



## More invention

In April, *The Learning Curve* described how to create touches using repeating blocks. This month we look at other techniques.

### Singling in

You can make a longer touch by combining two shorter ones, not by ringing one after the other (which would bring up Rounds at the join) but by fitting one inside the other, and using a single at each joint. This is shown schematically in Figure 1, where touch Y is singled into touch X, to give the extended touch shown on the right. The two 'S's show the location of the singles.

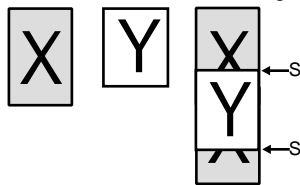


Figure 1: Singling in

As an example, consider joining two touches of Plain Bob Minor. Suppose that touch X is the 'standard calling' (WHWH, ie BPPBPPPB), which is ten leads. This can be combined with the six lead touch Y, (PBPPBP) by calling (BPPBPPSPBPPBSPB) - the inserted portion is underlined. It has 16 leads, so the whole of each touch is rung, but with touch X split into two pieces, part before and part after touch Y.

The first single is inserted just before the inserted touch (actually at the lead end change a blow before it starts) and the second single is on the last change of the inserted touch (also the lead end change). Note that both of the singled leads would otherwise have been plain leads. You can do the same thing if they would both have been bobbed leads. For example you could single in the three lead touch (BBB) slightly earlier in touch X, where there is a bob, to give (BPPBBSBPPPB).

### Padding courses

Another way to lengthen a touch is to insert, at suitable points, blocks of calls that introduce extra courses, but which get back to the same course from which they start. This relies on being able to fit in the calls naturally between calls that are already present in the basic touch. Many peal and quarter peal compositions use this technique by inserting blocks of two, three, four or even six courses, with a call at the same point in each course, often when the Tenor is Home. The sequence of calls for different numbers of courses is shown in Figure 2.

Courses	Calls (a course apart)
2	SS
3	BBB
4	BSSB
6	BBSBBS

Figure 2: Calls for different length blocks

The four and six course blocks are cyclic, and so the call sequence can be started anywhere, eg the 6 course block could be BSBSBS.

Figure 3 shows how these blocks can be used to extend touches of Plain Bob Major, with the location of inserted blocks of calls outlined.

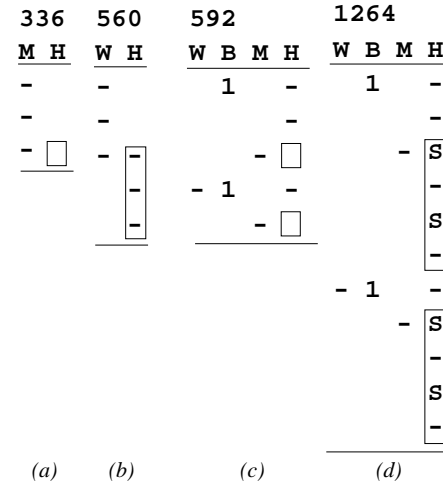


Figure 3: Extending Plain Bob Major

Figure 3a is a simple three course touch. By inserting a block of three bobs at Home it is extended to five courses. You might wonder why inserting a three course block in a three course touch only gives five courses. Look carefully, and you see that the first of the additional bobs Home comes at the end of a course already in the original touch, so only two courses are extra. The effect of the three bobs Home is to extend the original course from one course to three courses, in just the same way that calling three bobs Home extends a plain course from a one to a three course touch.

Figure 3c shows a five course touch. (Two of the courses are lengthened by the bobs Before, which is why it is 592 changes rather than 560.) Two of the courses end with a plain lead at Home (outlined). In figure 3d, blocks of four calls Home (SBSB) extend each of these courses to produce an eleven course quarter peal. Notice again that the number of courses added by each block is one less than the block length.

### Lengthening Plain Bob Minor

Plain Bob Minor (but not higher stages) has the useful property that calling two bobs Before (2B) has the same effect on the coursing order as a bob Home (H). Similarly calling two bobs In (2I) has the same effect as a bob Wrong (W). The additional effect is that each B or I adds an extra lead to the course. So if you take the standard two course (120) touch (W H W H) you can lengthen it by up to eight leads by making appropriate substitutions. For example (2I H W H) adds two leads to give 144. (2I H 2I H) is 168 and (2B 2I 2B 2I) is 216 - three and a half courses. Notice the change of order in the last example - the 2B which replaces the H comes before the 2I which replaces the W. This is because B comes before I in the course. If you kept the original order ie calling (2B 2I 2B 2I) it would give a longer touch (276) but all the rows in leads 3 and 4 would be repeated in leads 22 and 23, so it would be false.

### Falseness

That brings us neatly to the question of falseness, which we have so far avoided. In a 'true' touch, no row is repeated between Rounds at the start and Rounds at the end, but if any row is repeated, then the touch is 'false'. The concept of

truth is embedded in the history of changering - something that we inherit - and with no real parallel in other forms of music. Unless you take specific measures to avoid it, it is fair to assume that when creating touches, you will hit falseness sooner or later, and the longer the touch, the more likely it is to be false.

There is an irony here. On Major and higher numbers, peal composers try to include many musical rows and to reject less musical rows - they have plenty to choose from. On lower numbers, with less choice, the need for truth forces them to use less musical rows as well.

Does falseness matter? That depends on why you want the touch. If you ring a peal, then it must be true in order to be recognised. In theory the rules do not apply to performances less than a peal length, but in practice, there are very few ringers who would knowingly set out to ring a false quarter peal. What about touches for services and practices? Most published short touches are true, but there is no reason not to ring a false one if it serves some useful purpose.

### Touches with a purpose

Touches are chosen for several reasons:

- As an exercise for the ringer(s)
- As an exercise for the conductor
- For the music
- As a true performance
- As a combination of these

You might also want to adapt a touch on the fly - lengthening or shortening it to fit the time before a service. This can be better than filling up with lots of rounds, or running out of time. We can't look at all these possible uses, but we can consider two examples of a touches to exercise the ringers - one Doubles, one Minor.

Needless to say, the calls should affect the person or persons that you want to exercise, preferably often, and preferably doing a range of different work. Standard touches don't always do this, so it is sensible to think about it before hand. A standard 120 of Plain Bob Doubles has three calls in twelve leads (25%) with three bells doing all the affected work and one unaffected. A standard 60 has three calls in six leads (50%) with one bell making all the bobs, and the others only affected by two each. If you call (PBPBPPBPP) it has four calls in ten leads (40%) with two of the bells affected by every call. The two bells in this case are 4 and 5, but you can get different ones by starting at a different point in the touch.

The touch is in fact formed of two incomplete 60s (PBPBPPB minus the final B) joined together. It is cyclic, so you can start at any point, and one way to call it is to put in the first bob so that it affects the target bell and then call a bob every two leads unless that would put the target bell as observation, in which case you wait an extra lead.

The standard 120 of Plain Bob Minor has four calls in ten leads (40%) with no bell affected in more than two positions. Calling a bob every other lead has five calls in ten leads (50%) and every bell is in a different position at each call.

### And so on ...

Composing is a big subject, especially covering how to avoid falseness, and composing for the music, for neither of which is there enough space to consider here. This article should though have whetted your appetite, with enough ideas to seek out some pencil and paper and start experimenting.

Tail End