

# Introduction to Place Notation (with a bit of history)

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# What I am going to cover

- Some Basics
- A bit of History
- Place Notation Symbols
- Writing out a method from its Place Notation
- Other ways we can use Place Notation
- Questions – please type in chat box as we go along

# Some Basics - 1

- Row – A row is a sequence of bells in which each bell rings once and only once. All at the same stroke.
- Example – Rounds

1 – 2 – 3 – 4 – 5 – 6

1 is the bell with the highest note and so down the scale to the 6 which has the lowest note.

# Some Basics - 2

- Place or Position – The Place or Position of a bell is where it comes in the order of a row.
- The bell that is first is leading and the subsequent bells are in 2nds place, 3rds place etc.
- Cardinal numbers are used to name bells i.e. 1, 2, 3, 4, 5, 6
- Ordinal numbers are used to denote place i.e. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> etc
- So if the order is not Rounds, the 4 may be in 3rds
- Ordinal numbers may be used for bell names, in which case differentiate with place by saying 3rds Place.
- So the 4<sup>th</sup> is in 3rds place.

# Some Basics - 3

- Change – A change is the difference between one row and the next row.
- The result of a change for any one bell can only be one of three things:
  - The bell rings one place sooner in the subsequent row than it did before
  - The bell rings one place later in the subsequent row than it did before
  - The bell stays in the same place subsequent row as it did before
- Sometimes people say Change when they mean Row. We all do this on occasion, but it is strictly speaking wrong. The minimum length for a peal of Triples is 5040 Changes, but you need to ring 5041 Rows. It's a bit like a fence. The Rows are the posts, and the Changes are the panels.

# Plain or Single Changes

- The very earliest Change Ringing involved just 1 pair of bells changing at a time.
- These were called Plain or Single Changes.
- Very similar to Call changes.
- Many of the old systems of Single Changes are still rung today by Devon Call Change bands. An example is 60 on 3rds.
- However, these could have been rung without the Changes being called. The band would have all learned the sequence of Changes.
- Most bells would stay in one place for periods at a time.

# A Plain Six-score

## A Plain Sixscore,

Hunts 1 2.

12345					
21345	41352	21453	51432	21534	31542
23145	43152	24153	54132	25134	35142
23415	43512	24513	54312	25314	35412
23451	43521	24531	54321	25341	35421
32451	43251	42531	54231	52341	35241
32415	43215	42513	54213	52314	35214
32145	43125	42153	54123	52134	35124
31245	41325	41253	51423	51234	31524
13245	14325	14253	15423	15234	13524
13425	14235	14523	15243	15324	13254
31425	41235	41523	51243	51324	31254
34125	42135	45123	52143	53124	32154
34215	42315	45213	52413	53214	32514
34251	42351	45231	52431	53241	32541
34521	24351	45321	25431	53421	23541
34512	24315	45312	25413	53412	23514
34152	24135	45132	25143	53142	23154
31452	21435	41532	21543	51342	21354
13452	12435	14532	12543	15342	12354
Extr.	Extr.	Extr.	Extr.	Extr.	Extr.
14352	12453	15432	12534	13542	12345

An *Extream* is a distinct Change from the Rest, and made by the two farthest Extream Bells from the Half-hunt.

12345

21345 41

23145 43

23415 43

23451 43

32451 43

32415 43

32145 43

31245 41

13245 14

13425 14

31425 4

34125 4



# Fabian Stedman

- Stedman was the first person to publish books on Change ringing
- Tintinnalogia published 1668
  - Contained a number of Single Change methods and also introduced Cross Changes (2 pairs of bells changing) on 4 bells
- Campanalogia published 1677
  - Contained more methods; mainly Single Change methods
- Stedman published more than 50 different methods.

# Cross Changes or Double/Triple Changes

- Campanalogia Improved by JDCM (sic) published in 1702
- Already Single Change methods were falling out of favour
- Cross Change or Double/Triple Change methods were gaining popularity.
- Grandsire had been devised circa 1650
- Writers of Campanalogia Improved introduced a number of new methods to their readers.
- The methods much less static and more of a challenge to ring.

# Winwick Doubles

30 CAMPANALOGIA: Or,

WINWICK *Doubles.*

**I**N this Peal first the two hindmost Bells dodge (except the whole Hunt hinders them) till the first Single is made; and then the two foremost Bells dodge, except the whole Hunt hinders them, until another Single be made; and so on successively, throughout the whole Peal, there are six Singles, made after the same Manner as in *St. Dunstan's Doubles.*

12345					
21354	41532	31254	41523	51234	41325
23145	45123	32145	45132	52143	43152
32415	54213	23415	54312	25413	34512
34251	52431	32451	45321	24531	35421
43521	25341	23541	54231	42351	53241
45312	23514	32514	45213	43215	52314
54132	32154	23154	54125	34125	25134
51423	31245	21345	51432	31452	21543
15432	13254	12435	15342	13425	12534
14523	Bob	14253	Single	14352	Bob
	13524		15324		12354
					Et.

as in M. D

<u>12345</u>	
21354	41
23145	45
32415	54
34251	52
43521	25
45312	23
54132	32
51423	31
15432	15
14523	B
	13

# How were methods written in early books?

- Each method has a descriptive passage, and then a table of rows to examine
- These would need to be carefully studied away from the tower.
- It has to be considered that the ringers would have needed a good level of literacy and understanding
- The descriptions are quite involved and you would have needed to understand the descriptive terminology.

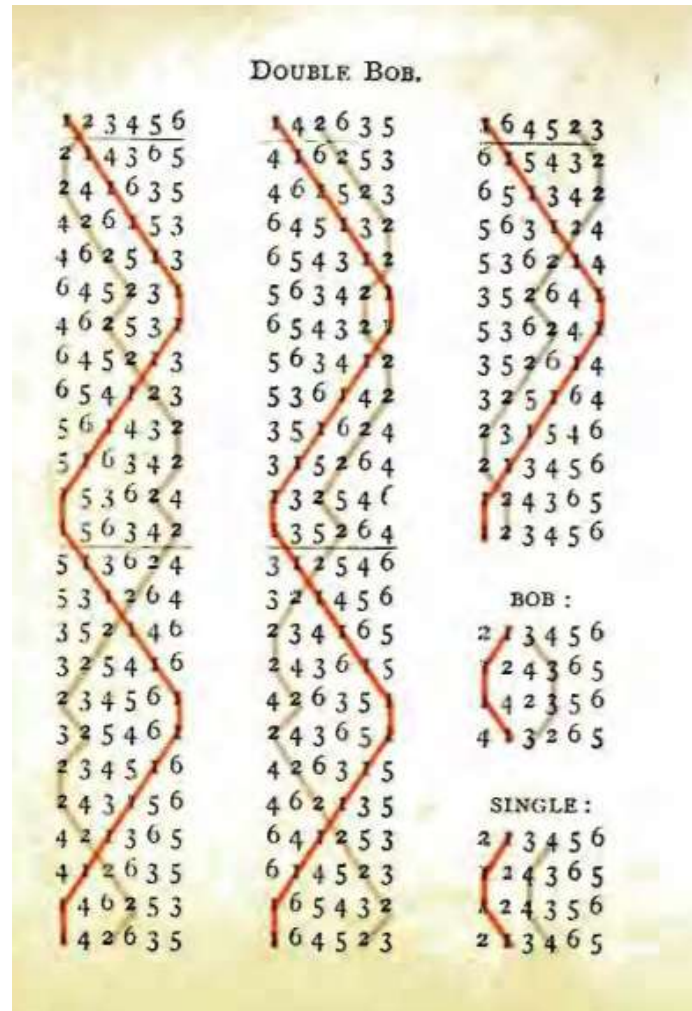
# The Nine Tailors – D L Sayers (pub 1934)

- “You’ll remember, my Lord, that you starts by making the first snapping lead with the treble and after that you goes into the slow hunt till she comes down to snap with you again.”
- “... after that I make the 3rds and 4ths...”
- “... and then it’s three steps forward and one back till you lay the blows behind.”
- Sayers quotes from Change Ringing by Troyte (1872) throughout her book.
- Troyte is available on Whiting Society website. It is very wordy.

# Jasper Snowdon & Blue Lines

- Moving on a few years
- Jasper Snowdon published a number of books for ringers including Diagrams in 1892.
- In this, he had the tables of rows as Stedman and Troyte had, but there was no description.
- Instead, he drew a red line through the path of the treble, and a blue line through the path of one of the working bells. This is now common practice in publications such as The Ringers' Diary.
- He still wrote other books with lots of descriptive text, including Standard Methods in 1908.
- Quite algebraic in places with As, Bs and Cs!

# Example from Diagrams





1	2	3	4	5	6
2	1	4	3	6	5
2	4	1	6	3	5
4	2	6	1	5	3
4	6	2	5	1	3
6	4	5	2	3	1
4	6	2	5	3	1
6	4	5	2	1	3
6	5	4	1	2	3
5	6	1	4	3	2
5	1	6	3	4	2
	5	3	6	2	4
	5	6	3	4	2
5	1	3	6	2	4

# John Carter

- At the same time the Snowdon was writing, John Carter was a leading Birmingham ringer.
- Had the idea for a ringing machine
- Effectively an early form of computer
- Needed to find a new way of defining methods

# Place Notation

- John Carter devised a new way of writing down methods; Place notation.
- This works on the principle that the bells making places in a method define what the bells that are moving must do.
- It is a shorthand way of writing a method. Even as late as 1956, The Ringing World was printing half a lead of any new method rung in order to define it.
- Place notation can also be used in order to get an understanding of the structure of a method.
- Some people learn new methods by learning the Place notation, though this is not common.

# Place Notation – Symbols 1

- **X** or **–** is used to denote that all pairs of bells must swap.
  - 1 2 3 4 5 6
  - x x x
  - 2 1 4 3 6 5
- Numbers mean that the bells in those Places stay there, and others swap
- So **36** means
  - 1 2 3 4 5 6
  - x x
  - 2 1 3 5 4 6

# Place Notation – symbols 2

- In even bell methods the places must be in pairs in order to leave an even number of bells available to swap
- Places can be external (leading and lying) or internal (other places)
- If a pair of places includes one internal and one external place, then sometimes the external place is omitted.
- E.g. On six bells 36 could be shown simply as 3.
- Odd places will be accompanied by a lie
- Even places will be accompanied by a lead.
- Most methods are symmetrical so Place notation for only half the lead will be given. However, the lead end needs to be stated.

# Example – Cambridge S. Minor

- Can be written
- $x 36 x 14 x 12 x 36 x 14 x 56$  l.e. 12
- Or it can be written as
- $- 3 - 4 - 2 - 3 - 4 - 5$  l.e. 2

# Place Notation – symbols 3

- For many methods like Cambridge, alternate changes will be an “all change”, and any places made will be right places: made handstroke/backstroke

# Example – Cambridge S. Minor

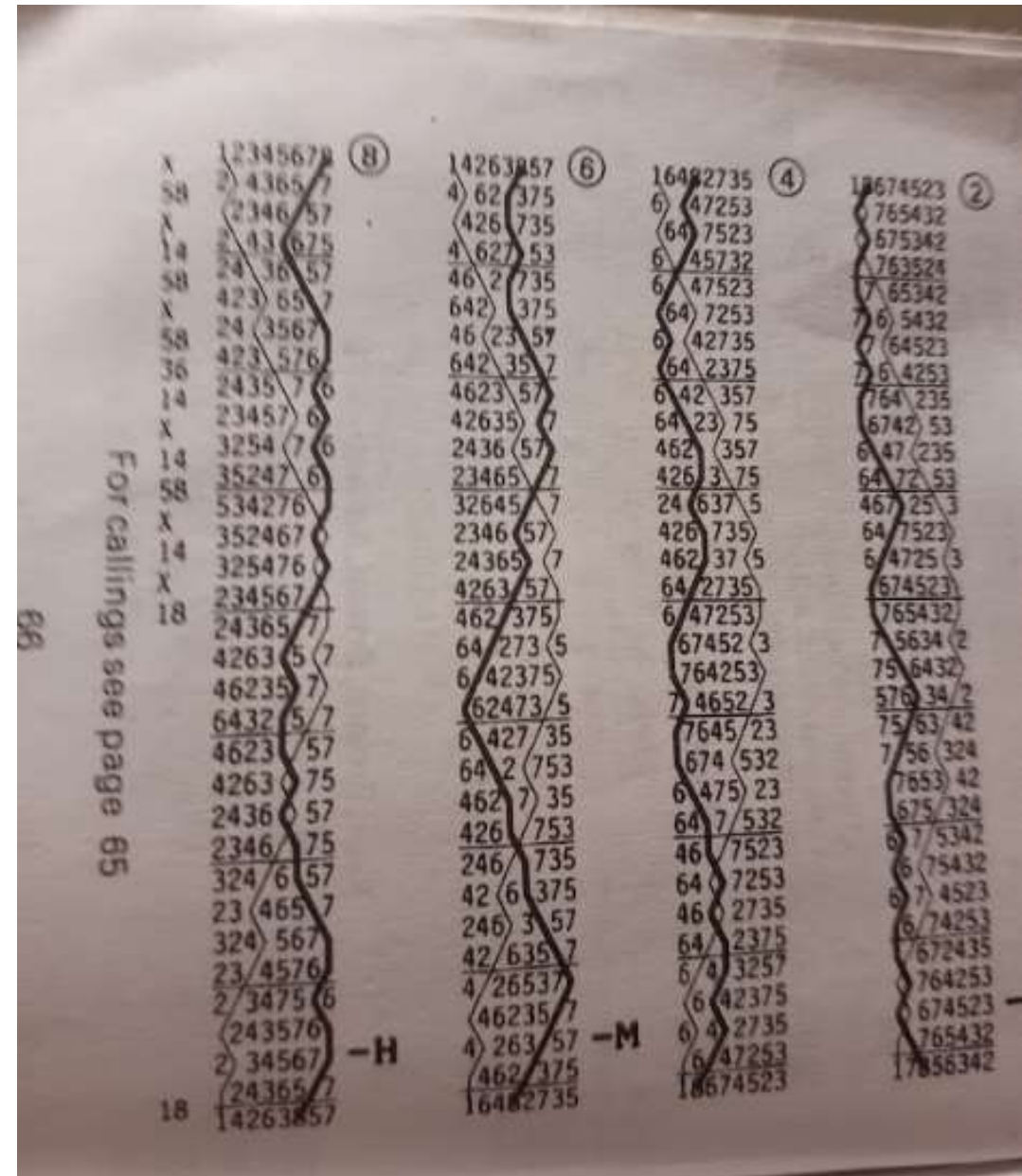
- Can be written
- $\times 36 \times 14 \times 12 \times 36 \times 14 \times 56$  l.e. 12
- Or it can be written as
- $- 3 - 4 - 2 - 3 - 4 - 5$  l.e.2



# Place Notation – symbols 4

- Some methods have wrong places: made backstroke/handstroke.
- Where right places follow wrong places (or vice versa) a full stop is used to separate the two changes
- E.g. London starts 36x36.14

# Example of Place Notation in Diary



	1	2	3	4	5	6	7	8	8
X	2	4	3	6	5	7	7		
58		2	3	4	6		5	7	
X	2	4	3		6	7	5		
14	<hr/>	2	4	3	6		5	7	
58		4	2	3		6	5	7	
X	2	4		3	5	6	7		
58		4	2	3		5	7	6	
36	<hr/>	2	4	3	5		7	6	
14		2	3	4	5	7		6	
X	3	2	5	4		7		6	
14		3	5	2	4	7		6	
58	<hr/>	5	3	4	2	7	6		
X	3	5	2	4	6	7			
14		3	2	5	4	7	6		
X	2	3	4	5	6	7			
18	<hr/>	2	4	3	6	5		7	
		4	2	6	3		5	7	
		4	6	2	3	5		7	
		6	4	3	2		5	7	
	<hr/>	4	6	2	3			5	7
		4	2	6	3			7	5
		2	4	3	6			5	7

# Let's have a go at writing out a method using Place Notation

- I've chosen Little Bob Minor
- I've chosen this because it is quite short as the treble only goes up to 4ths.
- The place notation is x 16 x 14 l.e.12

x 16 x 14 l.e.12

- Start with Rounds

- 1 2 3 4 5 6

x 16 x 14 l.e.12

- Start with Rounds
- First we have x. All cross

- 1 2 3 4 5 6
- 2 1 4 3 6 5

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2                      5

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2 4 1 6 3 5



x 16 x 14 l.e.12

- Start with Rounds
- First we have x. All cross
- 16. Bells at lead & 6ths stay put
- X

- 1 2 3 4 5 6
- 2 1 4 3 6 5
- 2 4 1 6 3 5
- 4 2 6 1 5 3

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
  - X
  - 14. Bells at lead & 4ths stay put
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2 4 1 6 3 5
  - 4 2 6 1 5 3
  - 4        1

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
  - X
  - 14. Bells at lead & 4ths stay put
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2 4 1 6 3 5
  - 4 2 6 1 5 3
  - 4 6 2 1 3 5

x 16 x 14 l.e.12

- Start with Rounds
- First we have x. All cross
- 16. Bells at lead & 6ths stay put
- X
- 14. Bells at lead & 4ths stay put
- Now we reverse along line; so X

- 1 2 3 4 5 6
- 2 1 4 3 6 5
- 2 4 1 6 3 5
- 4 2 6 1 5 3
- 4 6 2 1 3 5
- 6 4 1 2 5 3

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
  - X
  - 14. Bells at lead & 4ths stay put
  - Now we reverse along line; so X
  - 16
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2 4 1 6 3 5
  - 4 2 6 1 5 3
  - 4 6 2 1 3 5
  - 6 4 1 2 5 3
  - 6                      3

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
  - X
  - 14. Bells at lead & 4ths stay put
  - Now we reverse along line; so X
  - 16
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2 4 1 6 3 5
  - 4 2 6 1 5 3
  - 4 6 2 1 3 5
  - 6 4 1 2 5 3
  - 6 1 4 5 2 3

x 16 x 14 l.e.12

- Start with Rounds
  - First we have x. All cross
  - 16. Bells at lead & 6ths stay put
  - X
  - 14. Bells at lead & 4ths stay put
  - Now we reverse along line; so X
  - 16
  - X
- 1 2 3 4 5 6
  - 2 1 4 3 6 5
  - 2 4 1 6 3 5
  - 4 2 6 1 5 3
  - 4 6 2 1 3 5
  - 6 4 1 2 5 3
  - 6 1 4 5 2 3
  - 1 6 5 4 3 2

x 16 x 14 l.e.12

- Start with Rounds
- First we have x. All cross
- 16. Bells at lead & 6ths stay put
- X
- 14. Bells at lead & 4ths stay put
- Now we reverse along line; so X
- 16
- X
- Then l.e. 12

- 1 2 3 4 5 6
- 2 1 4 3 6 5
- 2 4 1 6 3 5
- 4 2 6 1 5 3
- 4 6 2 1 3 5
- 6 4 1 2 5 3
- 6 1 4 5 2 3
- 1 6 5 4 3 2
- 1 6



x 16 x 14 l.e.12

- Start with Rounds
- First we have x. All cross
- 16. Bells at lead & 6ths stay put
- X
- 14. Bells at lead & 4ths stay put
- Now we reverse along line; so X
- 16
- X
- Then l.e. 12

- 1 2 3 4 5 6
- 2 1 4 3 6 5
- 2 4 1 6 3 5
- 4 2 6 1 5 3
- 4 6 2 1 3 5
- 6 4 1 2 5 3
- 6 1 4 5 2 3
- 1 6 5 4 3 2
- 1 6 4 5 2 3

# Lead Ends - 1

- We start off with rounds
- At end of first lead we get
- The 6 is now 2<sup>nd</sup>, the 4 is now 3<sup>rd</sup>, the 5 is now 4<sup>th</sup>, the 2 is now 5<sup>th</sup> and the 3 is now 6<sup>th</sup>.
- We can use this to work out what the next lead end will be
- This is what we get.

• 1 2 3 4 5 6

• 1 6 4 5 2 3

• 1 3 5 2 6 4

# Lead Ends - 2

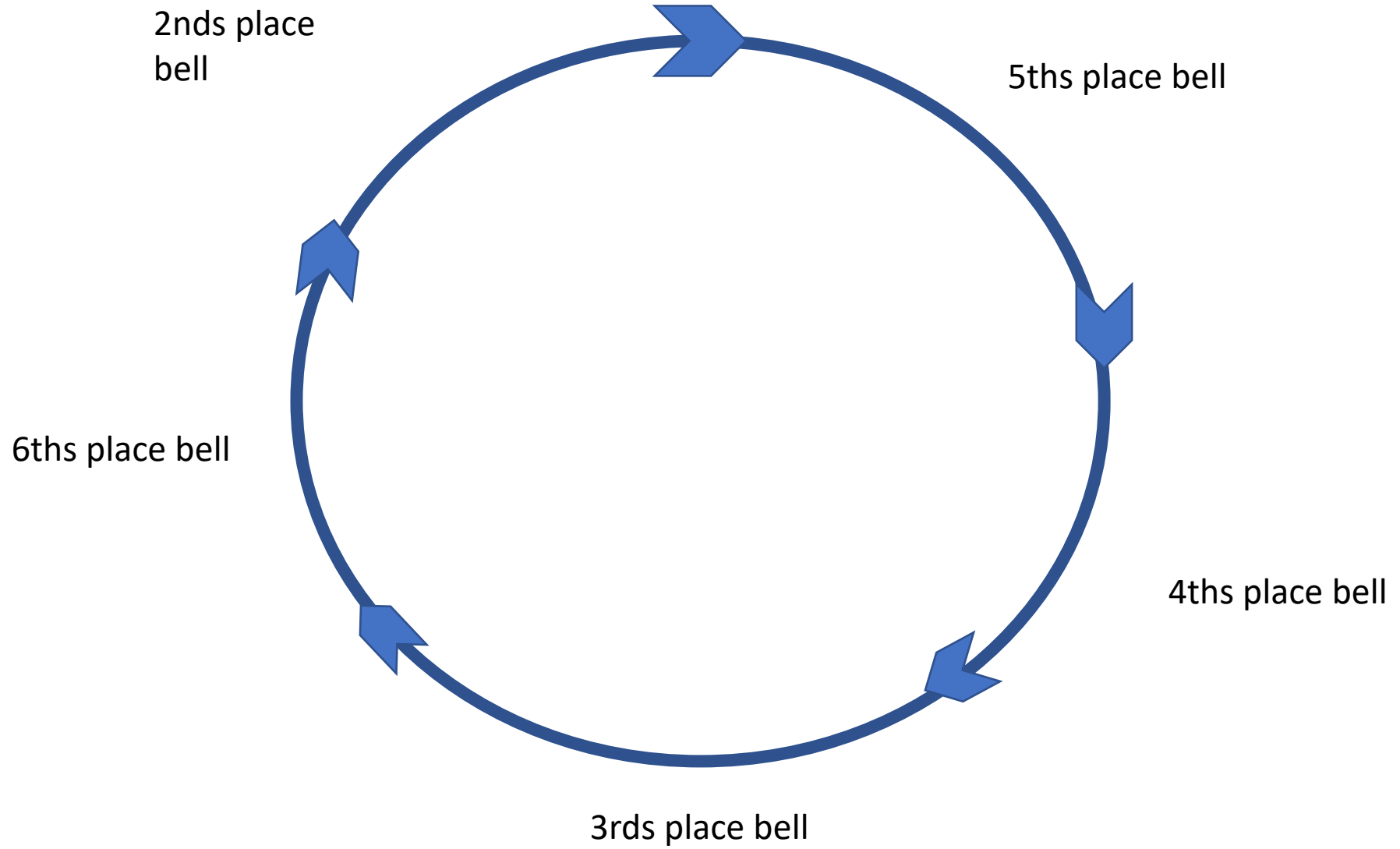
- If we keep doing this, we can write out the lead ends for the whole course.
- 5 leads gets us back to rounds
- The treble is always leading at the lead end by definition
- Each of the working bells ends up in a different place each lead.
- Most methods work like this

- 1 2 3 4 5 6
- 1 6 4 5 2 3
- 1 3 5 2 6 4
- 1 4 2 6 3 5
- 1 5 6 3 4 2
- 1 2 3 4 5 6

# The Grid

- We have seen that all working bells take their turn at ringing each lead
- Here we can see how that fits together
- First, look at how the **1** never gets beyond 4ths
- Now look at the **2**, follow the orange **2**s to the bottom where it ends in 5ths.
- Go back to the top and follow the **5**s. Then the **4**s, the **3**s & the **6**s, until you end up back in 2nds

•	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
•	<b>2</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>5</b>
•	<b>2</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>5</b>
•	<b>4</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>5</b>	<b>3</b>
•	<b>4</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>5</b>
•	<b>6</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>3</b>
•	<b>6</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>3</b>
•	<b>1</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>
•	<b>1</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>3</b>



# Uses at the BSoBR

- I use Place notation at Level 2/3 to introduce Plain Hunt.
- I do this by putting people in a line and numbering them.
- Each person says their number in turn
- Then everyone swaps position. They say their number
- Then first and last stay put and the internal pairs swap. They say their number
- Repeat until you get back to rounds.
- Or they could each ring a handbell

# Use at home 1

- During Lockdown, we need to find ways of keeping our learning going
- You could get 6 playing cards
- Lay them on the table, and use the Place notation of Plain Hunt to ring it
- Place notation for Plain Hunt is **x16**.
- You repeat this until you get back to rounds - 12 changes
- Write down each row as you go.

# Use at home 2

- Next, when you get the treble leading again try **12** instead of **16**, and then repeat the whole sequence 4 more times. That will be 60 changes.
- Next when you get back to rounds, use **14** instead of **12**. Repeat whole sequence for 2 more times. That will be 180 changes.
- Next when you get back to rounds, use **1234** (so only the bells in 5ths/6ths swap), and repeat. That will give you 360 changes.



# Summary

- Change ringing has been evolving over the past 400 years and the means of recording methods has needed to evolve as well
- Place notation is a useful tool for defining methods
- We can use it to develop our own understanding of how methods work

# Bibliography

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- John Carter's Setting Book Notes by E.A. Young

Questions – Please write in Chat Box.

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