxygen by the heart to the muscles.	6 X 3 minutes rate 30 – 32
LT (Lactate tolerance)	190 – max.	34 – 40	Very painful exertion. Aim: to improve the ability of the blood to buffer lactic acid.	6 X 500m at race pace

All crews, after novice term, should have a training plan which will label sessions according to these designations. It should be emphasised that each training level has a specific purpose, and that they develop different physiological strengths. Therefore the cox should ensure that the crew carries out their specific training. I.e., if the coach asks you to call six two-minute pieces, make sure that you time them properly and that the crew is aware of the exertion they are supposed to produce.

Further reading:

J. McArthur, High Performance Rowing (Marlborough, 1997) – *lots of descriptions of exercises and a good technique chapter.*

S. Redgrave, Steven Redgrave's Complete Book of Rowing (London, 1994) – *an excellent section on problems, diagnoses and corrective exercises.*

EBC COXES GUIDE 2003/4

4. More calls + coaching

A. *IN THE BEGINNING…*

(The following is paraphrased from T. Hooper, Coxing: Surviving the Wilderness Years (Cambridge, 1999).)

There are five pieces of information that you should give before starting any paddling. They are:

1. Who is rowing – all eight, stern four, bow four, outside pair, etc, etc… *Obviously you can change this at any point in the paddling. Usually in warm-ups fours are rotated, but make sure you always start with stern four, because it is stern pair that sets the rhythm. Occasionally I keep stern pair rowing at all times, if the crew is inexperienced.*

2. Where to start from – either backstops or frontstops. *It is almost always backstops. But starting from frontstops can be useful to reinforce placement exercises, and is also used to practise starts.*

3. What sort of rowing – a) slide position, either arms only, bodies over, quarter slide, etc; b) feather or square blades; c) continuous paddling or paused (*don't bother saying unless it's paused)*; d) how long before you're going into the next exercise.

4. How hard to row – light, quarter pressure, half pressure, three-quarters or firm? *Make sure that when you ask for a pressure, the crew respond appropriately. Don't be afraid to ask for more. Check that the rating is appropriate for that pressure, unless the coach has asked for a specific rating.*

5. When to start – **Ready?… Go!** *The ready is not a question, which is why you shouldn't say* **Are you ready?** *The crew should be ready at this call. If they aren't, make sure that they know they should be. The cox should lead the crew to be efficient in drink stops.*

Other basic and essential calls:

- **Eeeasy there!** The stop signal, called during the drive. *Don't let the crew drop their blades onto the water until you've called* **drop!** *Call* **feather!** *before calling this if the crew have been rowing square blades. If you want to show off your crew's perfect balance, leave a gap after calling* **easy there** *before you call* **drop!**

- **Take the run off!** To slow the boat after you've stopped. *Use this in non-emergency situations, and when the stream would drag you in a certain direction if you just easied.*

- **HOLD IT UP!** The emergency stop signal, covered in the first pack. *NEVER use for non-emergency situations. (Equally, don't be too sparing! If you're about to crash, call it!)*

- **Ready to take the rating up two… in two… in one… go!** Used to call a change. *Call the* **up two**, **up one**, *and* **go!** *at the finish. This gives the crew enough time to think about the change before it happens. You can use this formula to call lots of things, such as pressure changes, going into a piece, or changing the rhythm. Your crew might not need two strokes warning to make a change; if that's the case then just say* **ready… go!** *after explaining the change.*

- **Let's take it up one in the water, down one on the slide. Ready… go!** Used to correct rushing up the slide and restore a better rhythm. *Once again, call the go at the finish. Combine this with a catch and finish call (see below) to reinforce the new rhythm.*

Spinning the boat:

The usual way to spin the boat is to use full slide strokes, with one side of the boat rowing on and the other backing down. More advanced crews sometimes 'tap turn', where the rowers use arm-only strokes.

Before you spin, you should check that the river's clear and that you are in an appropriate position to spin (i.e. not just before a corner). Then easy and call for the rowers to take the run off. While they're doing this, use the rudder to swing the boat out in the direction of spinning. Then use these commands:

Spinning the boat… strokeside rowing on, bowside backing down, alternately… strokeside starting… ready…go! It doesn't matter which side rows on or backs down – that depends on the angle of the boat. On most rivers, coxes have to stick to the right side of the river, in which case it makes more sense to have strokeside rowing on and bowside backing down. *You can ask a side to increase the pressure if there's a danger of either the stern or bow hitting the bank. Alternatively you can ask one side to take more strokes. I recommend that you keep the stern close to the bank while you spin, as it's the end of the boat that you can see! Bear in mind that certain spinning places, e.g. close to Jesus lock, where you'll spin when warming up for bumps, are very narrow.*

B. *CALLING AT THE CATCH AND FINISH:*

Here are some common catch and finish calls. The first component called at the catch, the second at the finish. You shouldn't use these exhaustively; a cox who yells **finish…there!** fifty times during Fairbairns is going to bore her crew silly. You'll hear lots of coxes, unfortunately, doing this – take note of how uninspiring they sound! Instead, you should combine such calls with some talking. E.g. **Ok, coming up to Grassy, let's work on the catches for five. Light and sharp, together. Ready… go! Sharp!.. there. Sharp!.. there.**

Generally these calls are used more in races than in training, but try them out in training first! Make sure that your intonation matches the result you want, as well.

For emphasising the catch (quick, light, sharp, crisp):
In! … together…
Sharp!… there…
Lift!… there…
Spring!… back.
Make the first word sharp and staccato.

For emphasising the catch while also calling for time on the slide:
Kick! …gliiide….
Sharp! …tiiime…
Sting! …floooaaat…
Call the last word on the slide rather than the finish. Make your voice soothing.

For emphasising a quick catch and quick hands round the turn:
In! … Spin!

For emphasising quick hands round the turn but a steady progress up the slide:
Spin! … Steeaady…
Call the first word at the finish and the second on the slide.

For emphasising good connection as a crew:
Lock… lever.
Connect… drive.

For emphasising acceleration through the stroke and a strong send on the finish:
Squeeeze… send!
Puuushh… send!
Buiiillld… send!
This calls for some aggression in the first word!

For emphasising sending the backs through together:
Backs… through!
Sit… back!

For raw power (!):
Power… there!
Legs… down!
This is where you let rip!

C. *CALLING A STANDING START:*

All standing starts begin from frontstops. Most novice starts consist of two or three draw strokes (long, keeping the length on the finish), five or so wind strokes (little or no body lean, dynamic in the drive), then five or so lengthen strokes (gradually bringing in the backs and some length on the finish). After another ten or so strokes, there is a 'stride' or 'rhythm' call.

(More advanced crews often dispense with such a long and complicated pattern. Emma 1st women's start in the Lent bumps 2003 consisted of one draw stroke, one wind stroke, one lengthen stroke, and then 10 full-length sprint strokes before the rhythm call.)

Here are some guidelines on calling a normal novice start:

Whole crew… come forward to frontstops.
Square your blades.
Now sit up, eyes ahead, boat perfectly sat. Breeeathe.

[Umpire: Attention…. Go! / Cannon (bumps)]

[3 draw strokes:]
Draw… long!
Draw… long!
Draw… long!
Keep the same call for all three. Keep it simple.

[five wind strokes:]
Now wind!
Sit… up!
Sit… up!
Good, hands moving!
In… spin!
You can call the same for all five, or if they need to be reminded of something during the start then vary it.

[five lengthen strokes:]
Now let's get some length!
Push… send!
Good, long and strong.
Opening out the backs together…
Backs… through!
Backs… through!

[Ten strokes working on the rhythm:]
Ok now sit up at the finish!
Sit… up!
Sit… up!
Sit… up!
Good, now on the timing, it's sharp at the finish!
Sharp together!
Now on the length, send it long and strong!
Push… send!

Push… send!
[Rhythm call:]
Now rhythm in two…
In one…
Go! Sit… back!
Sit… back!
Sit… back!
Good, on our rating, on our rhythm!

D. *COACHING FROM THE BOAT…*

All novice crews must be accompanied by a coach. This period is therefore a good time to learn more about technique and coaching tactics. When you cox senior crews, there may be times when a coach isn't present (although at EBC that's quite rare), and so it's vital that you have some coaching skills in order to compensate. However, don't let the desire to learn this obscure the more important responsibilities of a cox (outlined in the first pack): safety of the crew, safety of the equipment, and steering.

From the cox's position in the boat, there's much that she can see, hear (from the stroke person) – and particularly feel – that a coach cannot. She should interact with the coach in order for the crew to gain maximum benefit. Here's a general guide to help you develop your skills as a coach-in-the-boat:

(The following is paraphrased from T. Hooper, Coxing: Surviving the Wilderness Years (Cambridge, 1999).)

- The main source of information is the blades. These should:

  a) enter the water at the same time, following stern pair;
  b) leave the water at the same time;
  c) travel above the water at the same height on the recovery;
  d) travel at the same speed on the recovery.

  If there is a general problem with any of these points then make a call to the whole crew (e.g. **Sharpen catch timing, ready… go! Light and sharp together.**). However, check that it is not a specific problem with one or two crew members. If this is the case, then call on them specifically: **Bow pair, raise your hands to the catch.** [When stroke's handle passes her shins:] **Lift!** Remember to always give feedback when you've asked for a change, whether it's for the whole crew or individuals.

  Point d) is often the hardest one to spot during continuous paddling. Differences in speed can be checked by watching the angle between the blades – it should stay the same at all times. If one blade seems to become closer to another at times then there is a discrepancy, although it may need a few more strokes for you to figure out what it is! Single stroke paddling is another good way to diagnose speed differences.

- Balance and timing are often major problems for inexperienced crews, and can prevent any meaningful work on other aspects of technique. It's therefore important to know how

to correct the mistakes that lead to poor balance properly. There are several reasons for such balance, including:

1. Poor catch timing. This creates an inequality in pressures which causes the boat to rock over. The crew should be following stern pair on catch timing, so check that they are doing this by watching the blades. If the timing is generally sloppy, with no one fault in common (i.e. some are late and some are early on stern pair), then call a general command: **Whole crew, sharpen up on catch timing, in time with stern pair. Ready… go!** You can call **Catch… there** in time with stern pair in order to help the rhythm, if necessary. *(If the problem refuses to go away then ask them to focus on their timing on the recovery, and reinforce that with some pause paddling at half slide. Alternatively try some roll-ups.)* However, if an individual or group has a specific problem with the timing, make your call equally specific: **Sharper at the catch, bow pair.** Occasionally it can be useful to give a measurement, e.g. **Half a blade late on the catch, six.** Remember to give feedback!

2. Poor finish timing. This also creates an inequality in pressures. Often poor timing is caused by differences in pressure (*make sure everyone is pulling their weight!)* or in length. Try a general crew focus, reminding them that momentum must be kept on the end of the blade until the extraction. **Whole crew, let's see some length at the finish. Sitting up tall, drawing through. Focus on that for 10, ready… go! Now sit… up! Sit… up!** If the boat is continually falling down to one side, call on that side to keep their length. **Bowside, sit up at the finish.**

3. Hand heights and speeds. These are often blamed for all balance problems! All the rowers should draw up to the same height, which is just below the bra on women and just below the nipples on men. *Check this when they're sitting at backstops, and emphasise the need to return to this position every finish.* When the hands move away from the body, they should also all be at the same speed. *Pause paddling is useful for discovering discrepancies.*

4. Weight at the finish. This should be central in the boat, with 50% of the weight of the rower on each buttock. When at backstops, the rowers' heads should all be in a line. Look straight at stroke's head at the finish and look for any that lean out. Call on those who aren't in line: **Heads in a line at the finish. 2 and 4, heads in a line.** Give feedback!

- Another important source of information, aside from the blades, is your body, which can feel how the boat moves. Boat 'feeling' is most useful to correcting faults of ratio and rhythm. An efficient crew should have very little difference between their highest and lowest speeds in the stroke – i.e. between just after the finish (the fastest point) and the catch (the slowest point). This is achieved through nurturing the boat speed for as long as possible before taking the next stroke, which in turn is achieved through traveling smoothly and cohesively on the recovery. There should be an approximate 2:1 ratio between the recovery and the drive.

  Here are some ideas for calls to improve the rhythm and ratio:

  Keep it steady up the slide. [At the finish:] **Spin!** [On the recovery:] **Steeaddy…**

  Let's work on the ratio for 10. [Aggressive voice:] **Dynamic on the drive,** [soothing

voice:] **relaxed on the slide. Make that change… in one… go! Drive… through! Gliiide… Drive… through! Gliiiide…**

I want more finesse on the recovery. Pushing out the cover… loose coming forwards. Ready?.. Go! Relaxxxx…. Relaxxxx…. Good, half a metre more. Let's push that out now to an extra metre. Keep it sharp at the catch now… Go! Sharp!… Loooose… Sharp!.. Loooose…

- The puddles in the water, left behind by the blades, can also be useful for the cox. The distance between each set of eight puddles is called the 'cover'. At higher ratings the cover will be very small, whereas at very low ratings it can be very large. The cover is therefore only a useful measure during steady state outings at a fixed rate.

  Challenge the crew to increase their cover during such outings. **Let's get another metre on this cover by sending it long on the finish. Together, ready? Go!** If the cover decreases rather than increases, the crew has taken up the rate in order to put more power down. (**Hold the rating! Relax on the slide.**) However, if they do increase the cover, then they are rowing more efficiently at the same rating.

- Other sources of information are the coach and your strokeperson.

  a) The Coach. Listen to the him or her; try and learn the phrases he or she uses and use them yourself. If you don't understand something he or she says, then ask (and remember for future reference!). A word of warning: don't talk over the coach – it's rude – unless there is a safety issue (e.g. you're drifting out into the middle of the river). Fill in when he or she's not talking, reinforcing the points he's just made, challenging the crew to make more of a change, and gently correcting those who require it.

  b) The Stroke. A good stroke should be quite happy to talk to you during training and in races – not small talk, but feedback on how the boat feels and suggestions as to helpful calls. Experienced strokes are often used to bossing the cox around, but make sure you understand and agree with any suggestion he or she makes before you call it. Ask him or her if you can feel a problem but are unsure as to the diagnosis, or if you're unsure as to the sustainability of a certain rating or pressure.

E. *THE 8 GOLDEN RULES…*

(Perhaps print these out and stick on your wall somewhere!)

- KNOW THE OUTING FOCUS, AND STICK TO IT REGARDING CALLS.
  WORK WITH THE COACH ON THIS – DON'T CONFUSE HIS COACHING BY TALKING ABOUT A DIFFERENT TECHNICAL FOCUS.

- EVERY CALL MUST BE RELEVANT. DON'T RAMBLE TO FILL SILENCE.
  IF YOU HAVE NOTHING TO SAY, SAY NOTHING. USE THE TIME TO OBSERVE THE CREW AND THINK ABOUT TECHNIQUE. DON'T BE AFRIAD TO SAY WHAT YOU THINK, HOWEVER, AND TRY OUT NEW CALLS.

- DON'T BE AFRAID TO BE SILENT FOR SOME TIME.
  HOWEVER, THIS CAN UNSETTLE SOME ROWERS, SO MAKE SURE THAT THEY KNOW THE TECHNICAL POINTS TO BE FOCUSSING ON WHEN YOU'RE NOT SPEAKING.

- WHEN YOU ASK FOR A CHANGE ALWAYS GIVE FEEDBACK.
  HAVE THEY RESPONDED WELL? OR HAVE THEY NOT MADE ENOUGH CHANGE?

- YOU MUST LEAD YOUR CREW TO BE EFFICIENT AND EFFECTIVE, BOTH ON AND OFF WATER.
  SPIN QUICKLY, DON'T HOLD UP THE RIVER. MAKE DRINK STOPS SHORT. CUT THE FAFF BEFORE GETTING THE BOAT OUT. ENFORCE DISCIPLINED ROUTINES, E.G. PADDLING FROM STATIONARY WELL.

- BE DECISIVE AT ALL TIMES.
  IN AN EMERGENCY THIS IS CRUCIAL. MAKE A DECISION AND STICK TO IT.

- NEVER MAKE THE SAME MISTAKE TWICE.
  DON'T BE EMBARRASSED ABOUT YOUR MISTAKES, AS LONG AS YOU LEARN FROM THEM.

- ALWAYS CALL THE GO COMMAND AT THE SAME POINT IN THE STROKE CYCLE.
  THE FINISH IS ALMOST ALWAYS BEST.

Further reading:
T. Hooper, Coxing: Surviving the Wilderness Years (Cambridge, 1999), ch. 2
http://www.widomaker.com/~ehrlich/letter/feb97.html – *excellent advice from a top US coach*

5. Racing

A. *GENERAL PREPARATION…*

There are a variety of races throughout the year. From October to April the races are mainly head races, which are 2000m or longer and are assessed through time trials (e.g., Cambridge Winter Head, Fairbairns, Head of the River Race [HORR]). For the rest of the year the races are usually regattas, where crews race side by side over distances of 2000m or less (e.g. Pembroke regatta, Henley Royal Regatta). Bumps are the exception, being an almost entirely unique form of racing.

Preparation for these races, besides the crew's training (which is not the cox's responsibility), consists of several things. Here is a list of preparations the cox should make before each race:

a) Cam races

1. Read the race details on the website of the relevant club, well in advance of the race. You will need to know:
   - What your crew number is, and either which division you are racing in (head races) or who your first opposition is (regattas). You will find this under 'draw'. On the day of the race you must go to the relevant club to collect your race numbers, which are usually pinned to the cox's lifejacket and bow's back.
   - Where the marshalling area is, and what time you need to be there. You can then work out what time you will need to boat.
   - Where the start and finish are. This will allow you to create an effective race plan (see below).
   - Whether it is a stern or bow finish (important in regattas); it is almost always a bow finish.
   - The rules as to overtaking (head races).
2. Pass this information on to your crew, so that they feel prepared. When you have devised a race plan, either by yourself or with the coach, make sure you also pass this on to the crew. In particular stroke must feel prepared for his or her role.
3. On the day of the race, remember to bring your spanners/rigger-jigger and electrical tape. Collect your race number and pin it on; then check the boat. The equipment is the cox's responsibility, so check that all the nuts are tight.
4. Pick up your cox-box – check that it's all working – and lifejacket.
5. Make sure that the rowers follow their warm-up routine on the ergs and are all properly stretched out – prevention of injury to the rowers is another of the cox's responsibilities.
6. Get the boat out and proceed to the start, remaining calm and helping your crew to focus.

b) Off–Cam races

1. Points 1 and 2 of the above are equally relevant for off-Cam races.
2. When the trailer is being packed, your equipment is your responsibility. Collect your cox-box and pack it into a cox-box case, then collect your lifejacket. Ensure that they are either in the trailer or in your possession.
3. When at the race location, command the crew to take the boat off the trailer efficiently. Use the same commands as you would to take the boat off the racks in the boathouse – i.e. [insert name] **and** [insert name]**, let's get hands on the bow. Taking it to the trestles here. Lifting, ready… go!** The crew usually expect you to arrange the trestles for them.
4. Help the crew to rig the boat. Afterwards, check all the nuts and ensure that the correct seat is at stroke. Check that the cox-box connections have been properly attached.
5. Regattas only: take the crew's ARA cards to the information tent and collect your numbers. Then go to the weigh in area and weigh in. ARA minimum weights are 50kg for the coxes of female crews and 55kg for coxes of male crews; you should be as close to this figure as possible. If you weigh less than this, wear as many layers as you can get away with and carry some spanners in your pockets. Often regattas allow you to weigh in with a cox-box, so try this as well. If you know that you may still be underweight, you must organize some deadweight – a bag full of water bottles, or some old gym weights, or even rocks.
6. Head races only: take the crew's ARA cards to the relevant club or information tent and collect your numbers.
7. At the appropriate time, tell your crew to go for a warm-up jog together, and then ensure that they stretch properly.
8. Get the boat out and proceed to the start, remaining calm and helping your crew to focus.

B. *RACING THEORY*

(The following is summarised from J. McArthur, High Performance Rowing (Marlborough, 1997).)

'THE MOST ECONOMICAL WAY TO COVER ANY RACE DISTANCE IS TO MAINTAIN AN EVEN PACE FROM START TO FINISH'.

When preparing a race plan, therefore, the cox and coach must identify the optimum cruising pace of the crew (its 'EVEN PACE'), at what rating that can be achieved, and how to reach that pace (i.e. how the crew are intending to start the race).

Identifying the optimum cruising pace

- Using an instrument to measure boat speed, or by doing timed pieces over set distances, the coach and/or cox should determine:
  a) What is the maximum boat speed the crew can achieve for ten to twenty strokes (their anaerobic capability)?
  b) What is the mean boat speed over the racing distance (their cruising pace)?
  c) At what rating is this mean boat speed achieved?
- Correct assessment of a crew's cruising pace is vital to ensure effective use of energy. The crew must neither 'blow up' before the line nor cross the line with another stroke left in reserve. The rating is a useful guide for the cox in a race as to whether this cruising pace is reached and maintained.

Devising a start

- The start should transfer the boat from a stationary position to race pace as quickly and efficiently as possible.
- On the first stroke the crew should take up the slack between the swivel and the oar, and then squeeze off the foot stretcher, to move the boat forwards gently. If the crew try to apply too much power, the boat will actually move backwards before it moves forwards.
- The next few strokes should be taken quickly, but with the same emphasis on pushing off the foot stretcher and minimizing vertical movement (especially with the shoulders).
- After lengthening out, the crew should apply maximum power and rating for ten to twenty strokes.
- A call should then be made for the smooth transition to cruising pace, by separating the body and legs at the finish.

The race plan should also take account of the strengths and weaknesses of the crew, and the possible weather and stream conditions.

Assessing your strengths and weaknesses

- What are your crews' strengths and weaknesses, physiologically, psychologically, and technically?
- E.g., is the crew very fit aerobically (physiological strength), and therefore able to maintain a high cruising speed? Can the crew keep their confidence even when they're behind other crews at the halfway point (psychological strength)? Is the crew well-prepared for racing into a head wind (technical strength)?

C. *RACE PLANS*

EBC coxes should have a race plan for every head race and for bumps races.

A race plan should always include a start, known to the crew and practiced well; a definite transition to the cruising pace (often called 'rhythm', or 'stride'); a series of focuses to maintain the cruising pace; and a procedure for the finish. The last two, however, should not be set in stone. In regatta races, the position of the other boats may have an effect on the timing of your focuses, while in head races, the opportunity to overtake may likewise call for flexibility.

You may find it helpful to write the focuses onto a map of the race course, or to write down approximately what you will be saying in order. I recommend visualising the race and practising your calls when alone at some point as well, to fix the plan into your memory. Some coxes also take the precaution of taping the plan to their thigh just before the race.

The start

This will be the sequence devised by the coach and practiced by the crew on numerous occasions. Make sure you know exactly what you are calling for every stage.

The transition to cruising pace / the rhythm call

Occurs after the lengthen strokes. Again you must have a definite call which is known to the crew, which should be followed by a ratings check.

The practice pieces you will have done in training will allow you to predict what calls you will likely need to call next. Some crews, caught up in adrenaline, find it difficult to make the appropriate change at this point, and keep the rating unsustainably high. The focus after the stride call would then be on acceleration to the finish and separation round the turn. It may, however, be more useful to focus on the crew's capacity for power at this point, and have a call for power for 10 strokes.

Focuses to maintain cruising pace

The focuses should coincide with landmarks or set distances along the course, e.g. corners on the bumps course; bridges on the Thames; or the 500m, 1000m and 1500m markers at Dorney Lake.

In general it is often a good idea to have a technical focus for each section (e.g. sharp catches, or length at the finish), with a 'push' past each distance barrier or landmark.

'Pushes' aim to increase the boat speed – assuming that it has dropped from cruising pace. There are two ways to increase boat speed: 1) increase the power output per stroke; or 2) increase the rating while maintaining the power output. Usually crews manage a combination of both. Often focusing on the acceleration to the finish, followed by focusing on squeezing off the toes (or the other way round), allows for an increase in rating and pressure.

Finish procedure

As said before, crews should cross the line with very little excess energy to continue rowing. In the last part of the race, however, cruising pace often suffers as a result of fatigue. It is therefore necessary to have a structured procedure in order to focus the crew on maintaining their boat speed.

This often takes the form of an extended push, where the crew focus on acceleration to the finish for five strokes, the quick change in direction at the front end for five, and then on effective drive through the middle third of the drive phase for the last five. The rating will come up as the crew are unable to perform the first method of increasing boat speed (see above).

D. *RACE TACTICS*

Here are some general points when racing side-by-side or when overtaking in a head race.

1. Tell the crew where you are in relation to the other crew/s. **I'm level with their six man… I'm moving through their five man now…**

2. Make sure that the crew make their pushes together. **Ok let's hold this power for five, ready for our push. They have half a length. Hold that power now… ready to come back. This is on the legs, together. Ready… go! LEGS DOWN! LEGS DOWN!**

3. Watch the other crew/s so that you can time your pushes. **They're pushing now but we're going to absorb their push, keeping our length. Good… long and strong. We move in two… in one… go! SIT BACK! SIT BACK! SIT BACK! We're coming back. I'm level with their stroke now…**

4. Don't ever 'sit' on a crew. If you're down, you push to get back up. If you're ahead, you push to break clear. **Let's finish this now. I want clear water in ten strokes. Get ready… this is when we break them. In one… go! DRIVE DOWN! DRIVE DOWN! DRIVE DOWN! Moving through… I'm on their bow ball now… hold the focus. DRIVE DOWN! DRIVE DOWN!**

E. *THE PERFECT RACE…*

(Summarised from B. Woods, Applying Psychology to Sport (London, 1998).)

Characteristics of a 'best' performance include:

- Physically relaxed… effortless, in control
- Mentally relaxed… no fear of failure
- Focussed on the present… detached, no distractions
- Highly energized
- Prepared… visualisation and mental rehearsal completed

As a cox it is your aim to ensure that this occurs every race, by removing controllable variables that could disturb such characteristics. E.g., make sure that the crew have visualised every scenario that could occur in the race (points 2 and 5); that they have eaten properly and are well hydrated (point 4); that your calls are focused on them and their technique, ignoring the crowd or other crews (point 3); and that you call the race plan correctly, reassuring them that they are in control at all stages (point 1).

Further reading:
J. McArthur, High Performance Rowing (Marlborough, 1997), ch. 9
T. Hooper, Coxing: Surviving the Wilderness Years (Cambridge, 1999), ch. 3
Check the Cambridge central public library's sport psychology section for useful books.

6. Taking it further…

There are three university clubs that you can trial for as an undergraduate or graduate. Prior to trialling there are the development squads, which allow improvement without the pressure or commitment of trialling.

A. *CUBC (HEAVYWEIGHT AND LIGHTWEIGHT MEN)*

This is the boat club that puts forward the Blue Boat to race against Oxford on the Tideway. Its reserve boat is Goldie. It owns boathouses on the Cam (Goldie boathouse, where the squad do their land training) and at Ely, and has very ample monetary resources. The squad attracts international rowers and coaches and has a very high reputation nationally.

Selection for the two boats is inevitably difficult but rowers and coxes who noviced at Cambridge routinely make it into the boats. Recent Emma blues or goldie colours include Hannah Oag (goldie cox 2000, noviced at Emma), Darren Barnes (CUBC spare IV+ 2003, noviced at emma).

www.cubc.org.uk - *official site*
www.theboatrace.org - *site covering the boat race*

B. *CUWBC (HEAVYWEIGHT AND LIGHTWEIGHT WOMEN)*

This boat club puts forward the women's Blue Boat to race Oxford at Henley, a week before the boatrace on the Tideway. Its reserve boat is Blondie, and there is a separate boat for lightweight women only (under 62kg, with a 59kg crew average). It owns a small boathouse at Ely and also trains on the Cam during the week. The squad lacks the funding enjoyed by CUBC and consequently also the same standard of rowers and coaches, although past CUWBC athletes have competed at a national level.

Emma has a strong tradition of participation in CUWBC, with the 2003 boat races involving the Emma students Nick Acock (Blondie cox, noviced at Emma), Mary Twitchett (lightweight boat) and Kate Billings (lightweight boat).

http://www.cuwbc.soc.ucam.org - *official site*

C. *CULRC (LIGHTWEIGHT MEN ONLY)*

This boat club puts forward the lightweight men's Blue Boat to race Oxford at Henley, on the same day as the women's boat races. Its reserve boat is Granta. Lightweight men must weight under 72kg, with a 69kg crew average. CULRC does not own a boathouse, so boats are stored at the Bridge Boatyard at Ely, although it also trains on the Cam during the week. Like CUWBC, CULRC does not enjoy much funding or sponsorship, although past CULRC athletes have competed at a national level.

Again, Emma's involvement in CULRC has been consistent. The 2003 boat races involved the Emma students Edd Knowles (Granta) and Andy Rankin (Granta).

www.culrc.org - *official site*

D. *DEVELOPMENT SQUADS*

All three boat clubs run development squads, to coach athletes who are interested in trialling in the coming season. CUBC's development squad runs in May term and part of the summer, while both CUWBC and CULRC's developments squads run over the summer. Attendance at CUBC and CULRC squads is selective, with selection depending on experience, erg score, technique and attitude; attendance at CUWBC squads tends to be more flexible and can be for only part of the full schedule. Those interested in attending should watch the CUCBC message board for relevant posts (www.cucbc.org), or get in touch with the relevant captain.

CUBC captain: Wayne Pommen, president@cubc.org.uk
CUWBC captain: Rachel Smith, rjs88@cam.ac.uk
CULRC captain: Doug Perrin, debp2@cam.ac.uk.

Further reading:
http://www.cuwbc.soc.ucam.org/articles/blondie2k.php - *an article about one girl's motivation to trial for CUWBC*