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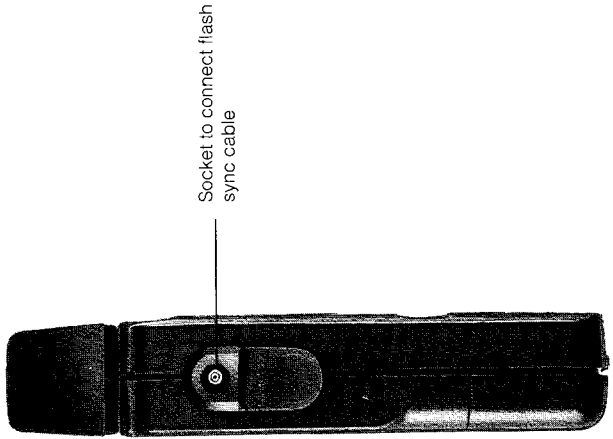
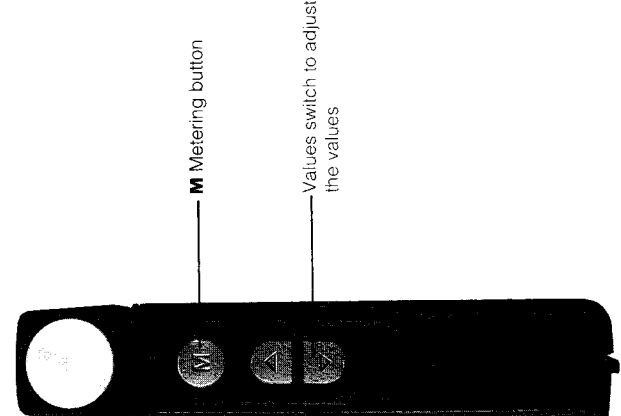
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COLORMASTER 2 F

COLORMASTER 3 F

5248



Display duration

The display automatically turns off, i.e. there are no readings, after 2 minutes of non-use of the COLORMASTER.

- The stored values are recalled by depressing either the function or values buttons.
- New measurements are instantly possible when the metering button is depressed.

The values of the last meter reading are stored until a new meter reading is taken. The COLORMASTER is fitted with separate memories for continuous (ambient) light and flash measurement.

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Self-checking routine

The microprocessor performs a self-checking routine as soon as the battery has been connected. Every possible display segment appears on the display during this routine.

The duration of the self-checking routine is approximately 10 seconds, but it can be interrupted by depressing any button.

The factory-programmed basic settings are automatically adjusted as soon as the self-checking routine has been completed.

Basic values

Film type:
5500 K = daylight film

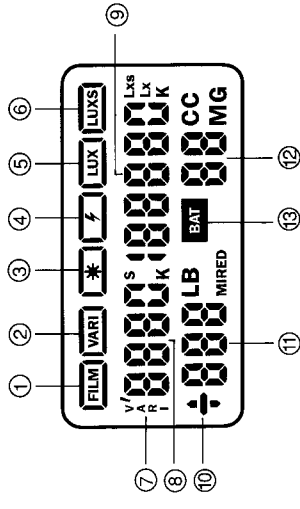
Flash sync speed (gate speed):
1/125th second

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COLORMASTER 3 F display

Functions:

- 1 Film type setting
Artificial light film 3200 K or 3400 K
Daylight film 5500 K
- 2 Variable film type setting (deviating from 3200 K, 3400 K and 5500 K)
- 3 Colour temperature measurement:
Continuous light
- 4 Colour temperature measurement: Flash
- 5 Measuring the luminous intensity (Lux)
- 6 Measuring the flash quantity (Lux-seconds)
- 7 Reminder that film type has been adjusted to "VARI" function
- 8 Upper left digital display
- Adjusted film colour temperature in Kelvin "K"
- Sync speed (gate speed) in seconds "s"
when measuring flash
- 9 Upper right digital display
- Measured colour temperature value in Kelvin "K"
- Luminous intensity "Lx"
- Flash quantity "Lxs"



- 10 "+," and "-," sign for filter values
- 11 Lower left digital display
Filter value display (LB = light balancing)
- Conversion filter in mired "MIRED"
- Kodak-Wratten filter (see page 15)
- 12 Lower right digital display: Filter value display
- Compensating filter
(CC = colour compensating)
M = Magenta filtration
G = Green filtration
- 13 "BAT" warning sign for battery check

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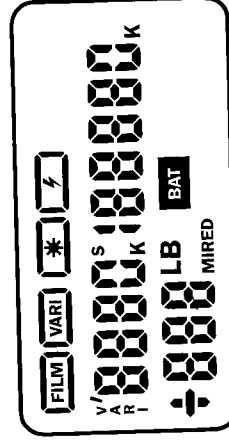
How the COLORMASTER 2 F and 3 F function

Preparation

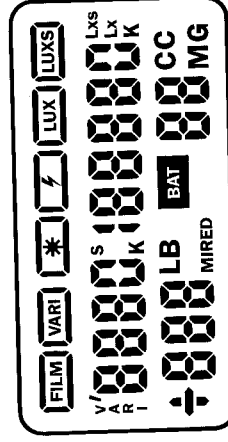
Battery

The COLORMASTER operates with a 9 V battery (alkaline-manganese battery). Since the meter's power consumption is minimal, the battery has a long life. The "BAT" warning sign is displayed when the battery is exhausted. This means that the battery has to be changed at the earliest possible opportunity.

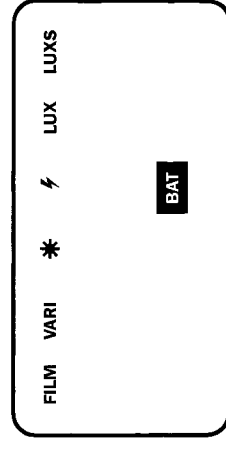
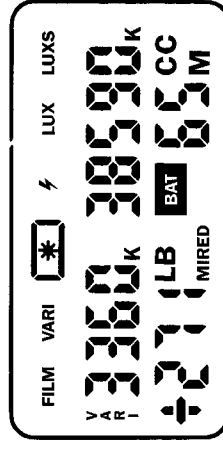
Measurements cease to be possible if the display only indicates "BAT". The battery must be **immediately** replaced. To change the battery, open the COLORMASTER battery compartment. Remove the battery. Clip the contacts onto the new battery and insert in the battery compartment. Push back the battery compartment cover. Battery changing erases all stored values.



COLORMASTER 2 F display



COLORMASTER 3 F display



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The individual functions

Adjusting the film type

1) In the **FILM** function

To enable the meter to supply the correct filter data, it is first necessary to enter the colour temperature (film sensitization) of the loaded film.

The meter has been factory-programmed to the colour temperature values of the three most common types of film:

Artificial light 3200 K
Artificial light 3400 K
Daylight 5500 K

- o Select **FILM** with the function buttons.
- o Adjust the colour temperature of the loaded film with the values buttons.

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Colour temperature measurement: Continuous light **[*]**

Always measure the light that is falling on the most important part of the picture (light measurement from the object towards the light). The diffuser surface must be pointing towards the light source. No shadow should fall on the diffuser as this will provide incorrect readings.

- o Select **[*]** with the function buttons.
(The last stored values appear on the display.)
- o Point the diffuser surface towards the light source.
- o Measure by depressing the **M** metering button.
- o The measured colour temperature appears in the upper right digital display.

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Measuring range extension

Extremely powerful flash and very bright continuous (ambient) light can be measured by using the special diffuser (+5 f stops). Change-over is automatic by the diffuser itself.

Ranges:

Luminous intensity
Normal diffuser
10 ... 62,000 lx
Special diffuser (+5 f stops)
320 ... 190,000 lx

Flash quantity
Normal diffuser
5 ... 650 lxs
Special diffuser (+5 f stops)
160 ... 20,800 lxs

The special diffuser for measuring range extension is identified by "+5".

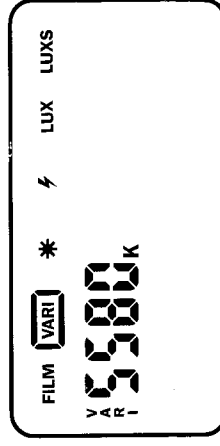
2) In the **VARI** function

A film colour temperature that deviates from the three common film types can be adjusted in this function. This is where individual colour nuances can be taken into account, e.g. as may be caused by your photographic equipment or film processing.

- o Select **VARI** with the function buttons
- o Enter the desired colour temperature with the values buttons. The longer you hold the button, the faster the values change.
(Range: 2000 K up to 9900 K in mired increments.)

The last entered film colour temperature is stored in the meter until a new value is entered, or the battery is changed.

(Alter the colour temperature has been adjusted, the filter values of the last measurement are automatically adjusted to the new film colour temperature when the continuous (ambient) light or flash metering function is selected.)



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LB +60 (= 60 mireds reddish/yellow filter) corresponding with KR 6 (= 6 dekamireds reddish/yellow filter)

Please observe the specifications of the filter manufacturer!

CAUTION: To avoid over filtration do not use filters that are stronger than those indicated by the meter.

Only on the COLORMASTER 3 F:

The filter value of CC filters (colour compensating filters) appears in the right lower digital display.

The density of the required CC filter for the measured light is specified by figures, while letters indicate the colour.

Key:

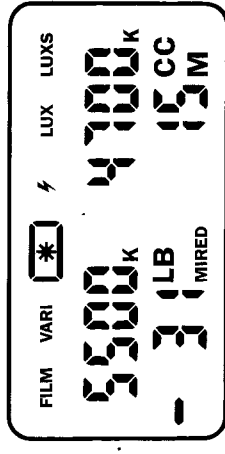
M = magenta (purple) filter (absorbs green) to compensate for excessive green.

G = green filter (absorbs blue/red) to compensate for insufficient green.

If necessary, the required CC filtration can be achieved by combining several filters.

Example:

CC 15 M means that, to compensate for a high share of green in the metered light, you should use the magenta filter 15 (= density 0.15); e.g. Kodak-Filter CC-10 M plus CC-05 M.



If the battery compartment switch (see page 1) is in the top (mired) position, the filter value (LB = Light Balancing) appears on the lower left display. If the switch is in lower position (Kodak), Kodak-Wratten filter value is displayed (see description on page 15). Display is in "+" or "-" mired values.

Key:

"+" = colour temperature of the light is too high.
 → Use reddish/yellow filter for colour correction.

"-" = colour temperature of the light is too low.
 → Use bluish filter for colour correction.

Filter designations

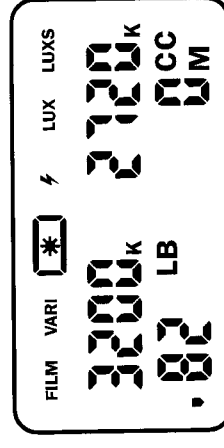
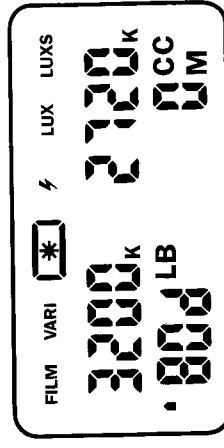
Filter manufacturers use different filter designations. Both mired values and dekamired values are common.

Examples:

LB -30 (= 30 mireds bluish filter)

corresponds with

KB 3 (= 3 dekamireds bluish filter)



Kodak-Wratten filters

(Filter values are displayed in the lower left digital display when the switch in the battery compartment is adjusted to its bottom position; see page 1).

The filter designations of Kodak LB filters do not provide direct reference to their conversion values. To avoid time-consuming reference to filter tables, GOSSEN has permanently programmed these filter tables into the microprocessor of the COLORMASTER.

For those using Kodak conversion filters (Kodak-Wratten filters, Series Nos. 80, 81, 82, 85), the meter can be switched over for direct display of these filter designations with the switch in the battery compartment.

(Note: Contrary to Kodak, some filter designation letters are displayed as lower-case letters. The "81 E" display corresponds to the Kodak filter 81 EF.)

Different displays:

o Display: "82 c" requires only the Kodak-Wratten filter 82 C.

o Display: "80 d" requires the Kodak-Wratten filter 80 D, plus an additional filter. The latter is displayed when the values button (Ⓜ) is depressed; "82" then appears on the screen.

Marks in front of the number indicate that the main filter must be supplemented by a second one, and this becomes visible when the corresponding values buttons are depressed.

In this example the filter combination 80 D + 82 is required*).

o No filter is required when "000" is displayed.

*) Image sharpness can be adversely influenced by scattered light if several filters are mounted on the lens. It is, therefore, always wise to keep the number of filters for conversion/correction to an absolute minimum. Consequently, the COLORMASTER will always select the smallest possible number of filters for any given filter combination.

Changing the flash sync speed (gate speed)

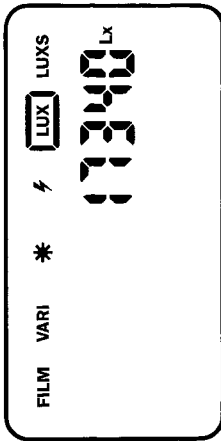
A flash sync speed (gate speed) between 1/2 second and 1/500th second can be adjusted in the functions **[Z]** and **[LUXS]** (only on COLORMASTER 3 F).

- o Select **[Z]** or **[LUXS]** with the function button.
- o Adjust the desired speed with the values buttons.

Measuring the luminous intensity **[LUX]** (only COLORMASTER 3 F)

The diffuser surface must be pointing towards the light that is to be measured. No shadow should fall on the diffuser surface as this will provide incorrect meter readings.

- o Select **[LUX]** with the function button. (The value of the last reading appears on the display.)
- o Measure by depressing the **M** metering button.



Colour temperature measurement: Flash **[Z]**

Always measure the flash light falling on the most important part of the picture. The diffuser surface should be pointing towards the flashgun, and no shadows should be allowed to fall on the diffuser surface as this will give incorrect meter results.

- o Select **[Z]** with the function buttons (The last stored values appear on the display.)
- o Connect the meter to the flashgun via the sync cable.*)
- o Point the diffuser surface towards the flash.
- o Depress the **M** metering button to fire the flash, and measure. (The preprogrammed flash sync speed (gate speed) is 1/125th seconds; for other speeds please turn to page 18.)
- o The significance of the individual displayed values conforms with "Colour temperature measurement: Continuous light", from the fourth "o" onwards, on page 12.

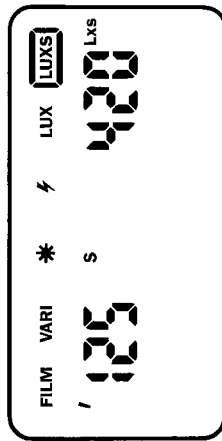
*) Flash-firing and infrared-firing devices can also be connected to the SYNCHRO socket.

Measuring the flash quantity **[LUXS]** (only COLORMASTER 3 F)

The diffuser surface must be pointing towards the flash. No shadow should fall on the diffuser surface as this will provide incorrect meter readings.

- o Select **[LUXS]** with the function buttons. (The last stored values appear on the display.)
- o Connect the meter to the flashgun with the sync cable.*)
- o Depress the **M** metering button to fire the flash, and measure. (The preprogrammed flash sync speed (gate speed) is 1/125th second. For other speeds see page 18.)
- o The measured flash quantity appears in the upper right digital display in Lux-seconds (Lxs).
- o The adjusted flash sync speed is indicated in the upper left digital display. (Example: 420 Lux-seconds and 1/125th second.)

*) Flash-firing and infrared-firing devices can also be connected to the SYNCHRO socket.



Caution:

A change of the flash sync speed (gate speed) (see page 18) cancels all results of the last flash reading.

Note: Use the GOSSEN CALCULATOR to convert Lux values into camera exposure settings (shutter speed and aperture setting combination).

This calculator disk (approx. 160 mm in diameter) enables you to directly read off the other corresponding values of the units Lux (lx), footcandle (fc), Candela/m² (cd/m²) and foot-lambert (fL).

Caution: Take the filter factor into account when filters are used.

- o The measured luminous intensity in Lux (Lx) appears in the upper right digital display.

The display values are logarithmically scaled, i.e. differing resolution at higher or lower luminous intensities. The resolution corresponds to the 1/10 light-value increments customary in photography.

Colour temperature and the filter data are automatically established during the measurement. These appear on the display when **[*]** is selected with the function button **[C]**.