CHANGE RINGING ON HANDBELLS

FROM CALL CHANGES TO LONDON SURPRISE MINOR

Notes and diagrams together with learning and teaching points.

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1 Introduction

Welcome to mathematical music.

Change ringing developed because bells hung in towers, and weighing several hundredweight had wheels attached and were swung higher and higher until they turned a full circle. With a limited number of notes (often just the six lower notes of a diatonic octave) and the fastest repeat of a note being about 2 seconds, music as we know it is impossible.

On the continent the use of bells developed in two ways, the first being a small number of bells, chimed (swinging through maybe 30 to 45 degrees, and allowed to chime (i.e. clash and clang) at the same time, in smaller churches. The second, in the larger Abbeys and Cathedrals the installation of a larger number of bells, often with a chromatic scale, and hit by hammers operated from a keyboard. In this case musical tunes are possible, and are uniquely tuneful owing to the percussive nature and slow fade of each note.

In the England we found that a bell could be swung just past the vertical, and the ringer could balance the bell at that point thereby delaying how long it would be before the note was repeated. Also, by watching other ringers you could ensure that no two bells rang at the same moment. So it was then possible to ring the bells for example in the order down the scale from highest pitch to the lowest pitch without discordant clashes. In the belfry the ropes normally fall in this order, and visually the ropes fall and rise in order around the circle. Hence ringing 1-2-3-4-5-6 became known as ringing “rounds”. The sound is musical without being music, rhythmic, repetitive, and after a short while, boring.

Written out this would look like:

\[
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 2 - 3 - 4 - 5 - 6
\]

So then changes into the order could be introduced by holding one bell a fraction longer and ringing another fractionally quicker. So a call of 2 after 3 would result in the sequence 1-3-2-4-5-6.

\[
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 2 - 3 - 4 - 5 - 6 \\
1 - 3 - 2 - 4 - 5 - 6 \\
1 - 3 - 2 - 5 - 4 - 6 \\
1 - 3 - 2 - 5 - 4 - 6
\]

It is a small step from there to get to change ringing where the sequence alters at every pull of the rope. So simple change ringing on 4 bells would look like:

\[
1 2 3 4 \\
2 1 4 3 \\
2 4 1 3 \\
4 2 3 1 \\
4 3 2 1 \\
3 4 1 2 \\
3 1 4 2 \\
1 3 2 4 \\
1 2 3 4
\]

Giving 8 sequences before repetition occurs.
Change ringers then developed more and more complex patterns and techniques for extending the number of sequences (or changes) without repetition. On 7 bells the maximum possible number of changes is 5,040 and this became a standard length. So to ring 5,000 or more changes became known as ringing a “peal”.

Ringing changes on handbells then uses the same method principles as on tower bells to avoid repetition of sequences. However, whilst the challenge on towerbells for the novice is initially physical because it takes a level of skill to control a musical instrument weighing half a ton or more, on handbells the challenge is more cerebral, you have two bells to navigate through the complexity of the method of ringing.

Various strategies are used to reduce the mental challenge of ringing a pair of bells but nothing replaces the need to study the structure of the ringing methods in great detail. This study pays dividends in both handbell ringing and towerbell ringing. Anyone thinking “I might be interested in learning” needs a) a good sense of rhythm, and b) some ability to think logically.

Please go to the links page on www.handbellringing.org.uk for more introductory information, and a great set of YouTube recordings.

2 Rounds and Call Changes

Ringing rounds and simple call changes gives a learner the opportunity to get the feel and rhythm of ringing without the mental challenge of change ringing.

Ergonomics

Many novices have a little difficulty to begin with in making a handbell strike, once, and once only on a handstroke or backstroke movement. It is the act of stopping the movement that throws the clapper against the spring sufficiently strongly to make the clapper contact the bell. And hence it may help beginners to get a feel for the handbells standing up in order to give more room for movement than is afforded by sitting down.

Ringing rounds

Rounds, down the scale from the highest pitched bell and finishing with the keynote, is normally rung clockwise. Once people have relaxed into ringing rounds it is important to listen carefully to the spacing of the bells, and to adjust to a near even spacing as possible; there is a natural tendency to make the gap between ringers slightly bigger than the gap between one's own pair of bells.

Ringing simple call changes

There is benefit in ringing call changes on 8 and 10 bells for people learning change ringing on 6. The timing / spacing on the lower numbers is easier after ringing on the higher numbers.

The first step is to jump between rounds and the "pretty" changes

- Queens: 135246  Tittums: 142536
- Whittingtons: 125346  Kings: 531246
and it is worthwhile swapping the pairs of bells people are ringing in order to give practice at leading, and at ringing all of the sizes of the bells in use.

Calling the change-over between pairs of bells is a useful step towards plain hunting as it enforces the recognition of bells by numbers. Calling the up bell and down bell is helpful to learners.
To go from row 1-2-3-4-5-6 to 1-3-2-4-5-6, the call would be "2 over 3, 3 to treble".

**Popular Named Changes**

The most useful named changes on 6, 8 and 10 bells are listed below

**Rounds**
- 6: 123456
- 8: 12345678
- 10: 1234567890

**Queens**
- 6: 135246
- 8: 13572468
- 10: 1357924680

**Kings**
- 6: 531246
- 8: 75312468
- 10: 9753124680

**Tittums**
- 6: 142536
- 8: 15263748
- 10: 1627384950

**Whittingtons**
- 6: 125346
- 8: 12753468
- 10: 1297534680

**Learning and Teaching notes:**

The visual aspect of ringing needs to be mentioned, so if a bell is rung and by accident doesn't strike, the learner needs to be taught not to "waggle the bell", just leave it as if it had properly been rung because other people will have counted the movement as a bell having been rung.

When ringing rounds, use an experienced ringer to ring 1-2 when possible, in order to demonstrate and emphasise the open handstroke lead.

The spacing of bells inside tittums and whittingtons should be used to emphasize the team nature of handbell ringing and as a preparation for plain hunting; one apart in tittums is like 1 apart in coursing.
3 Plain Hunting on 6 Bells

Introduction.
In Plain Hunting, every bell moves in the same pattern, one step at a time until it reaches the first or last place in the change, it then turns round and repeats the process until arriving back at its starting point. The underlying pattern for this is for adjacent bells to change position (cross over) or to make 1sts and 6ths places to delay the return to rounds as long as possible.

The numbered bells below are shown in their positions in the change-rows and also as a grid:

In double-handed handbell ringing, a pair of bells can start plain hunting from any combination of two places out of the six available giving 15 different pairs of places. However, the 15 different starting positions only lead to three unique hunting patterns, and these are defined by where the pairs of bells cross over inside the pattern.

These hunting positions are:

- **Cross-over**
  - **1-2 / 5-6**  Name: 1-2 position, or coursing
  - **2-3 / 4-5**  2-3 position
  - **3-4 / 3-4**  3-4 position, or opposites

It is helpful to ring several pairs of rounds, handstroke and backstroke, to establish a good rhythm before starting to ring the changes. When the conductor calls “Go Plain Hunting”, the bells commence their work on the next handstroke.

How do you know wherein the change-row you should ring your bells?

The answer is to work out where the first bell should be relative to the start of the change-row, and then ring your second bell at the correct spacing from the first.

The following tried and trusted aide-memoir has been used for decades:

**1-2 Hunting pattern, or “coursing”**.
2-3 Hunting pattern.

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Go

Lead and 2 between
Lead and 3 between
1 from lead and lie
2 from lead and lie behind
Meet in 4-5
Cross in 4-5
2 from lead and lie behind
1 from lead and lie
Meet in 2-3
Cross in 2-3

3-4 Hunting pattern, or “opposites”.

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Go

Cross in 3-4
1 from lead and 2 between
Lead and lie
Meet in 3-4
Cross in 3-4
1 from lead and 2 between
Lead and lie
Meet in 3-4

Ringing Plain Hunting

Whatever your “learning style” might be, the above three patterns need to be engraved in memory so that you have enough spare mental energy to count bells and think about the next instruction. To that end time spent looking at the detailed instructions above, together with the double blue line will pay dividends.

Normally when starting to ring plain hunting, the bells are paired up, 1-2, 3-4, 5-6, which means two ringers get coursing pairs, one ringer gets a pair in opposites, and no-one gets a pair in 2-3 pattern.

To practice 2-3 pattern, either get one ringer to ring 1 and 4, and another to ring 2 and 3, or start from a change row other than rounds such as 134256.

Plain Hunting on higher numbers:

The principles of Plain Hunting apply on all numbers, but in practice, the ability to use coursing bells (not just 1-2 or 5-6) becomes significant; the more bells you have, the harder they are to count.

Plain hunting on 8 bells has four different cross-over positions, viz:

- 1-2 / 7-8: 1-2 pattern or "coursing"
- 2-3 / 6-7: 2-3 pattern, coursing 3 apart
- 3-4 / 5-6: 3-4 pattern, coursing 5 apart"
- 4-5 / 4-5: 3-4 pattern or "opposites"
4  Plain Bob Minor

The ringing method, Plain Bob, is a simple extension of Plain Hunting; it enables 60 changes to be rung on 6 bells before returning to rounds; and with some calls, (i.e. bobs and singles), all 720 unique change rows can be rung without repetition.

In Plain Bob, as in other plain methods, the treble is a fixed bell, it simply hunts up and down as it does in Plain Hunting. The remaining bells, (known as working bells), perform a simple dance around the treble, and the majority of this is also plain hunting.

The difference between Plain Hunting and Plain Bob comes whilst the treble is leading. In Plain Hunting when the treble leads, 6ths place is made, the pairs in 2-3 and 4-5 cross, and rounds is reached. In Plain Bob, when the treble leads, 2nds place is made, and the pairs in 3-4 and 5-6 cross. This causes the bells in those places to make step backwards in their hunting path, known as a “dodge”.

Consequently, the first time the treble leads, the bells at backstroke fall in the sequence 135264, and at that point all six bells start ringing plain hunting once more.

This pattern is then repeated a further 4 times until after 60 change rows the bells return to rounds. The 60 changes without bobs and singles is termed “a plain course”, and with bobs and singles, “a touch”. A touch of 720 changes is known as “The Extent”. We will deal with bobs and singles later.

So in a plain course, we get 5 sections of 12 changes, each section having an identical pattern, but also having the working bells start from a different position each time. Viz:

Plain Bob Minor, The Plain Course Structure:

Plain Bob creates a distinction between the treble which rings a simple, fixed course, and the other bells are known as “working bells” or “inside bells”.

Turning now to look at each of the pairs of bells in turn:
Ringing 1-2 to a Plain Course:

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Lead and dodge 3-4 up

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Plain Hunting 2-3 pattern

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Plain Hunting 3-4 pattern

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Lead and dodge 5-6 down

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Plain Hunting, coursing

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Lead and make 2nds place
Ringing 3-4 to a Plain Course

Plain hunting - opposites

2nds and 5-6 down

Plain hunting 2-3 pattern

3-4 scissors back together

Plain hunting 2-3 pattern

3-4 scissors apart

Plain hunting 2-3 pattern

2nds and 5-6 up

Plain hunting - opposites

Dodge together in 3-4
Ringing 5-6 to a Plain Course

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Dodge 3-4 & 5-6 up in parallel

Ringing 2-3: 5-6

Plain Hunting - coursing

Dodge together in 5-6
Ringing Touches of Plain Bob Minor
What is a touch?
A Plain Course of Plain Bob Minor is 60 change rows, and to go beyond this without repetition we need to link in further changes before getting back to rounds. We do this by making temporary alterations, one at a time, to the method; these alterations are known as a call. Two types of call are needed, and these are known as a “bob” and a “single”.

Bobs and Singles
Bobs and singles affect the work of the bells in 2nds, 3rds and 4ths places at the lead end where the call is made. Calls are always made on the backstroke before the treble’s full lead, and take effect on the backstroke of the treble’s lead.

The call of a bob means that as the treble leads, 4ths place is made, and the two bells in 2nds and 3rds cross over. The bells in 5-6 are unaffected.

At the call of a single the bells in 2nds 3rds and 4ths place all remain in place and only the pair in 5-6 swap over. The bells in 5-6 are unaffected.

The impact of calls on the working of the individual bells:
PLE – making seconds place over the treble.
- **PLE:** Make seconds over the treble
  - **Bob called**
    - Run out to thirds
    - Make seconds over the treble next lead end
  - **Single called**
    - Unaffected

- **PLE:** Dodge 3-4 down
  - **Bob called**
    - Run in to 2nds
    - Dodge 3-4 down next lead end
  - **Single called**
    - Make 3rds place
    - Make 2nds next lead end
• PLE: about to dodge 3-4 up
  • Bob called
    o Make 4ths place
    o Hunt in to lead
    o Dodge 5-6 down next lead end
• Single called
  o Make 4ths place
  o Hunt in to lead
  o Dodge 5-6 down next lead end

• PLE: dodging in 5-6
• Bob called
  o Unaffected
• Single called
  o Unaffected

The impact of calls on the pairs of bells:

In the following paragraphs we have enumerated all of the combinations of lead end and call but this is a lot of information to memorise. However, we would advise looking closely at the information and ensuring that it is properly understood.

As all of the plain hunting patterns have already been learned, a good way to cope with calls is to look at which of your bells is affected and how, and then to ring plain hunting from the new pair of positions in the appropriate pattern until the following lead end. In this way the skill of watching the treble is rewarded, and reliance on knowing your exact placing in the double lines is reduced.

Ringing 1-2 to a touch:

Once the work of 1-2 in a plain course has been thoroughly assimilated, the addition of bobs and singles adds interest and can be learned quite easily from the following:

• PLE: Leading and making seconds
  • Bob called
    • Run out to thirds place,
    • Hunting: coursing pair,
    • Make seconds next lead end
  • Single called
    • Unaffected, make seconds and carry on coursing

• PLE: Leading and about to dodge 3-4 down
  • Bob called
    • Run in to 2nds place
    • Hunting: coursing pair,
    • Dodge 3-4 down next lead end
  • Single called
    • Make 3rds place
    • Hunt out (still coursing)
    • Make 2nds next lead end

• PLE: Leading and about to dodge 3-4 up
- Bob called
  - Make 4ths place
  - 2-3 hunting pattern
  - dodge 5-6 down next lead end
- Single called –
  - As for bob, but both blows in 4ths are over the same bell
- PLE: Leading and dodging in 5-6 either way
  - Unaffected by calls

The impact of calls on ringing 3-4, and 5-6:

- PLE: 2nds and 3-4 up
  - Bob called
    - Run out and make 4ths
    - Hunting: Opposites
    - 2nds and 5-6 down next lead end
  - Single called
    - Make 2nds and 4ths
    - Hunting: Coursing
    - 3-4 down and 5-6 down (parallel) next lead end

- PLE: 2nds and 3-4 down
  - Bob called
    - Run in and run out
    - Hunting: 2-3 pattern
    - 2nds and 3-4 down next lead end
  - Single called
    - make 2nds and 3rds
    - Hunting: 2-3 pattern
    - 2nds and 3-4 down next lead end

- PLE: 2nds and 5-6 up
  - Bob called
    - run out and 5-6 up
    - Hunting: Coursing out
    - 2nds and 3-4 up next lead end
  - Single called
    - Unaffected

- PLE: 2nds and 5-6 down
  - Bob called
    - Run out and 5-6 down
    - Hunting: 2-3 pattern (start with m&c in 4-5)
    - 2nds and dodge 5-6 up next lead end
  - Single called
    - Unaffected

- PLE: Dodge together in 3-4
  - Bob called
    - Run in and make 4ths
    - Hunting: Coursing
    - 3-4 down and 5-6 down (parallel) next lead end
  - Single called
    - make 3rds and 4ths
- Hunting: Opposites
- 2nds and 5-6 down next lead end

**PLE: 3-4 up and 5-6 up (parallel)**
- Bob called
  - Make 4ths and dodge 5-6 up
  - Hunting: 2-3 pattern
  - Dodge 3-4 up and 5-6 down (scissors apart) next lead end
- Single called
  - Make 4ths and dodge 5-6 up
  - Hunting: 2-3 pattern
  - Dodge 3-4 up and 5-6 down (scissors apart) next lead end

**PLE: 3-4 up and 5-6 down (scissors apart)**
- Bob called
  - make 4ths and dodge 5-6 down
  - Hunting: coursing down
  - Dodge together in 5-6 next lead end
- Single called
  - make 4ths and dodge 5-6 down
  - Hunting: coursing down
  - Dodge together in 5-6 next lead end

**PLE: 3-4 down and 5-6 up (scissors together)**
- Bob called
  - Run in and dodge 5-6 up
  - Hunting: Opposites
  - Dodge together in 3-4 next lead end
- Single called
  - Make 3rds and dodge 5-6 up
  - Hunting: Coursing out
  - Make 2nds and dodge 3-4 up next lead end

**PLE: 3-4 down and 5-6 down (parallel)**
- Bob called
  - Run in and 5-6 down
  - Hunting: 2-3 pattern
  - 3-4 down and 5-6 up (scissors together) next lead end
- Single called
  - Make 3rds and 5-6 down
  - Hunting: 2-3 pattern (start with m&c in 4-5)
  - Make 2nds and dodge 5-6 up next lead end

**PLE: Dodge together in 5-6**
- Bob called
  - Unaffected
- Single called
  - Unaffected
Example Touches of Plain Bob Minor

Touches are often rung using the tenor bell reference point (a.k.a. an observation bell). It is perfectly ok to make calls that affect the tenor, but very often the tenor is unaffected. The calling positions are known by their impact on the tenor viz:

- W: "Wrong" - 5-6 up
- F: "Fourths" - 3-4 up
- B: "Before" - 2nds
- I: "In" - 3-4 down
- H: "Home" - 5-6 down

Very short touches of Plain Bob Minor

1 36 Plain Bob Minor

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This is the shortest possible touch, three consecutive bobs, 5 makes the first, tenor makes the second, and 4 makes the last bob.

2 72 Plain Bob Minor

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In this simple touch, bell no 4 makes 4ths at both bobs, 5-6 run in and out at the first bob, and 2 and 3 run in and out at the second. This is "Before and Home".

Short touches of Plain Bob Minor

3 120 Plain Bob Minor

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In this simple touch a bob is called every time the tenor dodges in 5-6; it would be spoken as: Wrong, Home, Wrong, Home.

4 120 Plain Bob Minor

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This simple touch is: Single Home, Single Home. Only the ringer of 3-4 is affected.
5 120 Plain Bob Minor

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This simple touch is: Single Wrong, Single Wrong. Only bells numbered 2 and 5 are affected.

6 240 Plain Bob Minor

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In this simple touch is: Bob Wrong, Single Wrong, Bob Wrong, Single Wrong. Bell no 5 makes 4ths at each bob, and 3rds at each single.

7 720 Plain Bob Minor

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Repeat twice

The addition of a bob home gives 42356 as the final lead end, repeat twice to achieve the extent on 6 bells.

8 360 Plain Bob Minor

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Repeat twice

This touch is derived from no 3 by omitting the final bob home, and repeating the touch twice to give 360 changes, the maximum possible without using a single.
Getting started with touches

The major factors seem to be:
The overall strength of the band,
The speed at which concepts and challenges are being tackled and overcome.
If you are lucky enough to have two experienced handbell ringers and only one "improver" in the touch then just working down the above 9 touches, watching for mistakes and learning points should be enough to get up to quarter peal standard.
If your situation is more of a struggle, the following are suggested:
Brief the band on what the touch entails,
Specifically get the weaker person on the inside pair to learn how their bells are affected.
It can be useful for the conductor to call out when the lead ends occur that have no call.
Putting the weaker ringer on 5-6 and briefing him / her on the repeating structure of the calls, and the repeating structure of the work of their pair of bells can enable progress to be made, and very importantly, practise to be gained by all concerned.
4 Double Bob Minor

The transition from ringing Plain Bob Minor to ringing Treble Bob methods is quite a jump to achieve all in one step. These intermediate methods create interest for their own sake and also enable practice at ringing the sort of structures encountered in Treble Bob. Three methods are described here:

- Double Bob Minor, -16-16-56/12
- Little Bob Minor, -16-14/12
- Bastow Little Bob Minor, -12/16

Double Bob

Double Bob is mostly plain hunting, like Plain Bob, but in Double Bob, whenever the treble lies behind, the bell underneath it makes a place, and the other pairs of bells dodge. In Double Bob minor, the place is made in 5ths, and the extra dodges are in 1-2 and 3-4.

The rows in Double Bob are identical with those in Plain Bob, so you will recognise the “tune”, however, the 5ths place at the half lead jumbles up the order in which the blocks of 6 are rung, and in doing so includes all the work of Plain Bob at the lead ends plus all of the same work, “upside down” at the half leads.

If you are new to change ringing on handbells you might wish to write out the pairs as we did for Plain Bob Minor. However, it is perfectly valid for a ringer who is OK with Plain Bob to attempt to ring Double Bob by observing the treble approaching 6ths place and being ready to make 5ths and dodge in 1-2 and / or 3-4 as appropriate.

Being aware of the position of the treble is a key skill in all treble dominated methods, and equally is a key skill in handbell ringing; starting here to develop the skill of watching the treble.
Little Bob
Little Bob contains some of the change-rows from Plain Bob, but not all of them. The work of the treble is to hunt out only as far as 4ths place, make 4ths place hand and back, and then to returns to the lead, where seconds place is made as in Plain Bob.

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The structure of the half lead, treble making 4ths, is just like a bob in Plain Bob, except that it is the treble that is making 4ths rather than leading. The impact on the other bells makes Little Bob into a good fun method.

Because of the 4ths place half lead and 2nd place lead end, the bells reaching the back always dodge 5-6 up, lie behind, and then dodge 5-6 down.

The impact on the pairs is challenging, as the treble work can force coursing pairs apart, temporarily, as in 5-6 in the first lead, or flip a pair of bells between hunting in 3-4 position into asymmetric hunting, and vice versa.

As with Double Bob, a hesitant learner could do well to write out the work of the three pairs, but a better technique for someone who is proficient in Plain Bob, is to observe the treble in 4ths and dodge in 5-6 if needed, and ring the standard lead ends when the treble leads.

Why is this a good fun method? There is something to do every 4 changes, that’s a lot faster than Plain Bob, (every 12 changes), quite a bit faster than Double Bob (every 6 changes), it’s non-stop dodging in 5-6, and the interruptions to the hunting position come thick and fast. This is a stepping stone towards Treble Bob.
Bastow Little Bob
In Bastow the treble alternately makes second place and then leads again. The seconds place causes the bells in 3-4 and 5-6 to dodge. Giving a plain course of just 20 changes.

B 1 2 3 4 5 6
H X 2 1 4 3 6 5
B 12 2 1 3 4 5 6
H X 1 2 4 3 6 5
B 16 1 4 2 6 3 5
H X 4 1 6 2 5 3
B 12 4 1 2 6 3 5
H X 1 4 6 2 5 3
B 16 1 6 4 5 2 3
H X 6 1 5 4 3 2
B 12 6 1 4 5 2 3
H X 1 6 5 4 3 2
B 16 1 5 6 3 4 2
H X 5 1 3 6 2 4
B 12 5 1 6 3 4 2
H X 1 5 3 6 2 4
B 16 1 3 5 2 6 4
H X 3 1 2 5 4 6
B 12 3 1 5 2 6 4
H X 1 3 2 5 4 6
B 16 1 2 3 4 5 6

As a stepping stone into Treble Bob, Bastow Little Bob is a good introduction. The work of the treble resembles the work of the slow bell in Oxford and Kent, and the work of the other bells resembles the easy part of Treble Bob Hunting.

If you have managed Little Bob without writing out all the dodging positions, Bastow will be easier because it is more consistent, there is always a dodge except at lead, and then it’s just a plain lead and turn round.
**Touches of Double Bob and Little Bob**

Touches and extents of Double Bob can be very similar to those of Plain Bob except that the lead ends are in a different order. However, bobs and singles are just the same, and an extent can be rung in the same manner.

Touches of Little Bob are also rung in a similar manner, but the extent on 6 (720 changes) cannot be rung in Little Bob as the method does not include the rows where the treble is in 6\textsuperscript{th} place. Little Bob can be rung as part of an extent but only be “splicing” it in with a method where the treble plain hunts between 1\textsuperscript{st} and 4\textsuperscript{th} places and then dodges both ways in 5-6. Such methods are not included in this booklet.

**Teaching and Learning points**

To the experienced ringer, place notation is straightforward. To the novice place notation seems to be irrelevant in the struggle to remember where to ring one's bells in the changes, and the symmetry of the leads and patterns is not obvious.

Showing how plain hunting is created by place notation is not enough. It was when we started to write out a course of Little Bob (from 16-14/12) that the penny started to drop.

In change ringing on handbells, the ringer is much more involved with the structure of the methods, and detailed understanding of those structures is an invaluable aid to accurate ringing. Hence the early emphasis on place notation.

Awareness of the place notation is also an aid to developing an awareness of the position of the treble, the key to all basic ringing methods.
5 Treble Bob

The Work of the Treble – Treble Bob Hunting

Treble Bob methods are treble dominated just as they are in Plain methods, however, the treble dodges in each pair of places every time it hunts in each direction. Writing out the movement of the treble amongst the other bells we have:

Unlike plain hunting, if all the bells followed the path of the treble from their starting positions, each row would be repeated, which defeats the object of change ringing. To avoid repetition, places are made by the other bells as called for in the relevant method.

This dodging path for the treble is the basis of three further categories of method, Treble Bob, Delight, and Surprise.

In Treble Bob, 1\textsuperscript{st} and 6\textsuperscript{th} places are made whenever the treble is hunting between the dodging positions.

In 3\textsuperscript{rds} place delight, 3\textsuperscript{rds} place is made when the treble hunts between 4\textsuperscript{th} and 5\textsuperscript{th} places, and in 4\textsuperscript{ths} place delight, 4\textsuperscript{ths} is made when the treble hunts between 2\textsuperscript{nds} and 3\textsuperscript{rds}.

In Surprise methods, the places for 3\textsuperscript{rds} and 4\textsuperscript{ths} place delight are combined.

Examples (with method-type definitive places highlighted):

- Oxford Treble Bob Minor: -34-16-12-16-12-16/16
- Woodbine Delight Minor: -34-14-12-16-12-16/16 (4\textsuperscript{ths} place Delight)
- Morning Exercise Delight Minor: -34-16-12-36-14-56/16 (3\textsuperscript{rds} place Delight)
- Cambridge Surprise Minor: -36-14-12-36-14-56/12

In regular methods, the penultimate place is never made unless the treble is lying behind, hence the places made when the treble is dodging in 3-4 is always -12-.
Kent Ringing on Handbells

Kent and Oxford Treble Bob.
These two methods are identical in structure except when the treble is dodging in 1-2.

Oxford has the simpler structure with “normal” places being made, but Kent is often thought easier to ring as it preserves the natural order of the bells better.

In both methods the work of the seconds place bell at the lead end is identical, in that it involves dodging with the treble, and then alternately leading and making seconds place until the treble returns when this bell dodges with the treble and hunts out to thirds place.

In Oxford Treble Bob (all numbers 6, 8, etc.), the places made when the treble leads are 3rds and 4ths, and the bells making these places turn round and treble bob hunt in the opposite direction.

In Kent the places made are 34-34, and the whole method is 34-34.16-12-16-12-16/16, so rather than dodging as you would in treble bob, or turning round, as you would in Oxford T.B., the bells passing through 3rds and 4ths make contiguous places.
Ringing the Methods
In approaching Kent and Oxford Treble Bob, the ringer should practice the standard plain methods such as Little Bob, Bastow Little Bob, and treble bob hunting (with repetitions) before tackling Kent and Oxford T.B.

In Kent T.B. the 3-4 places are made wrong, that is backstroke to hand stroke, and a careful study of those places will pay dividends. Coursing pairs strike a blow in adjacent places inside the change-row and the ringer needs to be ready for this to keep the striking crisp and even.

In Oxford T.B. the places made when the treble is dodging are 3rd and 4th, rather like a single in Plain Bob, except the bells in 1-2 are dodging. But then the bells that made the places have swapped positions amongst the other bells, so instead of coming down to lead in the order 2-4-6-5-3 as in Kent (interspersed with 2), the bells in Oxford TB come down to lead in the order 2-3-6-5-4. This may not seem like a big deal but it is surprising how much ringers rely on natural coursing order.

With good practice on easier methods such as Plain Bob and Gainsborough Little Bob, the above notes are sufficient to enable a learner to practice Kent and Oxford Treble Bob Minor.

Beyond Kent and Oxford Treble Bob.

There are many interesting Treble Dodging methods which may be overlooked in the march towards ringing Surprise. Here are a few, relatively easy examples:

**College Exercise T.B.**
-34-16-12-16-34-56/12 B14 S1234.
Place / dodge / place across Lead End and Half Lead

**Duke of Norfolk T.B.**
-34-16-12-16-12-56/12 B14 S1234
Oxford with 5ths at half lead and 2nds at the Lead End

**Norbury T.B.**
-34-16-12-16.34-34.56/12 B14 S1234
2nds place Oxford above the treble, double Kent places below

**Ockley T.B.**
-34-16-12-16.34-12.56/12 B14 S1234
2nds place Oxford with interesting front work
6 Cambridge Surprise Minor -36-14-12-36-14-56/12

Cambridge Surprise incorporates the maximum amount of plain hunting that is possible in a treble dodging method, and so there is plain hunting between 3rds and 6th place when the treble is in 1-2, and between 1st and 4ths when the treble is in 5-6. The 5ths place half-lead and seconds place lead end make this a crisp method to ring; it moves between the fluid hunting, long place-work and the two-lie-one-5ths-one-lie-two of the symmetrical 3rds place bell. This is a neat method.

Awareness of the position of the treble becomes increasingly valuable for ringing Cambridge. Taking this a section at a time:

Treble dodging in 1-2: the upper four bells hunt in a -36- cage.

Treble dodging in 3-4; this is a standard treble bob -12-.

Treble dodging in 5-6; the lower 4 bells hunt in a -14- cage.

The linkages between the blocks create the neatness of the method. Between the 1-2 and 3-4 dodging the places are 14, and between 3-4 and 5-6 the places are 36. In these places it is one bell which makes all of the thirds and 4ths places.

So Cambridge places in the first half lead are, following the 3-4 down dodge to become 4ths place bell, 3rds, 4ths, dodge 3-4 down with the treble, 3rds, 4ths, dodge 3-4 down for the half lead.
Cambridge Places

<table>
<thead>
<tr>
<th>B</th>
<th>1</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td>H</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>H</td>
<td>X</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>12</td>
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<td>H</td>
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<td>B</td>
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<tr>
<td>B</td>
<td>56</td>
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</tr>
<tr>
<td>H</td>
<td>X</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>14</td>
<td>4</td>
</tr>
</tbody>
</table>

Places down (see diagram):
Dodge 3-4 down, 3rds, 4ths, dodge 3-4 down with treble, 3rds, 4ths, dodge 3-4 down.

Places up
Dodge 3-4 up, 4ths, 3rds, dodge 3-4 up with treble, 4ths, 3rds, dodge 3-4 up.

Ringing two bells to Cambridge Surprise Minor

Awareness of the position of the treble and the structure of the method is fundamental to ringing Cambridge. The places define the method (as they do in all change ringing), but the elegant simplicity of Cambridge makes this a good first step into Surprise Minor on Handbells.

A useful mental exercise is to take a pair of bells, and work through the place notation impact on the positions of the bells. For example:
Pair in 3-4:

<table>
<thead>
<tr>
<th>Treble in 1-2 up</th>
<th>Treble in 5-6 down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Cross in 3-4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Cross 3rds, 6ths</td>
</tr>
<tr>
<td>3-6 3rds, 5ths</td>
<td>1-4 2nds, 5ths</td>
</tr>
<tr>
<td>Cross 4ths, 6ths</td>
<td>Cross Lead, 6ths</td>
</tr>
<tr>
<td>1-4 4ths, 5ths</td>
<td>3-6 2nds, 6ths</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treble in 3-4 up</th>
<th>Treble in 3-4 down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross 3rds, 6ths</td>
<td>Cross Lead, 5ths</td>
</tr>
<tr>
<td>1-2 4ths 5ths</td>
<td>1-2 Lead, 6ths</td>
</tr>
<tr>
<td>Cross 3rds 6ths</td>
<td>Cross 2nds, 5ths</td>
</tr>
<tr>
<td>3-6 3rds, 6ths</td>
<td>1-4 3rds, 6ths</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treble in 5-6 up</th>
<th>Treble in 1-2 down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross 4ths, 5ths</td>
<td>Cross 4ths, 5ths</td>
</tr>
<tr>
<td>1-4 4ths 6ths</td>
<td>3-6 Cross 4ths 5ths</td>
</tr>
<tr>
<td>Cross 3rds, 5ths</td>
<td>Cross 3rds, 6ths</td>
</tr>
<tr>
<td>Treble in 6ths, Half Lead</td>
<td>1-2 4ths, 5ths</td>
</tr>
<tr>
<td>5-6 4ths, 5ths</td>
<td>Lead end</td>
</tr>
</tbody>
</table>
This mental exercise can be performed for the 5 starting positions for the pair 1-2, and the 10 positions for two method-work bells.

As a mental exercise this should not be undertaken at the same time as other responsible activities such as preparing vegetables with a sharp knife, or driving a motor car, etc.

The above information is sufficient to enable a ringer to ring Cambridge Surprise Minor, however, a deeper knowledge of the method is useful in making a ringer more confident. Time spend looking at the Cambridge places, the Cambridge front work, (2nds place bell to the half lead), and the work of the symmetrical 3rds place bell will all be repaid in quality and enjoyment of ringing the method.

**Cambridge Surprise on higher numbers**

Cambridge Surprise readily extends to higher numbers of bells and is one of the standard Surprise Major methods.

**Cambridge Surprise on handbells**

Learning and teaching points to follow.
London Surprise Minor 36-36.14-12-36.14-14.36/12

London Surprise incorporates the maximum amount of reverse hunting (bells lead back and hand) that is possible in a treble dodging minor method. There is backward hunting between 3rd and 6ths when the treble is dodging in 1-2, and backward hunting between 1st and 4th places when the treble is dodging in 5-6. The transition between forward and backward work generates some interesting artefacts such as fishtails in 5-6 and Stedman whole turns with an accompanying point lead.

Section by Section

Treble in 1-2

places are made back and hand in 3rds and 6ths, bells 3 and 6 making the first places, and bells 4 and 5 setting off in the “wrong” direction.

Treble in 3-4

14-12-36 this section is “right way round” and the transition causes bell no 3 in this first lead to make a fish tail and leave 6ths without making a place.

Treble in 5-6

14-14 The transition back into backward hunting generates the Stedman whole turn for 5ths place bell (symmetrical), which also makes 3rds at the half lead.

Ringing two bells to London Surprise Minor

The exercise suggested for Cambridge Surprise, of working along the place notation and thinking how this affects the pairs of bells translates perfectly to London Surprise. The difficulty in London Surprise stems from the perpetual switching between forward and backward hunting, coupled with the fluidity of the method.

NB.
The jump to maximum backward hunting could prove to be a stumbling block. There is a stepping stone method, York Surprise, which would enable practice of backward hunting below the treble, whilst preserving the structure of Cambridge above the treble.

London Surprise on handbells

Learning and teaching points to follow