

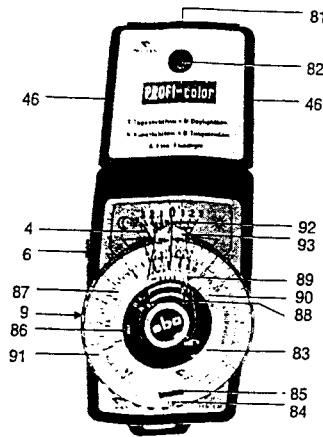
Neue Adresse - New Address

# GOSSEN

Foto- und Lichtmeßtechnik GmbH  
Thomas-Mann-Strasse 16-20  
D 90471 Nürnberg

## GOSSEN PROFI-color

- 1 Spherical diffuser of the PROFISIX
  - 4 Indicator needle
  - 6 Measuring button (red)
  - 9 Button for battery test (green)
  - 11 Extension factors
  - 13 EV (exposure value) modification scale
  - 16 Black cover for red signal
  - 24 Computer ring
  - 33 Front shield for accessory jacks
  - 46 Ribbed Sides
  - 81 Measuring aperture (flat diffuser)
  - 82 Control lamp
  - 83 Colour Calculator
  - 84 Setting knob
  - 85 Locating aperture
  - 86 Locating mark for colour calculator
  - 87 Colour temperatur scale
  - 88 Symbols for film types
  - 89 Index mark for film types
  - 90 Colour temperature correction (scale of tolerances) (page 35)
  - 91 Filter scale (B = blue filters, R = red filters)
  - 92 Scale value "0"
  - 93 Transparent snap-on pointer
- (see instructions for the PROFISIX)



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### General indications

All colour films are balanced for a certain type or quality of light, e.g. for daylight or for artificial light. If the light source does not correspond to the colour temperature for which the film is balanced, a blue or red colour cast will result, especially with reversal colour film. Shots taken in the shade, for instance, will have a blue cast due to the blue light of the sky.

These defects can be overcome, however, by using the appropriate colour correction filter. These filters change the "wrong light" to that for which the colour film in use has been balanced.

Even if you want to illuminate your subject, on purpose, with the "wrong type of light" for obtaining special colour effects, it will be necessary to measure the colour temperature of the light used.

Light consists of rays with different wave lengths. The different wave lengths have their characteristic colours in the spectrum and are being identified by the colour temperature expressed in Kelvin (K). Please refer to page 44 for a more detailed explanation.

The PROFI-color attachment allows you to take colour temperature readings of incident light with your PROFISIX. In addition, your film's colour sensitivity can be set into the

PROFI-color calculator and values of correction filters for the light being measured can be determined. Proper results can be obtained with any continuous spectrum sources such as daylight, tungsten lamps, etc. Non-continuous sources such as fluorescent lamps will not give proper readings with the PROFI-color.

On pages 54 to 58, we are describing the internal circuitry and the operating of the attachment. Before actually starting measuring with your PROFI-color you should carefully read these instructions and also the operating manual for the PROFISIX itself. Once you are completely familiar with the general operating of the unit, the check list on pages 8 and 9 will do.

On pages 22 to 31 we are showing you some examples of how to use the unit correctly.

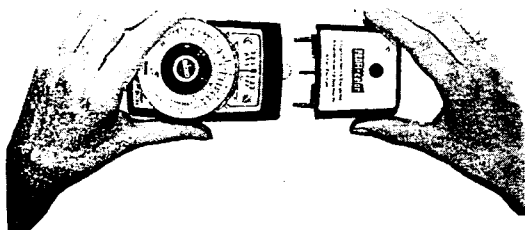
#### Operating check list

1. Attach PROFI-color and color calculator to the PROFISIX (please refer also to page 11).
2. With the setting knob (84) set the index mark (89) opposite the symbol (88) corresponding to the film type you are using.
3. Press measuring button (6) of the PROFISIX and release it (operate the green button for battery test from time to time (9)).

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#### Attaching to the meter

Remove detachable front shield (33) covering the accessory jacks from your PROFISIX. With the hemispherical diffusor (1) in the centre of the PROFISIX align the PROFI-color with the front of the meter so that the plugs



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on the attachment are opposite the jacks in the meter and the recess in the attachment is opposite the hemisphere. While holding the PROFI-color by its ribbed sides, push the accessory straight on to the meter. Once the PROFI-color is attached, the internal circuitry of the PROFISIX will be automatically programmed.

The film speed set at the PROFISIX does not have any effect when measuring with the PROFI-color. A special calculator dial (83) and a snap-on transparent pointer (93) are supplied with the PROFI-color and are stored in a special compartment of the leather carrying case. To attach this supplementary calculator dial to the main computer dial of the meter, first

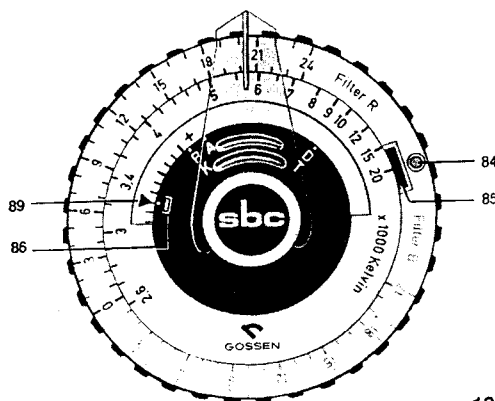
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4. While the control lamp is on (82) the unit is ready for measuring.
5. Point the flat measuring aperture (81) of the PROFI-color towards the light source to be measured.
6. Take a reading, null the indicator needle (4) by rotating the computer ring (24) without changing the measuring direction.
7. The required filtration can be read on the filter scale (91) and the colour temperature on scale (87) opposite the "0" mark of the meter (9').

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set the colour temperature index mark of the supplementary calculator opposite the locating mark. You will note that when in this position, a small aperture in the calculator is open. Next make sure that the exposure correction dial of the PROFISIX is set to zero, i.e. the red signal must be entirely covered (16). Align the supplementary calculator dial with the PROFISIX computer dial so that the small aperture of the calculator dial is directly over the exposure correction signal of the meter. Press the dial straight down until it locks into place. Once the calculator dial (83) is attached in this way, the combined unit PROFISIX + PROFI-color is ready for operation.

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To remove the calculator dial after use, press, from below, at the sides against the calculator dial where it extends from the meter body and lift it off.

#### Setting the film type

Before using the PROFI-color, the calculator dial must be set for the colour balance of the film being used. With the setting knob (84) turn the dial until the index mark (89) is opposite the appropriate film symbol (88). The meaning of the film symbols is printed on the back of the PROFI-color. Please refer to page 39 for more details.

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If you are using a film which is laid out for a colour temperature different from those listed on page 32, you can set the film's colour temperature into the dial by setting the black "0" of the filter scale opposite the desired colour temperature. In the illustration on page 36 that colour temperature value would be approx. 5200 K.

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### Battery test

As the PROFI-color is being energized by the battery of the PROFISIX meter, the battery test should be carried through with the PROFI-color mounted on the PROFISIX.

Press the red measuring button (6), hold down the green battery test button (9). The indicator needle (4) should now come to rest in the green area marked "BATT". If not, the battery must be replaced.

(Please refer to page 5 of the PROFISIX instructions.)

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### Taking a reading

You must in all cases measure the light which is falling on the most important area of your subject, this is **from the subject towards the light source**. Briefly press the measuring button (6). As long as the control lamp (82) is on, the unit will continue measuring (approx. 1/2 minute). Point the flat diffuser (81) of the PROFI-color in the direction in which you are measuring, i.e. towards the light source. Note that the flat diffuser must be evenly illuminated. If part of it is shaded, incorrect readings will result.

Then null the meter — **without changing the direction by moving the unit** — by setting the indicator needle (4) exactly on the zero mark (92).

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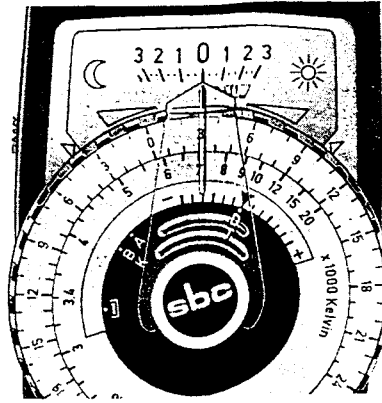
When using the snap-on transparent pointer (93), hold the colour calculator so that it cannot move, rotate the snap-on pointer until its centre line is precisely above the scale mark "0". On the filter scale (91) you can now read which filter to use.

At the same time, the colour temperature of the light you measured can be read in Kelvin on the colour temperature scale (87).

Example (Illustrated on page 19)

Film used: daylight (D/T)  
Filter: R3  
Colour temperature: 7000 K

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Note that the blue figures on the colour calculator signify blue filters, the red ones red filters. Page 48 and the following ones will explain those figures in detail. You will find the commercially available filters corresponding to those figures on page 40 and following ones. The Kodak filter types are printed on the back of the PROFI-color.

### Mounting the filter

Attach the filter indicated by the PROFISIX + PROFI-color to the camera lens. If you do not have available the filter indicated (for example R9), use the next weaker filter. A filter value indicated on the calculator can also be obtained by using together several

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filters, their values will add up, for example  $R6 + R3 = R9$ .

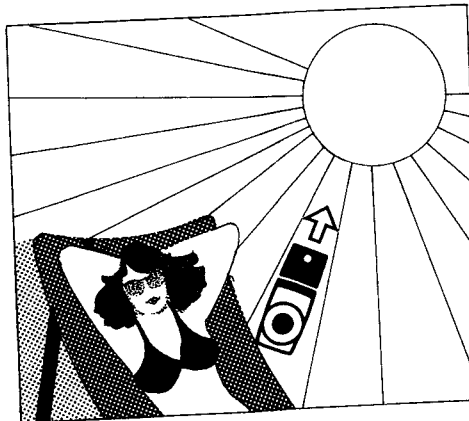
### Filter factors (extension factors) or extension values

When using filters on the camera, the exposure time must be extended. The extension factors or extension values are normally indicated on the filter mount, for example "x4" or "2/3". The dial marked "VF x/EF" (11) or LW/EV (13) of your PROFISIX allows you to programme these extension factors or values into your PROFISIX. Proper results can be obtained and the exposure time indicated directly used without further calculations.

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### Examples for measuring Subject in sunlight:

Point unit towards the sun. Note that the colour temperature of the sun's light will change in the course of the day. Do not eliminate special sunlight effects creating moods, for example reddish light at sunset, by using colour balancing filters (see also page 33).

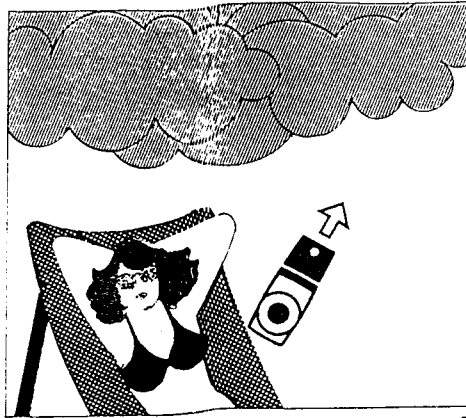


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**Overcast sky (no sun):**

For measuring point the PROFI-color at a slanted angle upwards towards the sky. Note that with drifting clouds (also with an entirely clouded sky): the colour temperature may change very rapidly, producing different readings. Therefore the picture should be taken very quickly after the measuring.

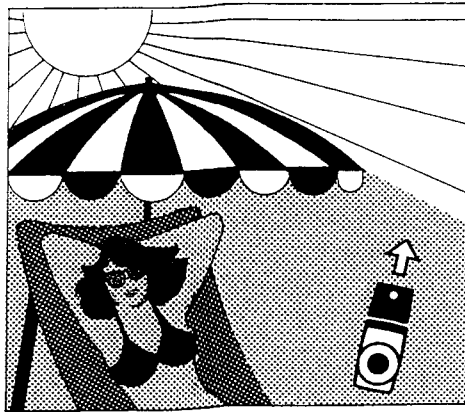


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**Subject in the shade:**

In this instance, the colour temperature will be especially high. Point unit at a slanted angle towards the sky and take care not to get any direct sun light on the flat diffuser (81), as that would cause a too low colour temperature reading.

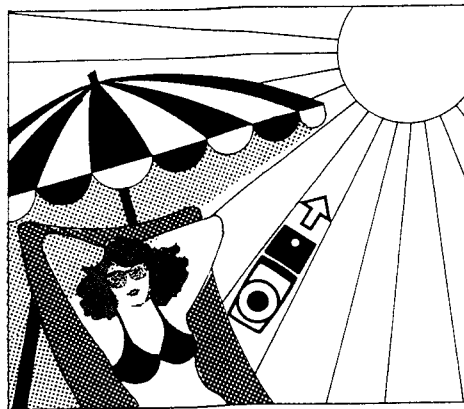


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**Subject both with sun and shade:**

Measure the light falling on the most important area of your subject. In most cases, this will be the light of the sun. With such light conditions, a colour cast will practically be inevitable in the areas you did not measure. This is due to the very great differences in colour temperature and could be avoided only by using additional artificial light. The colour temperature of the additional lamps would have to match that of the main light source.

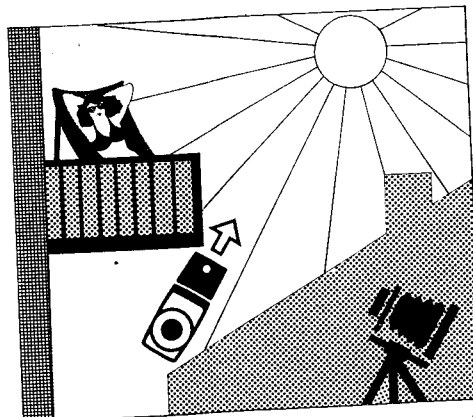


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**Subject not accessible:**

If subject is not accessible, measure from a substitute point getting the same light as your subject.



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### Film types

The most popular type of colour film is the Daylight colour film (PROFI-colour symbol T, english D) and the best colour reproduction is obtained under conditions where the colour temperature is approximately 5,8000 K. This type of film can also be used with electronic flash and blue flash bulbs.

Colour films for artificial light are available in two types:

- B or K for pictures with photo lamps with a colour temperature of approx. 3,200 K
- A for pictures with photo lamps with a colour temperature of approx. 3,400 K.

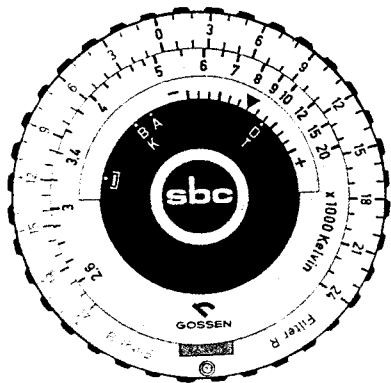
If a different colour temperature will produce  
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If you want to create a special mood, for example with sunset scenes, use a filter weaker than the value indicated by the PROFICOLOR or no filter at all, depending on the effect you want to create or your experience.

In case of doubt, use the next weaker filter!

Colour balancing filters of different manufacturers, although bearing the same number (i.e. the same R or B value), may look different and also have different exposure extension factors. Therefore the instructions supplied by the manufacturers with the colour balancing filters should be carefully studied. Pictures taken at conditions where different types of light are mixed may create problems.

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this correction will be valid as long as you continue working with the same film type and filter.

### Designation of filters

The filters of the firms listed below are indexed in the same way as the filter scale on the PROFICOLOR:

- Agfa-Gevaert
- B+W-Filterfabrik
- Cenei
- Göttinger Farbfilter
- Hama
- Hasselblad
- Lifa
- Rollei-Werke
- Summer ("Heliopan")

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better colour prints, set the black "0" of the filter scale (91) to that colour temperature value.

### Use your filters correctly!

The colour filters indicated by the PROFICOLOR convert the colour temperature of the measured light to that for which the colour film is balanced.

The colour balancing filters indicated by the PROFICOLOR correct only those colour casts which would have occurred, if the film were used under colour temperature conditions for which it was not balanced. The filters naturally do not compensate colour casts due to other causes, for example too long storage of the film or incorrect processing of the film.

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As each colour film is balanced for a particular colour temperature, such mixed light cannot be coped with by the film.

### Preprogrammed colour temperature correction

Filters from different manufacturers may have a different affect on films produced by different makers. In case such difficulties occur, corrections can be made by using the lines on either side of the colour index mark (90).

Each mark represents a shift equivalent to one decamired value and are marked "+" and "-". A change to the "+" side will result in warmer or redder pictures, while changes to the "-" side will result in cooler or bluer pictures.

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### Example:

You obtained a reading of R4 and found out that when using a filter R3 with a certain film type a blue colour cast will result. With the same light conditions, you will then take pictures with the filters R6 and R9. The picture taken with R6 proves to be the best. This means that a difference in filtration of R2 is existing which you can programme on the colour calculator (83).

Set the symbol of the film you are using (88) with the setting knob (84) opposite the second scale mark on the "+" side of the colour temperature correction scale (90). This is shown in the illustration on the opposite page. Thus you correct the film type setting by +2 filter values ( $3 + 2 = R5$ ). Note that

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Normally a filter set of two weak R filters and one weak B filter will be sufficient for the amateur.

Examples: R3, R6 and B3  
R2, R5 and B2

Two or more filters can be used together to obtain additional filter values, for example  $R3 + R6 = R9$ .

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