

# CHANGE-RINGING

st-andrews.sacr.org

bellringers@st-andrews.ac.uk

## SPORT

Unlike most other musical instruments, the bell is very heavy and moves very fast. Learning to **handle** the bell is a challenge with a steep learning curve. A small weak person can ring a bell much heavier than they are, if they have good skills and technique.

In the English tradition, the bell is rung **full-circle** using a **rope** and **wheel**. The bell is moving out of sight above you in the tower; your only feedback from the bell is the gentle tension on the rope, and the sound of the bell speaking about one second after you start the movement.

### RESOURCES

Bell-handling can only be learned hands-on in the tower, with an instructor. The movements of holding, moving, and transferring the hands to the rope are very quick and delicate yet firm. There are a lot of subtle and difficult motor and proprioception skills you need to pick up, by repetition and constant feedback.

But it's also important to study the mechanics of how the bell works. There is a model bell in the ringing chamber, and you should be able to go up and see the bells in the bell-chamber. There are videos on Youtube of a ringer and their bell in split-screen mode, so that you can see and understand how the movements sync with the sound.

## MUSIC

Change-ringing on tower bells is a very loud public music performance.

All ringers are by definition musicians, and so music performance must be the core of our art.

We must learn to listen carefully and critically to the sound of each bell relative to the others in the tower.

**Striking** is the art of controlling the exact timing of your bell relative to the others, to give an even musical rhythm to the sound of the bells. Hearing irregularities or errors in your own striking allows you to correct the swing of your bell in response.

It is important to learn to hear the pitch or sound of your bell amongst the others, and to hear the **place** of your bell in the rhythm of the **row**. More advanced listening skills involve hearing the pitches of the **treble** and other bells, and hearing the music of the **changes**.

### RESOURCES

Listen whenever you can. Come to **practice night** and listen to all the ringing. Come on **Sunday mornings** and listen. Listen to good ringing performances on Youtube. Work through a graded series of listening exercises such as the ones in Michael Foulds's book & DVD

## MATHEMATICS

The music of the bells is not tunes or classical harmonies, but is a kind of serialism. This kind of mathematical music developed in the 17th century in England, specifically for tower bells rung full-circle.

The bells each sound once in a regular **row**. The sequence of the bells can be varied by swapping the **places** of two adjacent bells. Only adjacent pairs may swap. Ringers learn a **method**, which is an algorithm to generate a pre-arranged sequence of **changes**. There are many different methods, from the very old ones invented or discovered in the 17th century, through to newly-composed ones, and from very simple short ones through to fiendishly difficult ones.

### RESOURCES

Changes are also rung on hand-bells, and you can learn hand-bell ringing to help you understand how change-ringing works in preparation for ringing tower bells. Or, you can ring changes on handbells as an independent performance art.

You learn methods at home, by studying the **blue line** or by memorising the **order of work**.

There are change-ringing apps for your phone or computer containing method libraries, which you can use to read and learn the line, or to practice and test your memory and understanding.