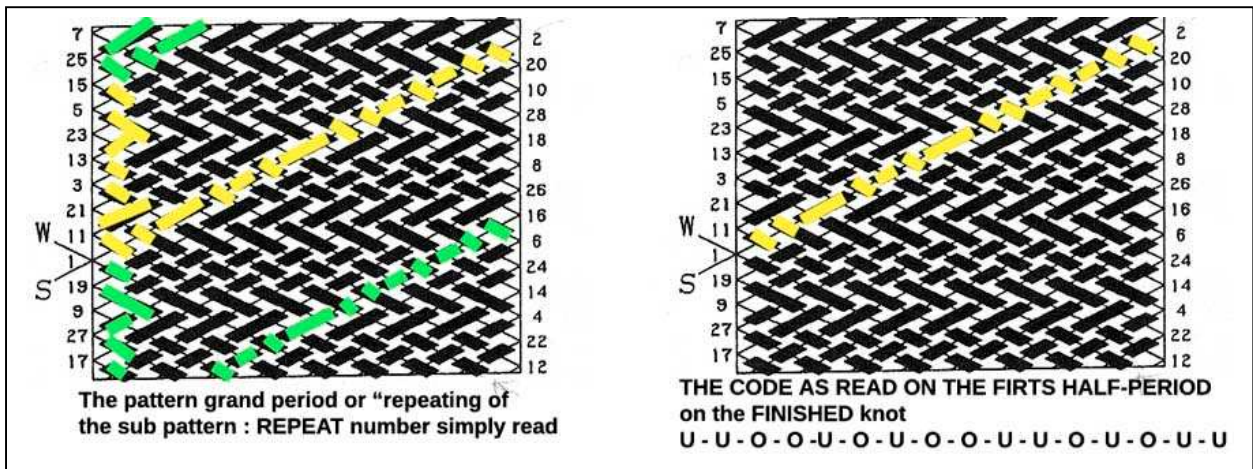
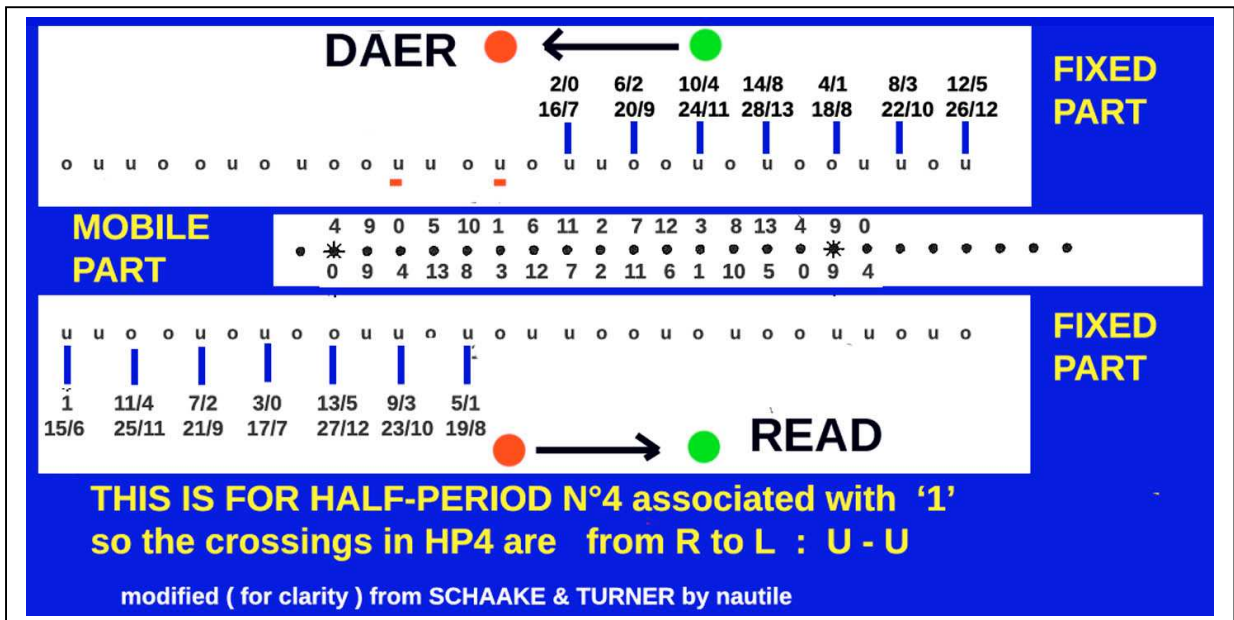
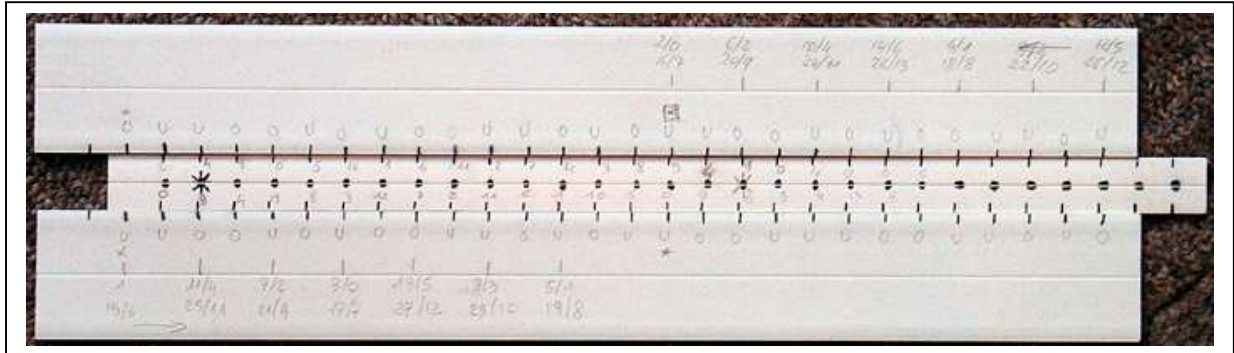


THE BRAINLESS RECIPE

(missing all the intelligent and articulate reasoning and justification given by SCHAAKE & TURNER.)

How to prepare your slide-rule without having the first understanding of the “why” of the “how”



Doing here what I heartily hate : giving a half-baked idiot recipe : “ do that and don’t think about why”

Still that seems to be much in demand as it avoid painfully engaging brain gears to follow good minds as SCHAAKE & TURNER's as many seem loath to do !

*** On the mobile part of the slide rule put a number of round marks in line :

L round marks followed by $2 * \text{REP} - 1$ marks. (for a 17L 14B and 7 as REP as in the example it will be $17 + (7 * 2 - 1)$ (recall priority of computing moves μ is done before -) $= 17 + 13 = 30$

Now **two round marks** will be transformed in STAR marks.

The second (read from L to R) round mark become a star and the round mark at the Lth position also.

then

*** Take the **coding pattern of the very first half-period (HP)** in the **FINISHED knot** or diagram.

This is your Coding Sequence (CS)

U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - U

For computing I used

0 - 0 - 1 - 1 - 0 - 1 - 0 - 1 - 1 - 0 - 0 - 1 - 0 - 1 - 0 - 0

***** From this CS extract the Repeating Coding Sequence (always, absolutely always keep in mind the modular mathematics of clockwork mathematics).**

To do that the **REPEAT (REP)** number will be use.

This **REP** number is not computed but simply read on the diagram of the finished knot.

It is the Pattern or ‘motif’ grand period, the number of step after which you fall on a HP with the same sequence of coding .

So using a (2 * REP) length **extract from the CS, commencing at the very first left position, a 2*REP long Repeating Coding Sequence (RCS)**

U - U - O - O - U - O - U - O - O - U - U - O - U -

***** Below this RCS set REP vertical lines at the even positions for the marks line or from the RCS frame of reference every two step starting at the first code**

either from the mark line frame of reference

• * • • • • • • • • • • *

U - U - O - O - U - O - U - O - O - U U - U - O - U

| | | | | |

or from the RCS frame of reference

U-U-O-O-U-O-U-O-O-U-U-U-O-U

The number of vertical line to be put is REP vertical lines

*** Now come back to the REP * 2 – 1 round marks **on the right of the right side star** (the last one will not be actively use, only REP * 2 – 2 will get a coding)

Using as many RCS as are necessary for doing that **put a coding under every mark in the marks line except the very last one.**

U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - U - O - O - U - O - U - O - O - U - U - O - U - O

| | | | | | | |

This line of U-O above **is written on the upper edge of the lower fixed part of the slide rule.**

*** Now reading in the usual Left to Right **and** starting at the **second** round mark **after the right side star** till the last available coding (under the before last right side round mark) take the Coding Sequence (CS)

• * *

U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - U - O - O - U - O - O - U - U - O - U - O

| | | | | | | |

*** Now search this CS *inside the whole coding starting at the left side star.

• * *

U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - U - O - O - U - O - O - U - U - O - U - O

| | | | | | | |

O - U - O - U - O - O - U - U - O - U - O

the starting position of this CS inside the coding is the fourth after the left side star mark.

Once you have identified the starting point of this searched for sequence between the 2 stars it becomes the start of another sequence.

From this point we now take Left to Right a sequence of 2 * REP length

O - U - O - U - O - O - U - U - O - U - O - U - U - O

Then **change the coding of this “echoing” sequence for their opposite** (easier with and using modulo 2 after adding 1 to each)

U - O - U - O - U - U - O - O - U - O - U - O - O - U

We have the New Repeating Coding Sequence

Read it Left to Right but write down what is read from Right to left beginning at the right side star mark on the lower edge of the upper fixed part.

U - O - O - U - O - U - O - O - U - U - O - U - O - U

We get this :

U - O - O - U - O - U - O - O - U - U - O - U - O - U

• * *

U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - U - O - O - U - O - U - O - U - O - U - O

| | | | | | | |

We have to put in coding in the places missing them and this is done according to the NRCS and the direction of writing : this is written on the lower edge of the upper fixed part of the slide rule.

O - U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - O - O - U - O - U - O - U - O - U - O

• * *

U - U - O - O - U - O - U - O - O - U - U - O - U - O - U - U - O - O - U - O - U - O - U - O - U - O

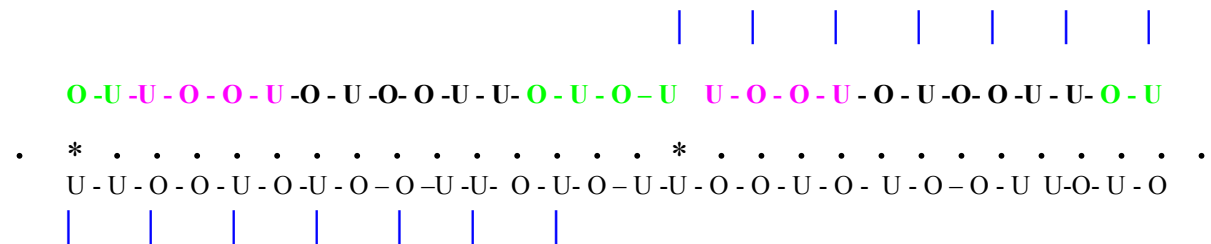
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What is ABOVE the marks line is for EVEN HP and what is BELOW is for ODD HP.

Important reminder : BELOW the sequence of crossing is read Left to Right as Westerners do

ABOVE the sequence of crossing is read Right to Left as in Arabic.

***** Now starting from the right side star mark put in progressing Left to Right “REPEAT” vertical lines , one above every other mark.**

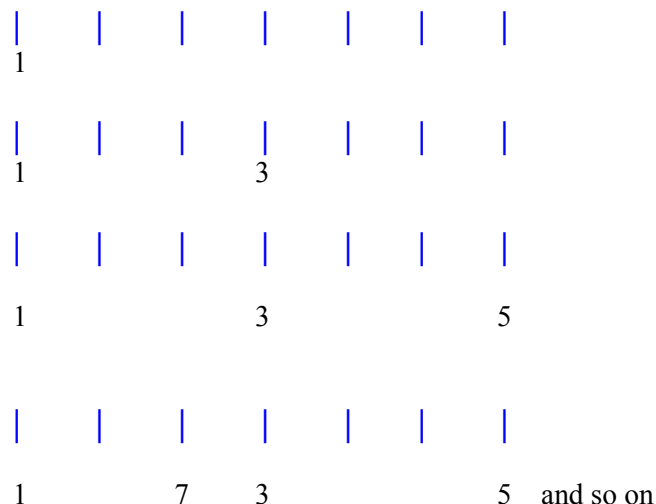


*** We need to recall that Row-coded (mandrel frame of reference) **do not** have (REPEAT oblige) the same coding for every successive odd HP or for every successive even HP.
There is a “cadenza”, or better but in technical parlance a phase shift to be observed and obeyed.

In order to get the correct phase shift we need to **start each HP, whether odd or even, at the appropriate place**. To be able to determine this appropriate place in each case a set of numbers will be given to each of the different starting points (a REP number of them for each fixed part of slide rule) in each of the two series : odd and even.

So for **each** odd and each even set of HP 1 to REP “coupled” numbers are attributed.
Coupled because made with two numbers somehow usefully and meaningfully linked together.
First number is Bight and second is HP number. Ex :10/4 or 7/2

The **numbering of each of the two vertical lines (Left to Right in both case) segments start with the first HP in its series.** (1 for odd and 2 for even) and goes on **periodically** (again modular mathematics) **the ‘step’ for this ‘periodical line marking’ is given by |Lead| modulo REP.**
In the 17L/14B REP = 7 example the “stepping” pace will be $|17|\text{MOD}_7$ that is $\equiv 3$



1	11	7	3	13	9	5

HP number are now to be added to make 'coupled' numbers

							THE FIRST WILL BE ATTRIBUED (-1)
1/-1	11	7	3/0	13	9	5	

1/-1	11	7	3/0	13	9	5/1

1/-1	11	7/2	3/0	13	9	5/1

till we have

1/-1	11/4	7/2	3/0	13/5	9/3	5/1

but we are missing 15/ 17/.....27/

so the easy way is to **add 2REP*** to the first member of a couple
and **REP** to the second (this is where the -1 given is useful)

so we get

1/-1	11/4	7/2	3/0	13/5	9/3	5/1
15/8	25/11	21/9	17/7	27/12	23/10	19/8

27/12 is 27th HP and Bight number 12

we have to stop adding row of coupled numbers when 2*B-1 has been attained for ODD and 2*B for EVEN

we have to do the same process for the upper fixed part of the slide rule

2						

2			4			

2		8	4			6

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