



An autobiographical note from the author

This kit was born from my life-long experience in two different fields: aviation and popularization of science.

As a teenager I was (and I am still) as lucky as to live on Lake Como, Italy, where the only seaplane base and flight school for seaplane pilots exists in Europe (the Guinness World Records has qualified it as the oldest seaplane operation in the world). With the seaplanes and amphibians available at a 5-minute distance from my school, office and home, I made journeys throughout Europe and the Mediterranean Sea, and I continued to fly those fascinating machines also in the realm of water aviation: the United States and Canada, with excursions up to Australia, where I could ride the Coral Sea on a glorious Grumman "Turbo Mallard". I was also as fortunate as to fly a few historic seaplanes of the '30s.

On the subject of water flying I have written five books, two technical (typical "How to fly on water" or "How to fly such type of aircraft" books), two on the history of water flying and one of adventures I had the chance to live in a 40 years-long seaplane pilot career.

In the field of the popularization of science, my speciality has always been the combination of a written product and one or more tools or gadgets to make experiments or activities.

An interesting life indeed, though not always with material satisfactions proportionate to the effort spent in designing and in many cases producing books, kits, gadgets and devices.

I started as an amateur astronomer, fond of sundials and historical, pre-telescope astronomical instruments.

That passion led me to design a kit of cardboard astronomical instruments, reproducing in an usable, modern form most of the instruments of the astronomers of the Renaissance, of which several tens of thousands have been produced.

Later I produced a kit to design and construct sundials, a few astrolabes and eventually the kit "Orientation, Topography and Navigation", including more than 30 cardboard instruments replicating those used by ancient topographers and navigators.

In the mean time, just when billions of electronic calculators made millions of slide rules fade away and disappear definitively, I re-invented the slide rule in a different form, i.e. as extremely cheap but graphically appealing cardboard gadget, in evident contrast with the austere grandfather's slide rule.

Popular instruments, applied to solve the most disparate everyday's life problems; computers to establish the most suitable diet, to know how to use the pressure cooker or the microwave oven, to choose the right combinations of foods, to compute one's own fertility period (for women), which degree of sun cream to use to protect one's own type of skin, where to look in the sky to view the Halley comet, how to compute the rate of exchange or the performance of an investment.

In the lucky '80s I produced more than one hundred of such instruments, to be diffused as gadgets attached to magazines or as promotional gifts. In many cases more than 500,000 pieces of a specific gadget of this type have been produced and diffused.

The strangest I designed is probably – let's so call it in English – the "govern-o-meter", to compute the characteristics of the possible governments that could be formed after the elections (Italy is a complicated country, where tens of political parties compete for a place in the sun, so that computations are needed to study the possible coalitions).

Another curious slide rule I designed was a Babylonian logarithmic, circular slide rule, working in accordance with the sexagesimal system and carved with cuneiform figures. I presented it as an ancient artifact, "lost in a ship taking an expedition of archeologist from Latakia to Venice in the '20s". The story of the finding was supported by an old album of pictures, letters of the ship captain who came into possession of the material and letters of the president of the Italian Mathematical Society, endorsing the discovery.

The artifact was a demonstration that the Babylonian had the theoretical knowledge and the practical know-how to invent and produce the slide rule two millennia before it

was “re-invented” in the Western civilization by William Oughtred. I easily succeeded in demonstrating the assumption that the Babylonians could manage logarithms, upon the mathematical documents found in the Fertile Crescent, in the form of clay tablets. But the artifact, the old album and the letters were fake, as I was the author. Why did I organize such a fraud (soon declared as such)? Simply to play a joke on the lovers of legendary archeological findings, as the “battery of Baghdad”, those who are sure the pre-columbian civilizations were regularly visited by the aliens.

I was as well one of the founders of the Italian sister-association of the American CSI, the Committee for Skeptical Inquire, whose mission is “to promote scientific inquiry, critical investigation, and the use of reason in examining controversial and extraordinary claims”.

The re-birth of the slide rule has been noticed in 1986 by the J. Walter Thompson, the world’s best-known marketing communications brand, and I won the David Campbell Harris “The Future of Communication” award, with the relation “Second generation slide rules – Interesting application in the fields of mass communication and advertisement of a sophisticated technology of the past”.

It’s curious that in the space and electronic era one could win a prize through the application in the communication field of a technology invented three centuries before.

In our days another revolution subverted the world. A class of new portable and cheap devices globally interconnected appeared, having a proportional relation with the early electronic calculators as these had at the end of the ’70s with the centuries-old slide rules.

In today’s technological landscape what could be the role of analog computers, i.e. slide rules? Coming to the field of aviation, what’s the reason to use instruments like those included in this kit?

I tried to respond to this question throughout this book. Let’s say that when an approximate, but quick answer is needed (this is exactly the case when we fly an aircraft) a slide rule can honorably accomplish the task, even better

than a complex programmable computer. And it’s nice to rely on a device that does not depend on anything, electricity included.

I would like to add that many think that the latest generations are less and less able to work with their hands and to deal with the real matter, living in a virtual world of pixels, accustomed to get from computers quick solutions to problems, with a partial interaction with the problems themselves. So, there is a tendency to make a small step back and make bud among the youngest the pleasure and capability of using their hands and understand and manage step-by-step the processes they are involved in.

It must be said that in the specific field of aviation the slide rule, i.e. the Flight Computer is an object to be possessed by every pilot, whose use is still taught in flight schools. Unfortunately, only few continue to use it after the exams and rely more and more on complex devices present in the cockpits and on the instrument panels. As programming such devices requires a good deal of time and attention, a negative side effect is that pilots look less and less out of the aircraft.

All this is to say that slide rules can still have a practical role, beyond the elegance of enclosing in the small surface of a few pieces of an unexpensive support a huge amount of knowledge and an infinite computing power.

This kit carries another message. In 1676 Isaac Newton wrote «If I have seen further it is by standing on the shoulders [sic] of Giants», a phrase carved on the edge of the British two pound coin. What we do today in the aviation field is possible because we also “stand on the shoulders of Giants”. These Giants are the pioneer designers, constructors, operators and pilots who spent and often gave their life to realize the ancient, and for so a long time unreachable dream of mankind: flying.

I thought that disseminating this book with stories about our grandfather-aviators is a way not only to learn something, but also to feel ourselves as the heirs and, at a large or small scale, the continuators of the deeds of exceptional man and women who made history.