Theory of ringing up & down

All instructions are given for right handed ringers.

# Safety

**If you’re not sure if a bell is up or down you should test it by either:**

* Hold rope as if ready to ring normally (i.e. as if it is up – tail end (no loops) in left hand) and pull sally – if it swings slowly it is down; if you pull the bell off you have the tail-end in your left hand anyway so you can safely ring and set it.
* For light bells (or those with good bearings) simply pulling the rope gently with two fingers should be enough to get it swinging gently, but isn’t (usually) enough to pull it off. If the bell has plain bearings (or is really heavy) this method is not always conclusive, but if the bell does not swing when you pull with two fingers then you assume it is up anyway.

# Overview

**The key point is that raising and lowering in peal is a collective effort, and it is dynamic.** Everyone is ringing upwards (or downwards) together and in rounds with a variable speed rather than a constant speed:

* as the bells get higher so the interval between blows increases
* as the bells get lower so the interval between blows decreases

In addition, when the bells are nearly down the back bells will not strike at both strokes so the handstroke change will contain fewer bells than the backstroke. Everyone should aim for continual change, not just drift until something doesn't fit. To achieve this you need to be able to raise and lower a bell at an externally set speed rather than just the speed that feels comfortable. **This means no sudden changes of speed, for example when letting out or taking coils.**

# Visual Resources

This document is a compilation of resources readily found on the internet and acknowledged at the end. Reading about ringing up and down in peal is great but you need to see it being done properly to really understand what you need to do. The following two links show two longish YouTube videos of ringing up and down in peal which demonstrate very well what is described in this document.

Ringing Up (a single bell)- <https://www.youtube.com/watch?v=nWVXlWOe7J4>

Ringing up in peal - <https://www.youtube.com/watch?v=JzPqdoLFj8U>

Ringing Down - <https://www.youtube.com/watch?v=StCRIrPgDek>

You will find many other examples on the internet.

# Ringing Up

* Pull down hard and then lift your hands as rope goes up, BUT DO NOT resist – otherwise you will be wasting energy.
* Keep back straight – don’t lean forward when pulling.
* Try to pull straight down (not slightly sideways or forwards) – otherwise you throw the rope across the room and when the bell is nearly up you won’t be able to reach/catch the sally.
* If struggling to get the bell up learn to bend your knees as you pull (keep your back straight) – you are then using all your weight (not just arm muscles) to pull the bell up.
* When the bell is nearly up and the sally starts bouncing up just steady it with your right hand – if possible you can pull it, but your main focus should still be on pulling the backstroke. Don’t concentrate on catching the sally and forgetting to pull the backstroke as the bell will start to ring down.

# Ringing Down

### A bell that is pulled off will ring itself down – your job is to control its speed.

* To control the speed of the bell as it comes down you still need to pull down a little (which also helps control where the rope is going) but your main focus is to resist the rope going up, and thus reducing the bell’s swing.
* Once the bell starts coming down, catch the sally with just your right hand.
* Change rope length after the handstroke between the sally going down and the rope going up to backstroke. **Only take in an inch of rope at a time using thumb and forefinger.**
* Make loops when the rope in your hand starts to get long, or an existing loop is getting too big (and about to hit you in the face!) Keep your right hand on the rope and pull your left hand (with loop) backwards about a foot. Then bring left hand forward towards right hand and grab rope immediately under right hand. (Do not move your right hand.)
* When the sally stops bouncing ignore it and concentrate on taking in rope and making loops.
* As you hands reach the sally at backstroke you can start chiming – just give the bell a hard tug as it reaches the top of its swing.
* When ready, stop the bell so the rope does not swing up and down.
* Each tower does different things with ropes when the bells are down: some tie down knots (a “bowline” for the sailors); some leave them on the floor; some put on a “spider”. There is no right or wrong way.

# Different bell speeds

Smaller bells swing faster than big bells so when ringing up in peal the lighter bells have to ring up quite a way before the tenor can start chiming. Similarly when ringing down the trebles will still be a third up (or higher) when the tenor is chiming.

When there is a big difference in weight between treble and tenor, the trebles have to chime whilst still a third up (and must not ring down any lower) so the tenor can chime. This does make catching at the end harder for the trebles though.

# Ringing up and down in peal

### The treble controls the speed of ringing up and down.

* The 2nd bell is very important when ringing up or down it sets the pace (gap between bells determined by 2).
* The tenor has a big impact as the other bells have to ring around the less manoeuvrable (and heavier) tenor.
* Follow the bell in front of you, but watch a couple of bells further forward too in case the bell in front waivers.
* Try to maintain the gap between you and the bell in front – you want to match the speed of your bell to the speed of their bell.
* Getting back in time – when you get out of step with the bell in front of you it is sometimes difficult to work out how to get back in time. **The key is to make adjustments as soon as possible**, if your bell gets too far out then it is difficult for even an experienced ringer to get you right.

**If your bell is striking before the bell in front of you** then your bell is LOWER than the bell in front and is it is swinging too fast. You need to pull hard and let out a bit of rope to slow your bell down – the higher your bell is up the slower it will ring.

**If your bell is striking after the bell behind you** then your bell is HIGHER than the bell in front and it is swinging too slowly. You need to ring your bell down slightly to match (take in a bit of rope) their speed. Learners often find it easier to stop ringing up and just maintain their bell at the current speed until the other bells ring up to their level. However this method does mean you may sometimes end up on the opposite stroke to the other bells.

# Trebling up

* You are in charge – say clearly: “Here’s one” then start ringing up.
* Each successive bell joins in one at a time. **Keep ringing up fairly fast at the start** – until all bells are ringing both strokes. You have to ring up quickly in order to space out the bells enough to fit them all in as they start chiming..
* **Then reduce the rate of ringing up to allow tenor to get up** – remember the tenor is much heavier than the treble. If the tenor ringer is pulling up as hard as they can and going red in the face then you’re probably still ringing up too fast – you should reduce your rate of ringing up more.
* When everyone is up (if necessary ask the tenor ringer if they’re up), clearly call “Stand”

# Trebling down

* Don’t start ringing down until you have reasonable rounds.
* The treble is in charge – say clearly: “Gently down” or “Downwards”
* If there are lots of bells (8 or more) it is worth asking everyone to squeeze their bells together as you start going down – this helps the heavier bells to start ringing down. Remember as you ring down you’re all ringing your bells faster so very slow rounds before you start doesn’t help.
* Slow and steady down – **you have to ring down at a slower rate than all the other bells** – pulling the tenor down is hard work so if the tenor ringer is being pulled off the ground to keep up with you then SLOW DOWN - you’re ringing down too fast.
* As you near the end **listen for tenor dropping out and then ring down a little** until you are following the tenor – then “hold station” – don’t ring any further down as tenor won’t be able to chime any faster.
* Do not drop too low – **the tenor cannot chime as fast as the treble so once tenor is chiming STOP RINGING DOWN.**
* Catching at the end. Some towers count two, some count three, but process is the same:
  + Treble ringer says: “Two (or three) more, miss and catch (in rounds)”
  + As you chime the treble, count “One”
  + As you chime again, count “Two”
  + Miss the rope once
  + Catch and stop the bell from swinging.
* For a little variation (or when the team gets adventurous) you can try catching in other changes:
  + Queens (135246 on 6) – odd bells catch after missing once, even bells catch after missing twice.
  + Tittums (142536) – more tricky – 1 and 4 catch after one miss, 2 and 5 after two misses then 3 and 6 catch after three misses. This is harder on big bells as the clapper on the tenor may have stopped swinging enough to chime by the third miss.
  + Weasels (14235 – useful for 5 bell towers) – needs good rounds before hand to get the timing – then 1 and 4 catch after one miss, 2 3 and 5 catch after two misses – “Pop goes the weasel”

**Trouble-shooting**

It is common for inexperienced ringers to get stuck half way up. The reason lies in their technique, and not any built in energy barrier to do with the way the bell swings. One reason that some find the middle stage more difficult is that the faster rope movement aggravates the effects of poor technique. The stronger you are, the more likely you will be able to do it with poor technique. Admittedly, with a very heavy bell strength plays a role even with good technique.

#### Chiming

When chiming the clapper is being bounced off the side of the bell. It is the clapper that is swinging rather than the bell. The timing of the pull (check) should be such as to hold the bell firm at the point that the clapper strikes it thus causing the clapper to bounce off a firm surface.

#### Even speed of handstroke and backstroke

The heavier the bell the less of an impact a ringer can have on any one stroke. Hence the only way to achieve even ringing is for each bell to be allowed to swing to its highest point at both handstroke and backstroke. The other thing to remember is that **however hard the pull, the bell will go up only as fast as it is allowed to by letting out rope.**

Avoid being so keen to get a good backstroke pull that you start the pull fractionally early which is counter-productive. The balance between pulling too early and preventing the bell from rising, and pulling too late and missing the best bit when the bell is moving relatively slowly is a very fine one. Getting it right requires you to **feel** what the bell is doing. Feeling what is happening is much easier with a relaxed grip.

#### Backstroke

Some ringers have a tendency to grip the end of the tail end too tightly and so check the bell at backstroke - either by stopping the rope before the bell has reached the top of its swing or by the weight of their arms acting as a drag on the bell or both. More experienced ringers use a more relaxed grip so that the bell is able to take as much rope as it needs when the arms are at full stretch. The ringer can then **feel** accurately when the 'rope slip' is about to finish and can tighten the grip and start the downward pull. This allows a smooth application of power.

If you keep hold of the same bit of rope, then the bell cannot rise, however hard you pull. All the energy you put in will be dissipated in the jerk at the top of each stroke.

Equally if you start to pull before the bell reaches the top of its stroke you will stop it rising. This is **“checking”** the bell rather than **“pulling”.**

This is all a matter of confidence, 'feel' and timing which usually only comes with practice.

#### Handstroke

At the start of the raise the timing of the handstroke is determined entirely by the degree of pull at the backstroke. Even after you start using one hand on the sally it is not possible for most of us to check the bell significantly one handed. Consequently the handstroke is the best guide to whether your bell is at the right height.

#### Length of pull

As with ringing a bell that is up the way to achieve a well behaved rope is through a long pull and the gradual application of power. A short sharp pull, or snatch, will result in an errant rope on all but the most docile of bells. This is achieved at the top of the stroke by having a relaxed grip that applies just enough tension to feel what the bell is doing. As you feel the bell reaching the top of its swing the power should be applied gradually.

The rate of application, and hence the speed of movement, will be different for different bells. It must not be so quick as to be a snatch but equally it must be quick enough that the tension in the rope rises even though the bell is now falling

At the bottom of the stroke the hands should follow through such that the wrists are turned down as if holding a golf club. This should be a routine at the end of every backstroke, both to impart a little more energy to the bell and to help keep the rope tidy.

#### Taking and releasing coils

If your bell is to rise or fall in time with the band then the **releasing or taking of coils should not of itself cause a change in the speed of your bell.**

During the raise, when a coil comes tight you need to ensure that you are ringing at full stretch before releasing it. When the coil is released the tail end is effectively lengthened by the length of rope round your hand, about 6” / 15 cm, so at the next stroke you will need to ring with bent arms to allow for this. No more rope should be let out until the bell has been raised enough to use up this extra length. When releasing the last coil it can be easier to let the tail end out rather that to drop the coil, especially if the tail end of the rope is too long.

During the lower, the coil should always be taken with the rope below the hand that is holding the tail end such that there is no sudden change in length of tail end.

#### Sally

The sally "misbehaving" is a tell tale sign that the ringer is not pulling effectively. The primary causes are:

* the start of the pull being snatched
* stopping the hands before the end of the stroke (not following through)

#### Late handstroke and early backstroke:

This is caused by not letting out enough tail end and so checking the bell at backstroke. It is often combined with over-pulling at backstroke

#### Bell sets at handstroke:

This is an extreme case of late handstroke where when the bell is near the balance and the ringer cannot hold the handstroke one handed.

## Acknowledgements

Bicester Branch - <http://www.bicesterbranch.org.uk/resources/ringing-up-down-course-notes/>

The Heatons - <http://www.heatons.fsnet.co.uk/Ringing/Articles/InPeal.html>

Cambridge District - [www.cambridge**ringing**.info/**RingingUpAndDown**InPeal.doc](http://www.cambridgeringing.info/RingingUpAndDownInPeal.doc)