

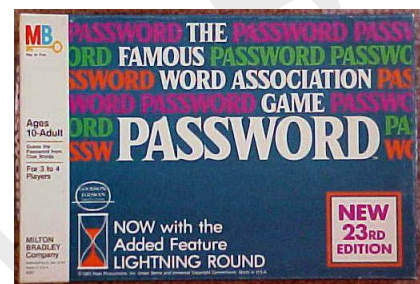
Squaring the Circle

Overlooked Nestler Models

Word Games

Word association has become fashionable: “if you were an animal, what would you be?” Largely, apart from as a word game, the concept is a job interview gimmick of little scientifically proven significance. However, I do subconsciously make word associations with certain slide rule makers.

Pickett is always remembered as the maker of the slide rule that went to the moon with the Apollo missions. But idiosyncratically certain shapes of slide rules are, for me, synonymous with a particular make of slide rule. For any *circular* model the Dutch maker **ALRO** always springs into mind. Anything *duplex* and I think of the German maker **Faber-Castell** and for any *drum* type, the Swiss maker **LOGA**. That just leaves the *rectilinear* models. These I always associate with the German maker **Nestler**. So when I came across a circular Nestler it struck me as odd.



MB Word Association board game

Nestler's Rectilinear Heritage

For my rectilinear association there were other worthy candidates such as makers **ARISTO** or **A.G. Thornton**. I “choose” Nestler because they were the only maker who had dividing engines that could incise linear scale lengths of up to 100cm. They were the “Kings” of the classic wood and celluloid veneered linear slide rule. They produced around 300 different rectilinear wood and plastic models in ten different stock lengths ranging from 10 to 100cm. So when I came across a round plastic Nestler I just assumed I had never seen one before. Nevertheless my “wrong looking” circular Nestler intrigued me.



Nestler Dividing Engine [1]

To my surprise the plot quickly thickened as no circular models are listed for Nestler in either of the standard reference works from Hopp or Von Jezierski [2, 3]. They were also missing from my Nestler catalogue from 1931 [4]. The catalogue was obviously too early

for any plastic model but there was also no mention of any circular models in the themed books on Nestler by Craenen [5, 6] or in any published Nestler-related article. So my circular Nestler must have a story to tell.

Nestler's Circular Heritage

Initial research soon revealed that other Nestler branded circular models existed. However, this still did not explain their scarcity and why they have been overlooked. After some more digging a more familiar story slowly emerged.

Nestler sold circular models but never considered them part of their retail slide rule product range. This is why no circular model was **ever** listed in any Nestler catalogue [7]. This is not an unfamiliar story as many makers often resold or rebranded complementary slide rules from a third party or an OEM supplier alongside their own published range. But this is not true of Nestler. In their factory in Lahr they had the technical staff and the equipment to make any form of slide rule in-house - i.e. rectilinear, drum/cylindrical or circular/disc. In contrast, although rarely mentioned, the 3 drum models (Ø 5.5, 9 and 16cm) Nestler made **were** listed [4] in their catalogues (model numbers 44, 44a and 45 but post 1955 renumbered to 0441, 0442 and 0443). All the Nestler circular models were specially commissioned production runs. By not openly publishing their special commissions Nestler mirrored their German rival Faber-Castell. Until published in the book by Holland [8] the specially commissioned models made by Faber-Castell were also largely unknown.

Nestler's Circular Slide Rules

Although world renowned for their slide rules, Nestler also successfully retailed a rich product portfolio of drawing, drafting and surveying equipment [4]. Consequently they had an extensive and varied customer base. So whenever a valued customer approached Nestler with a special commission for a circular slide rule it made good commercial sense to arrange a low volume special production run.

All such specially commissioned circular models carry the Nestler brand name and the company name/logo of the customer. The known examples fall into one of four distinct categories:

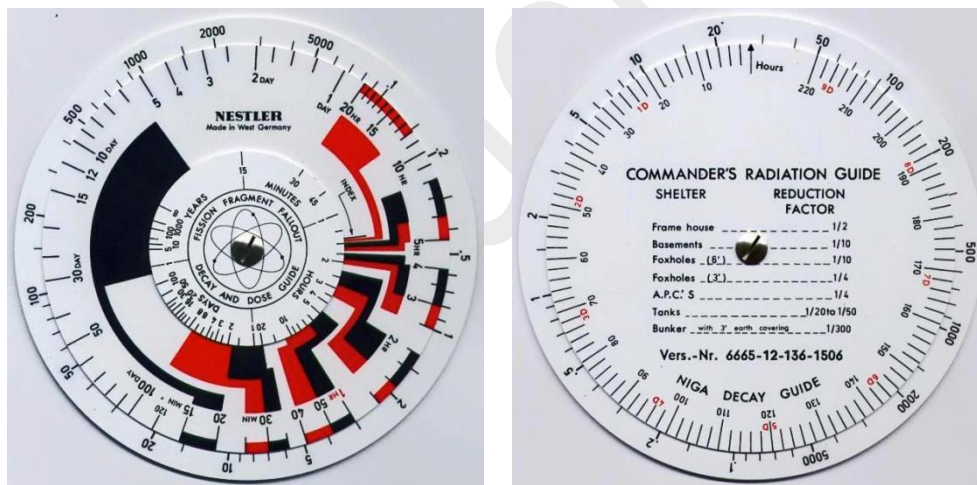
- 1. Military**
- 2. Regular**
- 3. Special**
- 4. Unofficial "co-branding"**

However, regardless of the category, all the circular models were made from *Anagit*¹ plastic and produced in the 1960s.

The Military Models:

Nestler was a long-standing supplier to the German “*Bundeswehr*” and the two known circular examples from this category were made for the German Armed Forces. Their military provenance is confirmed by both models displaying a 13-digit NATO or National Stock Number (NSN) identifying code - the 5th and 6th digits² being “12” for Germany. Such NSN’s identify a unique item of supply across the globe. However, the two circular examples are significantly different in style, size and scope.

The pocket Ø 10.2cm thin red and white duplex model is an Atomic, Biological and Chemical (ABC) calculator³. The *Fission Fragment Fallout Decay And Dose Guide* calculates the dangers from nuclear radiation fallout after an atomic explosion. A table on the back includes compensation/reduction factors specifically for the military - e.g. for armed forces personnel in a foxhole or in an armoured tank at the time of an explosion.



Pocket Ø 10.2cm ABC Radiation Calculator – NSN 6665-12-136-1506

The second and much larger Ø 31.5cm black-and-white *Hoehenwindmessung* desktop model has a distinctively more armed forces look and feel. The rugged High Altitude Calculator comes in two “industrial-strength” versions – both with two independently working sturdy chrome and plastic cursors. Unsurprisingly when it is not in use the calculator was protected by a dark-green stitched heavy-duty linen pouch.

¹ Nestler name (Albert Nestler AG) for injection moulded polystyrene.

² National Codification Bureau (NCB) defined 2-digit country code number.

³ Design, without an NSN number, also reused for non-military customers.



Desktop Ø 31.5cm High Altitude Calculator
NSN 6660-12-127-6307



NSN 6660-12-140-6737

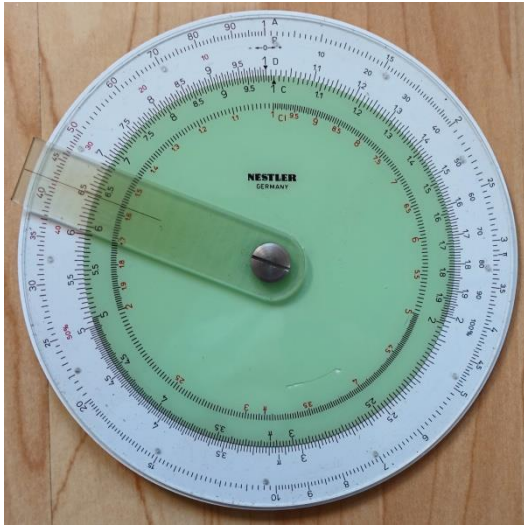
Both versions date from 1969 and are in essence modern adaptations of a traditional *Artillery Range Finder* slide rule or graphic plotter. The layout of NSN version ending in 6307 includes a scale classically calibrated into 360 degrees - "*Winkel in Grad*". On the NSN version ending in 6737 the scale is calibrated in the more military favoured milliradians⁴ (MILS) - "*Winkel in Strich*". A modern version was needed because "battlefield distances" are now global. But having such a late production date the possible use by the military is speculative. The late 1960s is still the era of the first *Cold War* between the Soviet Union and the United States and its Western Allies. So these calculators could have been used to plot incoming or outgoing missile trajectories. However, they could equally and more benignly have been used as a latter-day "Pilot Balloon" slide rule to track the likes of the jet stream and its effect on missiles or planes flying at high altitude [9].

The Regular Models:

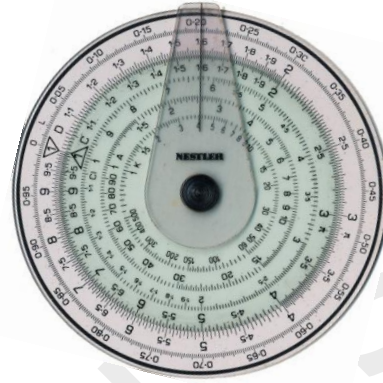
Although any circular model was made to order, Nestler saw the economic sense of having "ready" an off-the-shelf pre-engineered offering and a standardised instruction leaflet. Customers could choose between: (i) a large Ø 13cm circular **RL 130** model or (ii) a pocket Ø 7.5cm circular **RP 75** model [7]. Both had a green and white colour scheme and a limited complement of scales - none of which were trigonometric. The name

⁴ For NATO countries (but excluding the UK) a circle divided into 6400 mils.

and/or logo of the commissioning company were put on the accompanying pouches.



Ø 13cm Mannheim-like RL 130

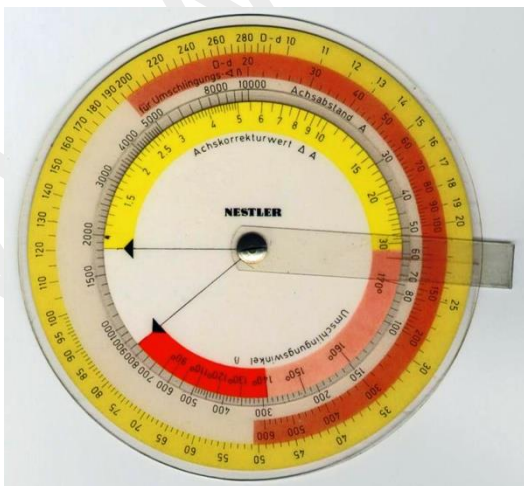


Ø 7.5cm Rietz-like RP 75

The larger Mannheim-like RL 130 did include an extra % scale and the back of the cursor innovatively doubled up as a clip for a jacket or shirt pocket. The pocket RP 75 came in two versions. A Rietz-like layout for engineers and a basic C / D, % layout for merchants [10].

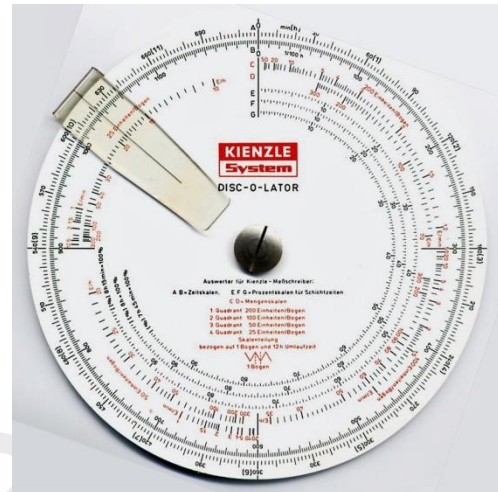
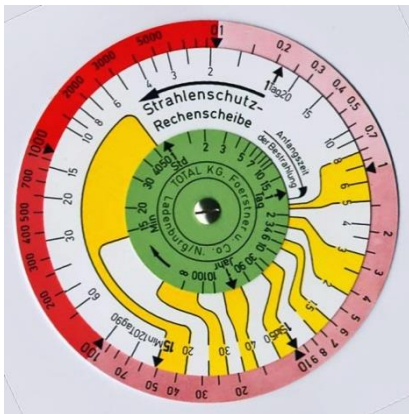
The Special Models:

Inevitably some non-military customers needed a bespoke circular slide rule with trade or company-specific scales. Such commissions were in essence “one-offs”. The first known example is an impressive multi-coloured duplex circular model made for the Frauenfeld based Swiss company *Peter Hefti AG*.



Large Ø 13cm duplex *Kreisrechner*

In the 1960s Hefti supplied made-to-order continuous drive belts for industrial belt-driven machines. Using both sets of the scales a customer could reliably calculate the exact-sized drive belt they needed to order [7]. Undoubtedly there are more but at least two other known bespoke examples were made:



Pocket Ø 10.5cm Total Strahlenschutz

Large Ø 13cm Disc-O-Lator

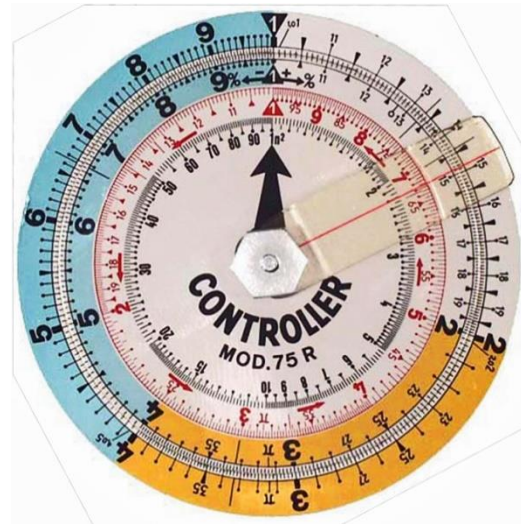
The German multi-coloured pocket Strahlenschutz is a non-military version of an ABC atomic fallout calculator. Brief instructions were printed on the back but the thin grey cardboard wallet it came in also included a full instruction booklet. It was first commissioned by the Ladenburg based *Total KG Foerstner & Co.* The company is famous for its range of fire extinguishers but later became part of *Automation und Messtechnik GmbH*. The Strahlenschutz design was then reordered and reissued under the new company name [10].

The larger red and black Disc-O-Lator was made for *Kienzle System*. The full company name was *Kienzle Apparate GmbH*. They were based in Villingen, Germany and were a spinoff of the original Kienzle watchmaking company. *Kienzle Apparate GmbH* specialised in instrumentation such as tachographs for commercial vehicles. The Disc-O-Lator was an aid for calculating the driving/working hours recorded on a tachograph's replaceable paper discs [11].

The "Co-branded" Models:

The models in this category are especially novel. Seemingly Nestler decided to market two circular models in collaboration with fellow German

slide rule maker *Controller-Calculator KG* based in Munich. Two of Controller-Calculator's distinctive aluminium models, the **75 R** (Ø 7.5cm) and **110 R** (Ø 11cm), were repackaged in a black plastic pouch featuring both company names and a set of instructions from Nestler. But these models are not what they seem and have nothing to do with *Albert Nestler AG*.



"Co-branded" pocket Ø 7.5cm Nestler/Controller 75 R

The clue to the true provenance of these models is the address listed at the end of the instructions: **Baden Baden**. This should have been Lahr but a grandson of the founder of Nestler, Albert Nestler Jr., tellingly lived in Baden Baden. Also the company name listed is: *Albert Nestler Handelesgesellschaft mbH*. Albert Nestler Jr. was not involved in running his grandfather's company although he was a local Nestler sales representative for the Baden Baden area. The counterfeit Nestler/Controller models were a private marketing initiative. Albert Nestler Jr. had some plastic pouches and sets of instructions printed which he paired up with two existing aluminium circular slide rules from Controller-Calculator. He was piggybacking on the established Nestler name and brand. It was done without Nestler's permission and probably without Controller-Calculator permission. There was never any form of cooperation or collaboration between Nestler and Controller-Calculator or between Nestler and any other slide rule maker [7].

The Square Is Now Round

In Nestler's case their circular models were literally all exceptions to the rule and defied the company's rectilinear profile. Being specially commissioned they were all made in ad-hoc production runs in the 1960s.

Sales volumes would have been low and this is probably why they have been overlooked in the past. Therefore any of the genuine Nestler circular models are uncommon and are worth looking out for. But do not be misled by any Nestler circular model purporting to be co-branded with slide rule maker Controller-Calculator. Good hunting!

Acknowledgements And References

I am especially grateful to **Jürgen Nestler**, the great-grandson of the founder of *Albert Nestler AG*. His willingness to answer my many questions and to share his company and family knowledge were instrumental in finding the true provenance of the overlooked Nestler circular slide rules. I am also indebted to fellow collectors Hans Peter Schaub, Peter Holland and John Hunt Snr. for their help with some of the details.

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