

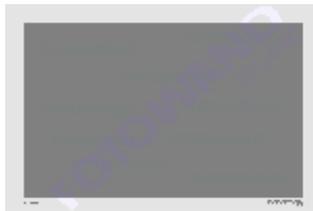
Visit our internet-site: <http://fotowand.com>

or directly by using: [http://4687@fotowand.com](mailto:4687@fotowand.com)

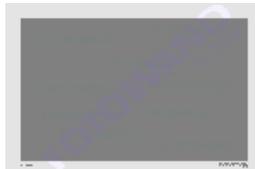
have a look at our:

Neutral Graycard - neutral standard of photographie

(Art-Nr. 4964 DIN A 4) <http://4964@fotowand.com>



(Art-Nr. 4963 DIN A 5) <http://4963@fotowand.com>



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TECHNIC

Dietmar Meisel Tepestraße 20A D-27257 Sudwalde
phone 04247-1521 fax 04247-1510 eMail technic@fotowand.de

4685/4687 WHITE CARD

Technical Details

Format	standard 8 1/4" x 11 5/8" resp. half 8 1/4" x 5 4/5" resp. pocket 70x125mm
Thickness	1 mm resp. 3 mm
Material	Polystyrène (frostwood) white
Colour	White DN = 0.08 log. Dens = 84% Reflexion
Contrast range 1:	1.4 K
Colour Stability	7-8 Blue Wool Scale
washable	



Application

Use our White Balance Card as reference value for **manuel white alignment**.

As the card is used in the open air, high demands are put on its durability. That is the reason why we have made it washable, strong and highly fade-resistant. Nevertheless you should treat it with care. Exposure to the sun or other bright light for some time does not harm it.

Over longer periods, however, you should keep it wrapped up to avoid colour changes over the years.

If the card has got dirty, wash it only with water and a little washing-up liquid or, even better, with a plastic cleansing agent. Never use a solvent or a detergent. Avoid scratches. The card is intended to last a photographer's lifetime.

You do not, however, have to be overcareful. The white card can stand a lot.

For those of our customers who are irritated by the white border on the card, we recommend the following: Slit the card on the back with a stanley knife, then you can break it; that way you can remove the white border. The card can also be split in this way.
The white border is a result of production techniques and prevents wear of the colour area.

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White is not White

There is a genuine white and one that is not genuine. Under certain circumstances you cannot differentiate the two visually. Genuine white has a diffuse reflection independent of the wavelength of the illumination, is neutral in its colour.

In other words:

The same percentage of light is reflected, independent of the light conditions, independent of the colour of the light.

A non-genuine white, however, can have a strong varying remission, i.e. the light can be reflected differently according to the colour of the light.

Under certain light conditions genuine and non-genuine white can seem identical. Seen under different light the difference appears.

The neutral white is an absolute value.

Exposure measurement

Filmcameras and digitalcameras with the capability of white alignment, offer adjustment for an existing lightsituation by alignment on neutral white of defined brightness.

Artificial- or Daylight, lamp- or sunlight and merging ones have different **colour temperatures**.

The colour temperature is measured by Kelvin degrees. Days fluctuation shows the **daylightcurve**, we are characterizing them correctly in the terms of **warm, neutral or cold**.

Warm daylight goes from orange to reddish, cold light is bluish. You will know the spectrum of this curve. It starts from the morning red via neutral middaylight to the deep sunset glow, sometimes achieving magenta.

Our brain is compensating these natural fluctuation at least to a great extent we hardly notice. This enormous reversion of our brain is relieved of that the fluctuation of day and artificial light is on one line, because this offers the capabilities of continuously compensation.

Look with consciousness out of the window from within an artificial lightened room on a scene of daybreak. It will appear bluish. On the contrary, if you are looking at evening from outside on a lightened windowpane, the colour of the roomlight will appear orange-brown.

This difference we will notice only by comparison. Lownstanding viewed the light will appear neutral, because our brain is switching the perception on neutral, compensating every difference.

The same is done by a camera through white alignment, that our shots shouldn't appear different or reveal colour castings.

Discontinuously neonlight

Except cases of discontinuous neon- or halogenlight, a camera will compensate different colour temperature by white alignment. A light is named continuous as long its line wouldn't show sudden breaks or leaks.

Discontinuous neon- or halogenlight however can't be compensated even by white alignment. Because here complete spectrum sectors are absent. A camera can't realize which sectors are absent, and therefore, they can't

compensate or convert them. This would be possible only for intelligent systems with a considerable deal of calculation energy, by alignment on a **reference** by means of spectrum analysis.

Even the so-called halogen-daylightlamp shows spectral gaps and they aren't qualified as a shooting lightsource. Only daylightlamps with a continuous spectral curve are qualified, these are **artificial lamps with 5000°-5500° Kelvin light temperature**.

In case of discontinuous light, ever some colours will lack, faces and definite colour areas would appear pale. In case of this light we speak about **gaps and chimneys**, areas of the whole spectrum with a different lighting. In its results comparable sensibility lacks of photographic emulsions or touchlacks of scanner chips.

Continuous light, the natural fluctuation of daylight however we can compensate. For that purpose we shift the center of the colour space like an excenter, without pulling lacks in the colour context of a shot.

Do the **white alignment** by aiming at the White Balance Card.

Hold the card in front of the camera. The card should be lightened nearly as like the object is lightened. It isn't essential to aim the card exactly, because its death reflexion, prismatically surface will reflect the light in an angle of 120° sufficient back.

Push the alignment button of your video- or digital-camera. Now its electronics is adjusting the way, that red, green and blue CCD-parts now together describes the existing white correctly. This way deviations from neutral ideal of an existing lightsituation is compensated, your shot is neutralized.

Repeat this procedure for every changing light situation.

Suddenly gathering clouds will cause a different colour characteristic or coloured shadows, for example foliage of a wood can interact.

In the last years UV-parts of sunlight is growing. This demands repeated alignment in cases of cloud breakups.

Merging lights, for example indoor artificial light plus sunlight from outside a window, you relate white balance **on mainlight**. Or middle, if the characteristics of both light situations should be maintained.

Different colour temperatures, at one and a same motif simultaneous appearing, for example caused by several halogen-spotlights, couldn't be compensated this way. Colourcast filtering or eclipse here wouldn't help anyway. Such lightsituation couldn't fit a neutral shot.

Sudwalde, November 2005