

Emmanuel Bigler, Besançon, France  
e-mail : bigler@free.fr

**Principles of the “Sunny-16” rule:** the correct exposure time for a photograph taken outdoors in bright sunshine conditions, with a film rated ISO 125, is 1/125-th of a second when the lens aperture is set to f/16. This corresponds to an Exposure Value (EV) equal to 15. The circular slide rules yields at a glance all possible combinations of exposure times and apertures delivering the same results, at least within the limits of the law of reciprocity for film. *Corrections for non-reciprocity are not indicated, since they vary from one film to another; digital sensors can be considered as perfectly reciprocal.*

By a comparison with the exposure table printed at the back of classical GOSSEN Lunasix/Luna-Pro exposure meters, one finds that the the “Sunny-16” rule, EV=15@ISO 125 is actually valid when the amount of incident light is 70000 lux, i.e. when the absolute meter reading is  $19\frac{2}{3}$  on the absolute light scale.

As a general rule:

**Sunny-16 rule by bright sunshine, available incident light approx. 70000 lux**

**Expose for  $1/S_{\text{ISO}}$ -th of a second with an aperture set to f/16  
when the film (or digital sensor) ISO-rating is set to  $S_{\text{ISO}}$**

**Changing the aperture to f/ $N_2$  instead of f/ $N_1$ ,  
requires to change the exposure time by a factor  $(N_2/N_1)^2$**

The old series of speeds between 1/5-th of a second and 1/400 are indicated in red, they do not differ from the standard modern series by more than one third of a f-stop, one third of an EV unit.

The aperture scale indicates all intermediate values by one-third of a f-stop from f/0.7 (*if you are lucky enough to own one of the famous Zeiss Planar lenses used by Kubrick in “Barry Lyndon”*) up to 1/1440, this extreme value covering applications to pinhole photography.

