INSTRUCTION MANUAL

205FCC - the master improved

Following inputs from users, the Hasselblad 205FCC has been improved on a number of important functional points. The result is the 205FCC - a professional tool that lets you control the final image with utmost precision. It quickly becomes a natural extension of your creativity, by ensuring that you always have the option to make your own decisions. With the 205FCC you will be able to make perfect exposures under almost any lighting condition conceivable - either in the studio or outside.

A highly sensitive and sensitive spotmeter in the camera body lets you quickly choose from a wide variety of viewpoints, and still be able to utilize all the automatic functions. It gives you accurate readings of important subject areas helping you to create the image you visualize.

You can choose from four different modes of operation. Three automatic, with aperture priority, and one manual. In the 4th mode, the camera is capable of automatic exposure bracketing. The DIFF mode is again aperture priority automatic, but operates from a locked value. This is a convenient mode if you are working in a lighting situation. Just take a reading from the subject and the exposure is locked until you decide to change it. You can change aperture, lens or magazine - the exposure remains unchanged.

Regardless of whether you are working with color or black and white, the ZONE mode is the simplest way to use the camera. By 'thinking' in zone-valued rather than in plus or minus adjustments, the camera quickly becomes a part of your image visualization.

In the Manual mode you take aperture and shutter speed, guided by the metering system or by your own experience. You have the possibility to choose shutter speeds from 1/2000 second to 24 minutes in half step increments. A 4th mode is the 'Programmable' mode where you can program different camera functions such as film speed - when using F5/F5N magazines, sell linear delay, IB in flash level, bracketing step and DIFF metering level.

The flash system of the 205FCC has been improved significantly. It now includes all the advanced functions and electronics, the camera is an integral part of the Hasselblad system. With few limitations you can use all accessories, including 58-, CF- and F- lenses and still be guided by the metering system which indicates the shutter speed to be set.

Read this instruction manual carefully and follow the instructions step-by-step to learn how to use the camera to its full extent.

NOTE: In the last 2 positions of components are described in relation to the camera as you see it when using a photogaph, i.e. the lens is on top, the flash is on the top, the winding crank is on the right hand side, and the control panel is on the left hand side.
Getting Started

This section describes how you prepare your Hasselblad 500CFC for use. You will find all necessary information how to operate the camera in this section standing on page 18. Follow the instructions step by step to avoid getting or damaging the camera. Always keep the rear protective cover on to protect the shutter curtain when the magazine is detached.

Battery

The battery compartment and cassette is located in the lower forward corner on the left hand side of the camera body. Put the battery and install the battery - 7V type 64, or equivalent - according to the marking on its casing. Push the battery firmly all the way back into the compartment.

Cocking the Camera

Clock the camera after installing the battery. First out the winding crank on the right hand side, press the button in the center of the crank and rotate it clockwise one turn until it locks (see page 20 Double exposure).

Front Protective Cover

The front protective cover is attached to the lens bayonet mount. Rotate it as indicated by the arrow in the illustration and tilt it out of the mount.

Attaching the Lens

Remove the lens rear protective cover by rotating it counterclockwise and flipping it off the lens.

Removable Rear Protective Cover

Depress the catch, lift the cover backwards and tilt it off. Always keep the rear protective cover on to protect the shutter curtain when the magazine is detached.

Attaching the Magazine

Ensure that the magazine slide is fully inserted and that the magazine status indicator is white. If the indicator is red, then follow the instructions on page 9. Insert the magazine on the magazine support with the support hooks properly engaging the recesses in the magazine bottom. Finally, swing the magazine towards the camera body, checking that the magazine screw fits into the slot in the magazine. Push the magazine gently but firmly against the hooks while sliding the magazine catch to the right.

Release the button when the magazine is correctly aligned with the camera body and then push the button to the left to ensure that it has reached the locked position. Remove the slide to positively lock the magazine to the camera body.

The Winding Crank

One full revolution of the winding crank winds the film and lens mechanisms and transfers the film to the next frame. Underneath the crank is the drive shaft and the bayonet mount for the Hasselblad Winder (page 17), which can be attached after removing the crank. It is recommended that the camera is fully wound when the crank is removed or replaced.

Removing the Winding Crank

To remove the crank push the catch lever on the end of the crank hub downward while rotating the crank counter-clockwise. Then pull it straight out from the shaft.

Attaching the Winding Crank

On the side of the crank hub are two triangular index marks, a larger one and a smaller one. Align the crank to the shaft with the smaller mark aligned with the red dot located immediately above the mount. When pushing the crank against the camera body rotate it clockwise until the larger mark is aligned with the red dot.

Check that both the camera and the lens are cocked. The focal plane mirror is shown in the proper position against the index mark for the camera drive shaft (top) and the lens drive shaft (bottom). If the lens is not cocked you can use a zoom or other flat object and turn the focusing screw on the lens to rotate the mirror approx. 1/5 of a full turn. You will notice that holding the camera body with your left hand and the lens in your right hand as shown in the illustration is the easiest way to attach the lens. When you have aligned the red index on the lens with that on the camera body as shown in the illustration, the lens will firmly snap into the bayonet mount. You can then rotate it clockwise until it stops with a firm click as the lens locks in place.

Removing the Lens

Depress the catch button, rotate the lens counterclockwise and tilt it out of the bayonet mount.

NOTE: You can only attach and remove the lens when the camera is correctly wound and the magazine is correctly attached.

Removing the Magazine

It is advisable to have the camera fully wound and the magazine status indicator showing white. If the indicator shows red, then follow the instructions below.

Insert the magazine slide fully and with the hinge towards the front of the camera. Slide the magazine catch to the right, lift the magazine back and tilt it off the support.

NOTE: The magazine cannot be removed without inserting the magazine slide. The slide protects the film from fogging. Never operate the camera without removing the magazine slide having attached the camera.

The Magazine Status Indicator

The status indicator on the right hand side of the magazine shows whether the magazine is ready to operate (white) or not, i.e. the film has not been advanced (red). Do not attach a magazine showing red to a camera that is not re-cocked! Wind it first, otherwise you will lose one frame. Do not attach a magazine showing red to a fully wound camera! That could result in an unintentional double-exposure since the frame in position in the magazine has probably already exposed. If the status indicator shows red, swing the camera (page 17) before attaching the magazine. Then, when you wind the camera, the film will be advanced one frame.

Strap and Strap Lugs

The 500CFC is delivered with a medium wide, shoulder strap, pinset separately. You will find other types of straps in the Hasselblad Product Catalog. All straps are provided with special clips for easy attaching and removing of the strap.

Attaching the Strap

Place the main body of the strap clip over the strap loop on the camera with strap points backward (see figure). Press the tip of the strap points into the camera body and pushing the strap to slide the clip over the lug to the locked position.

Removing the strap

Hold the strap points backwards and lift the locking plate of the clip high enough to pass over the top of the lug. Push the clip in the direction opposite to this until it slides off the lug.
Focusing Hood and Magnifier

Opening the Focusing Hood

Lift the lid with a firm grip on the tab at rear edge and swing it up to a vertical position. The hood unfolds automatically and locks in open position.

The Built-in Magnifier

Use the built-in 4x magnifier to enlarge the viewfinder image, e.g. for more accurate focusing. To unfold, lift the lid of the focusing hood on the right, as indicated in the illustration. To fold the magnifier down, simply push it back towards the lid until it clicks. The magnifier can easily be exchanged for one with a suitable correction lens to match your individual eyesight (see page 26).

Closing the Focusing Hood

Pinch the side plates at the hinge points and fold the hood back down.

Viewfinder Image and Display

The multi-coated 205FFC is equipped with the Acute-Matte focusing screen featuring the highest brightness and resolution among the Hasselblad focusing screens. The center of the screen is indicated by a hairline cross and a circle of dots indicating the metering area covered by the built-in metering. The circle has a 6 mm diameter. See page 27 how to change the focusing screen.

The Exposure Meter

The exposure meter is a spotmeter, precisely shielded to avoid all influence from stray light. The metering area corresponds to an image angle from 1° to 2° depending on the lens in use. The metering range for the film speed of ISO 100/21° extends from EV -1 to EV 20.

The Display

Located above the upper edge of the viewfinder image is the display, which is the information center of the camera. You find a comprehensive description of the display and its symbols on pages 18-19.

The Control Panel

The control panel occupies most of the left hand side of the camera body. It includes all the controls for the various functions of the 205FFC, such as:

- Flash Connectors
- The Display Illumination Switch
- The Mode Selector Dial
- The Adjustment Buttons

Flash Connectors

The flash connectors are located underneath the protective cover in the upper forward corner of the control panel. The smaller one is a standard PC-socket and the larger one is a 6-pin connector for dedicated flash units.

The PC-socket

Non dedicated flash units and certain adapters should be connected to this socket.

The Dedicated Flash Connector

A dedicated flash unit connected to this 6-pin socket directly or through a suitable adapter will be fully controlled by the camera processor.

You will find detailed information on flash photography on pages 58/88 & 93.

The Display Illumination

Pressing the button above the flash connector turns the display illumination on or off. The switch has a toggle function.

Left Hand Grip

Holding the 205FFC in your left hand with your index finger on the release button as shown in the upper illustration below, is the most convenient grip. You can reach the AE-look and the adjustment keys with your left thumb (lower illustration below) and your right hand is free for focusing, aperture setting, operating the crank or changing the lens or the magazine.

Activating the camera and the metering system

Before you operate the 205FFC you have to cock the shutter (if it is released) and switch on the metering system. To be able to release it you also have to remove the magazine slide.

The fully wound 205FFC can be started in two different ways:

1. By depressing the exposure button halfway in, i.e. to the "pressure point".
2. By depressing the AE-lock button. Activation as per 1. above can only be performed when the magazine slide is removed.

Activation as per 2. is not possible if the AE-lock has been kept depressed for more than 16 seconds.

Keep the magazine slide inserted where you wish to avoid increased battery power consumption caused by unintentional activation of the metering system.

The electronic system and the viewfinder display turns off automatically 16 seconds after the last key or button operation, but all relevant data are stored in the memory.

The Mode Selector Dial

With the mode selector dial you can select any of the five operating modes P, A, S, Z or M available in the 205FFC. A, S and M are used for photography and P for the programming of certain functions.

The Automatic Exposure (AE) Lock

In the center of the mode selector is a push-button, marked with a red dot. It operates the AE-lock and other functions, depending on the setting of the mode selector dial. You can also use it to start the electronic operating system in the camera.

The Adjustment Buttons

These keys also have multiple functions depending on the setting of the mode selector dial.

All the functions of the mode selector dial, the AE-lock and the adjustment buttons are described in detail on pages 29-39.

Focusing, Exposure Release and Viewfinder: Display

Turn the focusing ring (page 31) until the image of an object appears sharp in the viewfinder. Depress the exposure button to the pressure point.

If the mode selector dial is set in Ab, D or Z position the display now shows – besides a few other symbols described in the following section of this manual – the preselected aperture and the shutter speed calculated by the camera. With the mode selector set at M the display shows the letter M, the preselected aperture and shutter speed set on the shutter speed ring.

You can now press the release button all the way to make the exposure. After releasing the button you can rotate the winding crank one or two times to wind the camera and advance the film one frame.

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Getting started 18
The Right Hand Side

On the right-hand side of the camera body are the winding crank, described on page 16, and the pre-release and selftimer lever.

Double Exposure
You can make double (or multiple) exposures by rewinding the film without advancing the film. This is possible by depressing the double exposure button in the center of the crank hub and simultaneously turning the crank clockwise. Then you can release the button and complete the winding until the crank locks.

Mirror and Mechanism Pre-release
By pre-releasing, certain camera functions and lifting up the mirror you can avoid camera vibrations, reduce the shutter speed, and shorten the time delay. This is done by pressing the pre-release lever once. To avoid the mechanism and lower the mirror again you simply perform the operation for a double exposure as described above. While the mirror is lifted, the light metering is interrupted and locked on the latest recorded value.

The Front

The Shutter Speed Ring
The shutter speed dial for the focal plane shutter in the 205/FDC has speed markings from 1 to 1/1000 s as well as B and C. Between the markings are intermediate half speed click stop settings. One of these settings, 1/100 s, marks the flash symbol - the fastest shutter speed for flash synchronization with the focal plane shutter (page 59). In all modes of operation except M the camera processor automatically calculates and sets the shutter speed within the range 30 s to 1/1000 s, irrespective of the shutter speed ring setting.

Long Exposure:
If you have a shutter speed slower than 60 s you have to switch to M mode and depress the connection button (page 29). This "inverts" the meaning of the 1/sec-second markings on the shutter speed ring, i.e. 30 s, 20 s, 10 s, etc. until 2000 s (24 min). The "inversion" remains as long as the camera is active and 4 sec. after autowind-up, or if you change mode or depress both connection buttons a second time. In the B setting in all modes the display continuously shows the open exposure time in full seconds up to 60 minutes. The setting marked C is used together with CF and C lenses only (Appendix A, page 85).

NOTE: When the mode selector dial is set at M (page 54) the display indicates the accurate shutter speed for the intermediate settings.

Exposure Release Button
In the lower right hand corner of the front, within the retractable cover of the left hand grip, is the exposure release button. The button has three different functions:

A. When depressed to the "measure point":
1. Activate the camera; the exposure release button.
2. Change the display to indicate aperture and shutter speed.
3. Lock the light value in Ab mode
B. When depressed all the way in:
1. Release the shutter to make the exposure with preset or calculated values.

The exposure button is locked when the magazine side is in the magazine.

Cable Release
When using shutter speeds slower than 1/30 s you are recommended to put the camera on a tripod and use a cable release attached to the threaded mount in the center of the exposure release button. The cable release and the exposure button have identical functions. (See NOTE, page 21, for use of selftimer.)

Lens Catch & Shutter Speed Ring Lock
The lens catch button is located in the lower left hand of the camera (left). To release and remove the lens you have to keep the button depressed while rotating the lens clockwise as seen from behind. The button also operates the lock for the shutter speed ring settings B and C. Keep depressed when moving the ring to either of those settings. Moving them B to 1 is free.

Figures
Eight 7-segment figures indicate corrections, deviations, EV, shutter speed, aperture and other information in operation modes Ab, D, Z and M as well as programming functions in Pr mode and certain warnings in various modes of operation.

Fraction Indication
One, two or three dashes to the right of the figure indicate 1/4, 1/2 and 3/4 step higher value than indicated by the figure.

Minutes Indication
A vertical dash to the right of the figure indicates that the preceding figure shows the number of minutes at shutter speeds of 60 s or slower.

Film Speed
Indicates film speed on FDC or EF cameras dial or inserted manually in Pr mode (page 40, 41). S in ISO is also used to indicate seconds of every slow shutter speed (6 s to 60 s) or long exposures (15 s to 30 s).

Battery Check
Appears when battery capacity is low (page 57).

Magazine Check
Indicates that the magazine on the camera is not FDC-adapted.

Automatic Mode
Indicates that the mode selector dial is set at Ab (page 44).

Warning Symbol
Flashes red together with one or more of the other symbols to indicate various problems (page 57, 58).

Operating details

Viewfinder Display & Symbols
The display is shown at all illustrations the way it is built into the camera body. When you use a prism viewfinder, the display appears reversed, but the microprocessor adjusts all the indications to make them fully readable.

Flash Ready Signal
The flash symbol is illuminated green when a dedicated flash is connected, turned on and ready to be fired (pages 58, 69).

Manual Mode
The mode selector dial is set at M (page 54).

Selftimer Function
Flashes when the selftimer is activated. Appears also by programming the length of the selftimer delay in Pr mode (page 21, 40).

Differential Mode
The mode selector dial is set at D (page 58).

Plus/Minus Sign
Appears together with a correction or deviation value when the mode selector dial is set at Ab, D or M. The + or minus sign can also be displayed together with the "Flash ready signal".

Zone Mode
The mode selector dial is set at Z (page 51).

Operating details

The Right Hand Side

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22 The Front

23 The Right Side

21 The Right Hand Side
The Rear of the Camera and the Focal Plane Shutter

Avoid leaving the rear of the camera and the shutter curtain unprotected! Always attach the protective cover when the magazine is removed.

The opening in the rear of the camera is normally covered by the shutter curtain. The 205FC has a mechanically powered but electronically controlled focal plane shutter with two textile curtains running from left to right across the opening. The running time for the curtains is 1/90 s, in all automatic modes (pages 44–54) the shutter speeds are calculated by the metering system which controls the shutter. The shutter speeds are adjusted in increments of 1/12 EV-step in the interval from 1/1000 to 16 s and 1/4 EV-step in the interval from 16 s to 90 s. The shutter speed is not shown in the viewfinder display.

Caution: Whether the shutter is cocked or released, one shutter curtain is always exposed in the rear opening. When the view of the camera is not covered by a magazine or a protective cover care should be taken when handling the camera.

Avoid touching the curtain as you touch the camera body.

In front of the Hasselblad logo there is a window for the daylight illumination of the viewfinder display screen.

The Viewfinder System

Changing the Focusing Hood or the Viewfinder

To remove the focusing hood for using any available adapter within the FFC system detach the magazine or the protective cover. Always attach the focusing hood to protect it from being damaged. Remove the hood by sliding it to the rear of the hood slots. Slide the replacement viewfinder into the slots and push forward until it stops. When fully reinserted the viewfinder is positioned by the spring-loaded ball latch until you have reattached the magazine or the protective cover.

Changing the Magnifier

The standard magnifier lens plate can be changed for a plate with a correction tint to compensate for individual eyesight. The standard magnifier market provides a comfortable viewing of the focusing screen and a display for most users. Correction lenses are available with powers ranging from +0.5 to +4 diopters.

Change the magnifier as follows:
1. Remove the focusing hood from the camera body and open it by lifting the lid.
2. Release the magnifier by pushing the catch to the left. Push the magnifier halfway down and pull out the lens plate.
3. Keep the plate holder halfway down and insert the replacement lens plate with the printed side up. Pull the hood and pull it back on the camera.

The Left Hand Side

The Mode Selector Dial

The mode selector dial is in the center of the cover at the left hand side. To select any of the operating modes of the 205FC simply turn the dial until the symbol for that particular mode is aligned with the red index mark. The different operating modes are:

P: Programming Mode
A: Automatic Bracketing Mode
D: Differential Mode
Z: Zone Mode
M: Manual Mode

The functions of these modes are described in detail on pages 28–37.

The Automatic Exposure (AE) Lock

The AE-lock is the push button on the center of the mode selector dial, marked with a red dot. It has different functions, depending on the mode of operation as described later. It can either be used to achieve the camera’s metering system (page 16) except after the AE-lock has been depressed for more than 15 seconds, e.g. if the camera has been lying on the left hand side. In that case the camera can only be achieved for normal use by depressing the exposure release button to the pressure point (page 16).

The Bottom

At the bottom of the camera are the quick coupling plate, the tripod thread, and two notches, supporting the camera when placed on a flat surface. The quick coupling plate fits the Hasselblad accessories, such as the quick coupling and the Flashgun Bracket 1 (Cat. No.45300). The tripod threads are 1/4" and 3/8".

The Top

The viewing components (page 26) occupy most of the camera top. The camera body is equipped with a collapsible focusing hood, which also serves as a protective cover for the focusing screen. In front of the Hasselblad logo there is a window for the daylight illumination of the viewfinder display screen.

Changing the Focusing Screen

Your 205FC is equipped with the exceptionally bright and sharp Acute-Matte focusing screen. The center area inside the dotted circle indicates the area metered by the built-in spotmeter (page 38).

If you wish to replace the focusing screen with any of the other focusing screens in the Hasselblad System simply follow the procedure below:

1. Detach the magazine and the viewfinder.
2. Push the two screen latches to the side into their recesses.
3. Place your hand over the screen and invert the camera. The screen will now drop into your hand.
4. Insert the replacement screen with the smooth side up and the sharp-edged corners down. Ensure that all latches touch the pins in the housing. The new screen is positively locked by your hand. The mirror is in the down position. Pull a finger through the lens mount and push gently at the screen from underneath, preferably with a soft cloth between the finger and the screen.

Always avoid direct light into the viewfinder eyepiece when making an exposure.

The Viewfinder System

The Adjustment Buttons

The adjustment buttons also have different functions depending on the selected mode. With a few exceptions a single push on the upper button increases and the lower button decreases the value to be adjusted. If you keep the button depressed for more than half a second the value starts to change at a rate of 4–5 steps per second until the button is released.

The Flash Connectors

The larger six-pin TTL connector provides automatic control of dedicated flash units. The Hasselblad Flash 404H can be connected directly to the 205FC but other dedicated flash units may require a suitable adapter, such as the Hasselblad SCA-adapter 380 or 390, between the unit and the camera. The smaller connector is a common PC socket for any kind of flash unit. You can find further instructions on flash units with the 205FC on pages 58 and 60.

Display Illumination

In low light levels depressing the switch button on the upper edge of the central panel switches on the illumination of the viewfinder display. The button has a tactile function.
Lenses

The Hasselblad lenses made since 1957 can be separated in two major groups, each with two sub-groups:
1. Lenses with a built-in leaf shutter: C lenses (CP lenses)
2. Lenses without shutter: FE lenses

All these lenses can be used on the 205FCC, but only the FE lenses will give you access to the full range of exclusive and sophisticated features of the 205FCC.

FE Lenses

The Hasselblad FE lenses which have no built-in shutter can easily be identified by their system sign, the blue lens ring on the left hand side of the aperture ring. Another sign, visible only when the lens is detached from the camera body, are the four protruding contacts in the bayonet plate at the rear of the lens. They are used for the data transfer between the lens electronics and the electronics system in the camera body. The contact surfaces of these pins are sensitive to contamination and should not be touched with your fingers. Match the protective cover after removing the lens from the camera and never set the lens down on the unprotected bayonet plate.

The Depth-of-field Scale

The depth-of-field scale reproduces the aperture values on both sides of the "heater" index line between the first ring with the index line and the focusing ring. When the image is focused on this index line you can read the focusing distance opposite the index line in the depth-of-field scale. The depth-of-field limits can be read opposite the left and right values corresponding to the pre-set aperture value. This illustration depicts the depth-of-field for the pre-set aperture value of 6.

Depth-of-field Preview

The lens is now opened up to the largest aperture and provides the brightness possible viewfinder image with the shallowest depth of field. To close down the lens diaphragm to the pre-set aperture by pushing down the depth-of-field preview knob until it locks. To re-open it depress the lower end of the knob.

Exposure Value (EV)

The orange scale on the right hand side indicates the exposure value for the selected shutter speed combination. The EV value is equal to the aperture value (f-number) on the shutter speed ring. The scale has no particular function on the 205FCC.

Number 1 will now be displayed in the frame counter window indicating the loaded magazine is ready for use. The film winding crank is blocked at home 1 only. It can be used to wind up a partially exposed film for any home before that. The frame counter is automatically reset when the film holder is withdrawn from the magazine.
205FCC Metering System and Operating Modes

The most important feature in the metering system is the spot metering. The spot metering is used with the 4:3 ratio of the focusing screen. The circle has a diameter of 5mm, which is approximately 1/3 of the total image area. The spot metering is useful for determining the brightness of the subject in the photo, such as the white or black areas. The spot metering data is recorded on the viewfinder. The spot metering system can be used with the viewfinder and the LCD display.

Operating Modes

The different operating modes are described in the order they appear on the Mode Select Dial.

Pr Program Mode

The Pr mode is not the exposure mode but it is used to enter certain user-defined values, different from the standard settings, which are built into the camera. The Pr mode allows you to adjust the shutter speed and aperture values, which are stored in different camera settings. The Pr mode is effective when the image is divided into 4 parts, each with different settings.

Operating Modes, Programming Mode

By repeatedly pressing the AE lock button, you can shift through the Pr functions in the sequence: Pr1—Pr2—Pr3—Pr4—Pr5—Pr6—Pr7. The sequence always starts with the last used function, except when a battery change occurs. In Pr7 mode, the camera will return to the Pr mode. In Pr6 mode, the camera will return to the Pr mode if the exposure button is released.

Adjusting the Automatic Flash Metering (P12 function)

The function is used to provide a fixed adjustment in the automatic flash control to reduce or increase the flash power, e.g., for 50% flash illumination.

Film Contrast Dial

The film contrast dial is the film contrast dial which can be used in the zone mode only (page 51). It is used to adjust the contrast of the image from N-4 through N+4. It is available in the metering system when you intend to control the contrast by increased or reduced development.

Film Plane Index

The lens plane on the film plane is not recorded in the standard setting and all previous entered values are lost.

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ings and all previously entered values are lost.
1. Set the Mode Selector Dial in the Pr position.
2. Depress the AE-lock button to start the camera and then repeatedly if required to select the Pr function.
3. Press the adjustment buttons to set the desired correction value within ±3 to ±1 EV range. Pressing the upper button increases the value and pressing the lower button decreases the value.
4. Reset the Mode Selector Dial to the desired exposure mode or press the AE-lock button to switch to next Pr function.

**NOTE:** If the selected adjustment, combined with the selected f/stop value, makes the flash metering system outside its operative range (ISO 25 – ISO 1000), the display starts flashing.

Setting the Automatic Bracketing shift value (Pr function)
1. Set the Mode Selector Dial in the Pr position.
2. Depress the AE-lock button to start the camera and then repeatedly if required to select the Pr function.
3. Press the adjustment buttons to change the exposure shift; pressing the upper button increases the value and pressing the lower button decreases the value. The indicated step value is ±2 EV (page 42).
4. Reset the Mode Selector Dial to the desired exposure mode or press the AE-lock button to switch to next Pr function.

**AD Automatic Bracketing Mode**

**Function:** Automatic exposure with aperture priority, pre-selected f/stop value and automatically calculated shutter speed.

**Features:**
- Continuous metering of the light value.
- Locking and storing of the light value at a selected position by keeping the exposure button at the pressure point or by pressing the AE-lock.
- Optional preset permanent adjustment of the continuous or stored light value ±5 EV steps in 1/6 EV step increments.

Suggested procedure:
1. Press the desired bracketing shift value using the Pr function (pages 40, 42).
2. Press the f/stop button. With an F-CC (or E-) magazine attached the f/stop value is shown in the magazine display and the shutter speed is calculated accordingly (page 36). If an E-magazine is attached, the f/stop value is shown on the magazine display and the shutter speed is calculated accordingly.
3. Press the AE-lock button to lock the metering system and select the Pr function setting.

**How to Use the “Ab” Mode**

You are strongly recommended to use the Hasselblad finder accessory for the utilization of the sequential Ab mode.

The parameter in the Ab mode is only sensitive and reacts to the smallest change in the light level within the metering area (page 38). The shifting of the sensor makes it practically impossible to light the subject exactly. The brightness of the scene must be accurately determined before storing the metering data or releasing the exposure.

Automatic exposure bracketing is very useful when the subject is difficult to meter or when the possibility to make an accurate determination of the exposure value is limited. Bracketing is best performed by using the shutter for the smoothest operation.

The camera runs as long as the exposure button is kept depressed or until the film is finished, and for each exposure after the first one the shutter speed is changed according to the preset bracketing rate.

The second frame is made one step slower (slower EV). The third frame two steps faster (higher EV) and the fourth frame two steps faster (higher EV) and the fifth frame two steps faster (higher EV) and so on.

Bracketing shift function is limited to 10 exposures above and below of the originally measured and stored light value. Thus, all 21 exposures, there is no more wipe in the exposure values. During the bracketing operation the light meter is disabled.

The value of the shift step should be placed to any of the steps 0, 1/4, 1/2, 3/4 or 1 EV in Pr mode (page 43). Default value is 0 EV, which gives a common 1.3 fps sequence without shift. With a shift step of 1/4 EV the max. total span is as large as ±1.10 EV. If any of the exposure shift limits (0, ± 1/4, ± 1/2, ± 3/4 or ± 1 EV) is reached during bracketing that speed will be repeated until the operation is terminated.
D Differential (DIFF) Mode

Features:
- Continuous metering of the light value.
- Locking the exposure value in a selected moment.
- Continuous indication of the difference between the stored and the presently metered light value.
- Adjustment of the stored light value ± 5 EV steps in 1/4 EV step increments.

How to Use the "D" Mode

The Differential D Mode is very convenient when you work under stable light conditions or need to find the contrast range of a subject. By locking and storing the light values on one subject part and then moving the metering area about the subject, the display continuously shows the contrast range between the initially metered part and the present location of the metering area. The stored light value remains for any number of exposures until intentionally reprocesed or adjusted.

Suggested procedure:
1. Set the film speed. With a F-C or F (or E) magazine set the film speed dial (page 36).
2. With a single-frame magazine, turn the mode selector (page 34).
3. Press the desired aperture.
4. Set the Mode Selector Dial at "0" and aim the camera at the measuring spot in a selected subject area.
5. Depress the AE lock button to lock the exposure value and the shutter speed on a selected "reference" subject area considered to be the desired normal brightness. As the metering spot is moved to another subject area, the display continuously shows the brightness difference in EV units between the reference area and the present location of the spot with an accuracy of 1/4 EV steps.
6. Use the adjustment buttons to adjust the exposure up or down to the desired level with 1/4 EV increments. You can depress the exposure release button to the pressure point to display the pre-set aperture and change if required. The shutter speed will be automatically adjusted to the new aperture setting, but the exposure remains unchanged.
7. Depress the exposure release button fully to make an exposure.
8. Rewind the camera to cock the shutter and advance the film to the next frame with the previous exposure values and adjustments maintained.

NOTE: The metering system can also be started by depressing the exposure release button. It then recalls the last stored exposure value including any adjustment. The settings can be erased and the system unlocked only by depressing the AE lock button or by rewinding the battery.

Z Zone Mode

This section describes how to operate the 205FCG in the Zone Mode. In the text below the word "zone" always applies to zones in the film plane.

Functions:
- Automatic exposure with aperture priority, pre-selected film speed and calculated shutter speed.
- Continuous metering of the light value, locking and storing of the light value at a selected moment.
- User-defined default zone value setting.
- Continuous zone indication for the different parts of the subject.
- Automatic gamut correction at the aperture and the zone display indication when planned film development conditions are made.
- Adjustment of the stored light value between zone 0 and zone 10 with 1/4 EV zone step increments.

How to Use the "Z" Mode

The Zone Mode (Z) is in many aspects similar to the D mode but has a different way of displaying the contrast differences. With an F-C magazine it also provides means to adjust for contrast compensation in film development. This feature is available with an F-CG magazine only.

The metered subject part is normally placed on zone 5 (0.4, page 52), which is the standard setting. This setting can be changed by the user, applying the method below:

1. With the Mode Selector Dial set at "Z", press the AE lock and keep it depressed.
2. While keeping the AE lock depressed, press the adjustment buttons; the lower one to reduce the zone value and the upper one to increase the zone value with 1/4 zone step increments.
3. The change is effective until changed manually or until the battery is removed.

Suggested procedure:
1. Set the film speed to the pressure point to display the zone aperture and change if required. The shutter speed is automatically adjusted to the new aperture setting, but the exposure remains unchanged.
2. Depress the exposure release button fully to make an exposure.
3. Rewind the camera to cock the shutter and advance the film to the next frame. The exposure values and adjustments remain unchanged until next time you depress the AE lock button or the adjustment buttons or remove the battery.

NOTE: The metering system can also be started by depressing the exposure release button. It then recalls the last stored exposure value including any adjustment. The settings can be erased and the system unlocked only by depressing the AE lock button or by rewinding the battery.
Operating Modes, Manual Mode

M Manual Mode
Normale exposure

Functions:
- Manual presetting of aperture as well as shutter speed.
- Complete manual control of exposure.
- Continuous metering of the light value.
- Continuous indication of the difference in exposure between the previous set value and the exposure calculated by the camera's CPU.

How to Use the “M” Mode
The “M” Mode is completely manual. The metering system is working, but it does not change the exposure speed (opening) to preset manually. The display indicates the calculated “normal” exposure for the metered subject part, but the exposure will be executed according to the manual settings made.

- Set the Mode Selector Dial at “M”.
- Set the aperture and the shutter speed manually.

Suggested Procedure:
1. Set the flash speed with the flash speed or the ISO (v TCO) magazine or using the flash button on the flash.
2. Set the Mode Selector Dial at M.
3. Set the aperture and the shutter speed manually.

L (L.E.) Manual Mode
Long exposure, metering system disabled.

Functions:
- Manual presetting of aperture as well as shutter speed.
- Complete manual control of exposure.
- Continuous metering of the light value.

Features:
- Display shows the aperture and the shutter speed manually.
- Display shows the shutter speed in seconds and minutes.

How to Use the “L (L.E.)” Mode
The “L (L.E.)” Mode is completely manual. The metering system is disabled. The display indicates the manual settings made.

Suggested Procedure:
1. Set the Mode Selector Dial at M.
2. Depress the exposure release button or the AE lock button to start the camera.
3. Depress both adjustment buttons at the same time to select “Long exposure”.
4. Determine the exposure and the shutter speed manually.
5. Depress the exposure release or the pre-release button to the pressure point. The display changes to show the pre-set aperture and shutter speed.

Flash Photography Warnings

In all flash photography the indication “FLASH” flashes together with the warning triangle sign and display backlighting if the flash light was too bright or too weak. The warning is on for 3 seconds after the exposure. If the flash speed exceeds the range for the automatic flash control (ISO 25 – 1000), the indication “FLASH” is displayed when the exposure button is depressed to the pressure point.

Flash Photography Dedicated Flash Unit
The flash control function of the 200FC works behind the selected mode of operation, which becomes unchanged. The flash speed range for the flash function is ISO 25 – 1000. When a dedicated flash unit, such as the Henselblad Profoto 4/6, or another unit complying with the European SCA standard is connected to the dedicated flash socket (p/n 14) – directly or through a suitable adapter – and switched on, the green flash signal appears in the viewfinder automatically when the flash is charged and operative. If a new or worse flash metering adjustment has been entered, the r.h. plasmatic sign also appears in the display.

4. Depress the exposure release or the pre-release button to the pressure point. The metering system starts and the viewfinder display shows the symbol “M” for Manual Mode and the pre-set aperture and shutter speed.
5. Release the exposure button, instead of the aperture release. Then the display starts to show the difference in EV steps between the set exposure and the calculated “normal” exposure for the preset subject part with an accuracy of 1/4 EV step, continuously changing the indication as the metering area is moved about the subject.
6. The normal functions of the adjustment buttons is disabled in the “M” mode. To change the exposure values, e.g. to adjust the exposure to 0 difference for a certain subject area, change the aperture or the shutter speed (or both) until the difference indication on the display reads within 0 ± 1/4
7. Depress the exposure release button for an exposure with the set value.
8. Rewind the camera to cock the shutter and advance the film for the next frame. All settings remain until you change them manually.

Warning Functions
Whenever the camera is set to the red warning triangle flashes.

Permanant Warning
The permanent warning functions are built into the system and cannot be changed or disabled.

Battery Capacity Warning
When the battery voltage drops below a certain point, the battery symbol is displayed for at least two seconds and the warning triangle flashes twice.

NOTE: Battery memory may change the battery symbol to disappear after the two seconds.

Shutter Speed Warning
When the calculated shutter speed is slower than 1/30 s or faster than 1/2000 s and the shutter speed indication and the red warning triangle start flashing.

Light Meter Range Warning
When the light value falls below or above the range of the light meter the indication “Lo” or “Hi” appears in the left hand part of the display. If no other light value is stored the warning triangle flashes.

Your 200FC flash controls the flash duration by TTL/OTF metering through the L.E. or TTL flash. OTF = On-The-Fly. i.e. it meteres the flash speed of the film and calculates the flash when the exposure is done. The camera continues to operate in the selected mode with the calculated or pre-set shutter speed. If an automatic mode is selected for the camera the D mode is recommended. Make the selected subject area, look at the metered value and make the desired adjustments. Then adjust the aperture or use the adjustment keys until the shutter speed figure stops flashing as to be sure that the shutter speed will be slower than 1/30 s. Note that after the display of 1/2000 s could be flashing! NOTE: Also if the shutter speed is only slightly faster than 1/50 s it is usually faster than 1/50 s, but not as sync as is the problem to connect to the flash unit to the PC, but then you no longer have the advantage of letting the camera system control the flash and the exposure.

How to Use the Dedicated Flash A. Flash set at TTL Mode
For the operation of the flash unit see the flash unit Instruction Manual.

Functions:
- Fully automatic exposure control through TTL/OTF metering.
- Exposure with preset aperture and shutter speeds at 1/60 s or slower.
C. Flash set at Manual Mode

The flash unit should be set to manual control (see the flash unit instructions).

Functions:
- Exposure - With pre-set aperture and shutter speed
- Viewfinder indicator when the flash unit is charged and ready to flash.
- Viewfinder warning at over- or under-exposure.

Suggested procedure:
1. Align and connect the flash according to the Flash Manual.
2. Set the flash unit to Manual or corresponding mode and switch it on. When the flash unit is charged and ready to flash, the green flash symbol (page 18) lights up in the viewfinder.

6. Depress the exposure release button fully to release the exposure and trigger the flash. In Manual mode, the flash normally uses full power.

3. Estimate the flash-to-subject distance or measure it by focusing the lens and reading the distance from the focusing scale.

4. Determine the aperture setting using the aperture calculator of the flash unit or the Guide Number (see the flash unit manual).

5. Depress the exposure release or the pre-release button to bring the pressure points to start the camera. The display indicates the aperture setting and the shutter speed, in the Mode Selector Set 1 of M the symbols A or M are also shown but other symbols are not.

Non-dedicated Flash Units

With a non-dedicated flash unit, you can not take advantage of the sophisticated TTL/OTF flash control system in the 205 FCC and the viewfinder information supplied by this system. You will have to use the control system of the flash unit or your own aperture calculator. Always refer to the Flash Instruction Manual for flash settings and Guide Numbers.

The non-dedicated flash unit should be connected to the PC-socket or the TTL socket on the left (front) side of the camera body through a conventional synchronopatch cord, usually supplied with the flash unit.

The metering system and the viewfinder display in the camera will work normally in all operating modes, as the flash was not activated, i.e., the flash symbol in the viewfinder will not light up when the flash is ready.

NOTE: The fastest shutter speed for full flash synchronization is 1/60 s corresponding to the flash synchro on the shutter speed ring. At faster speeds the PC-synchronization is disconnected and the flash is not triggered. Use the camera's M-mode and the 1/60 s shutter speed to ensure that the flash will fire.

Since the metering system automatically calculates and sets the correct shutter speed in the modes A, D, and Z, you must monitor the viewfinder display closely to check that the shutter speed is 1/60 s or slower before making the exposure. Change the pre-set aperture or use the adjustment button to change the shutter speed if necessary.

F-Lenses

The F-lenses are optically, mechanically and operationally identical with the corresponding PC-lenses but are not equipped with their internal electronic and external identification. The instructions for the PC-lenses are generally applicable also to the F-lenses (page 95).

NOTE: With an F-lens on the camera the aperture value does not appear in the viewfinder display when the exposure or pre-release button is depressed. Instead the display shows two dashes (--)
Suggested procedure:
1. Set the film speed as previously described.
2. Present the desired aperture value.
3. Stop down the lens by pushing the preview knob down until it locks (page 52).
4. Set the Mode Selector Dial at the desired mode of operation.
5. Follow the instructions for the selected mode of operation.

Flash photography with F-lenses
The overall similarity between the FE- and the F-lenses makes the flash photography procedures almost identical. The only difference is that the aperture value does not appear on the viewfinder display.

Dedicated Flash Unit
The TTL/OTF flash control system makes no difference between the FE- and F-lenses as it always operates when the lens is stopped down during the exposure.

How to use the Dedicated Flash
The procedures are identical to those described for the FE-lenses in all flash and camera modes of operation (pages 58-69).

Non-dedicated Flash Unit
The information and procedure described for the use of a non-dedicated flash unit together with an FE-lens (page 69) is in all parts applicable with an F-lens.

Accessories
All accessories originally designed for the 205FCC are marked with the blue twin lines. The mark is always located on that side which is to the left when the accessory is attached to the camera to make it easier to identify. Other accessories are so called "general accessories". These accessories have not the blue twin lines but can still be used on the 205FCC without restrictions.

A third group of accessories can be used but will cause certain limitations to the FCC functions.
Finally there is a fourth group of accessories that cannot in any way be used on the 205FCC.

Accessory Mounting
The quick coupling plates on the bottom of the camera body (page 20) fits to the handy and reliable Hasselblad tripod quick coupling and to the Flashgun bracket 1 (Cat. No. 45725). On the front the lenses have external and internal bayonet mounts for filters, close-up lenses and lens shades. The viewfinder mount on top of the camera body accepts various focusing screens and viewfinders. Underneath the winding crank is a bayonet mount for the Hasselblad Winder.

Major FE Accessories
A selection of the most important FE accessories is described below. For a complete review of the Hasselblad accessories please refer to the Hasselblad Product Catalog.

Winder
The TCO Winder motorizes the 205FCC for a maximum frame rate of 1.3 fps.

Viewfinders
Besides the focusing hood which is delivered with the camera body you have a choice of a magnifying hood and prism viewfinders with and without exposure meter.

Extension Tubes
For close-up and macro photography. The F-type extension tubes have all connections, both mechanical and electrical, between camera body and lens.

General Accessories
The range of general Hasselblad accessories that can be used on the 205FCC without affecting the FCC functions includes different focusing screens, lens shade and filter adapters. There is also the Hasselblad Winder and the Hasselblad Portapup 4504 dedicated flash unit. Other dedicated flash units can be connected through flash adaptors such as the Hasselblad SSC 580 and SCA 580.

Other Accessories
These accessories can be used but will result in certain limitations to the FCC system. The F and CF lenses belong to this group as do the standard and the E-type film magazines.

External Battery Cassette
The external battery cassette connector replaces the original battery cassette in the battery compartment. Equipped with external power and the extension cord allows you to keep the batteries warm in your pocket when you are using the 205FCC in cold conditions.

The Hasselblad System Chart
Overleaf you will find the accessory chart that indicates the different groups of accessories in the Hasselblad System. Refer to the Hasselblad Product Catalog for complete information on the entire Hasselblad System.
Troubleshooting

Your Hasselblad 205FC is built for long and trouble-free service, especially when you follow the advice on maintenance and care (page 84). Should you encounter any operational difficulties the troubleshooting chart below may help you to resolve them.

### Troubleshooting

#### Faulty and Error Indicators on the Viewfinder Display

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The display is not illuminated.</td>
<td>The viewfinder is incorrectly installed.</td>
<td>Push the viewfinder firmly for about 5 to 10 seconds.</td>
</tr>
<tr>
<td>Aperture indication - - -</td>
<td>Defective contact between lens and camera body.</td>
<td>Replace the lens. Clear all contact surfaces on the lens and on the camera body with a lint-free cloth or tissue. DO NOT touch the contact surfaces with your fingers!</td>
</tr>
<tr>
<td>The magazine symbol appears when a TCC magazine is attached.</td>
<td>Defective contact between magazine and camera body.</td>
<td>Replace the magazine. Clean all contact surfaces on the magazine and on the camera body with a lint-free cloth or tissue. DO NOT touch the contact surfaces with your fingers!</td>
</tr>
<tr>
<td>The display indicates ‘L1’, ‘L2’, ‘L3’, or ‘L4’, possibly together with A or M.</td>
<td>Electronic system error.</td>
<td>Bring the camera to an authorized Hasselblad Service Center. Explore the appearance of the display to the service technician.</td>
</tr>
</tbody>
</table>

**NOTE:** If there is a contact failure between the lens and the camera body you can still use your equipment according to the instruction for the F lens (page 70-71). Contact failure between the magazine and the camera body could be overcome by selecting Pr mode and setting the film speed manually (page 43-44).

### Technical Specifications and Equipment, 205FC

**Camera Design:** Medium format single lens reflex camera with built-in TTL spotmeter electronically connected to FE lenses and FCC- and E-magnazines. Interchangeable lenses, film magazines, viewfinders and focusing screens.

**Shutter:** Electronically controlled mechanical focal plane shutter with release solenoid system. Horizontally running waxless curtains. Shutter speed range B-30 to 1/500 s. Manual Mode up to 540 s. Fully mechanical C setting for series with built-in focal shutters. Flash synchronization from B up to 1/500 s.

**Lens Mount:** Hasselblad bayonet mount for FE-, CF-, CF- and CF-lenses. Contacts for data communication with the FE lenses.

**Viewfinder:** Focusing hood with 4 x magnifier, interchangeable with magnifying hood and prism viewfinder with and without exposure meter. FCC interchangeable only collapsible. Acute-Matte focusing screen interchangeable with other Hasselblad housingscreen. Illuminated flash unit warning symbols.

**Operation Display:** LCD display in viewfinder with all relevant exposure and operational data and switch-controlled low light illumination.

**Camera Winding & Film Advance:** Manual single turn winding crank. Simultaneous shutter cocking and film advance. The crank is interchangeable with the Hasselblad motor winder for up to 1.3 frames/second.

**Exposure Meter:** TTL metering of all aperture with FE-lenses. High sensitivity silicon photocell. Spotmeter area approximately 1% of the image area, angle of view from approximately 1° x 1° depending on lens focal length. Metering range EV -1 to EV 20 at ISO 100/21° and 12.8. Active timer 16 s after release of activating button.

### Camera Body Dimensions

- Camera body only — see page 89. With focusing hood, lens Planar FE 8.8/80 and magazine 6.15/125, 111 NW x 111 NW x 113 NW (7.5 x 4 x 4.5 in) 14 oz (410 g). Weight: 1650 g (3 lb 10 oz). With focusing hood, lens Planar FE 8.8/80, E12 magazine and battery. Body alone: 745 g (1 lb 10 oz). The camera body (chrome finish only) R10 (0588) comes with focusing hood, focusing screen, winding crank, shoulder strap, front and rear protective covers.

For comprehensive information on accessories please refer to the Hasselblad Product Catalog.
Camera Care, Service and Guarantee

Camera Care.

Your Hasselblad camera is designed to withstand the rigours of professional use in most environments. In order to avoid the possibility of damage, however, the camera should be protected from the following:

- **Extremes of temperature.** High temperatures can have an adverse effect on both the film and the camera. Do not keep your camera in places where it may get hot, such as in direct sunlight or above a radiator. In tropical environments, fungus growth can be prevented by keeping your equipment in an area where the air is circulating. Frequent repair and severe temperature changes can cause problems such as corrosion of electrical contacts; and should be avoided. When in extremely cold temperatures, cameras and especially lenses should be protected as much as possible.

- **Dust and grit.** Prevent dirt of any kind from getting into your camera. When taking photographs in coastal areas for example, the camera should be protected from sand and salt water spray. You can blow away dust on the lens glass, filter of focusing screen, or wipe it off gently with a soft cloth if necessary. Smears on the lens glass should be removed with a high quality lens cleaning solution on a soft, clean tissue. Be careful not to scratch the lens or touch any of the glass surfaces with your fingers. The surface of the mirror is coated and should be blown clean but not wiped. Lens cleaning solutions or other chemicals should not be used on the focusing screen.

- **Impact.** Your camera can be damaged by severe physical shocks. You should take care not to drop the camera or knock it to the ground, or drop it outside.

**Service.** Faultless camera performance is essential to the professional photographer. Therefore it is advisable to check that your camera is functioning correctly before an important assignment. You should also return your camera to a “Hasselblad Authorized Service Center” for periodic checks and preventive maintenance. If your camera is used consistently and intensively, exposing hundreds of rolls of film per week, checkups every six months are recommended.

Hasselblad Service Centers have the expertise and specialist equipment necessary to ensure that your camera remains in perfect working order.

**Guarantees.** Provided that you bought your camera from an authorized Hasselblad outlet, it is covered by an international guarantee for one year. The guarantee document and a registration card are supplied with the camera. Keep this document carefully, but fill in the registration card and return it to your Hasselblad distributor.

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**EV Interlock Button**

Depressing the EV interlock button interlocks the shutter speed and aperture rings to make it possible to change the combined speed/aperture setting without changing the EV.

**Note:** The new C-lens has no EV interlock button.

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**Depth-of-field Preview Knob**

The Depth-of-field Preview knob location and operation is identical to the FE- and F-lenses (page 33).

---

**F-setting**

Depresses the usual green F-lock button to the left of the green F on the shutter speed ring. It is depressed while turning the ring to align the F with the index line. Release the button to lock the ring in the F position.

The F-setting locks the shutter wide open without interfering with the aperture function. With this setting the lens works exactly as an F-lens (page 71).

---

4. Press the shutter speed button up to make an exposure with the pre-set values.

5. Release the camera to get the viewfinder image back, advance the film to the next frame and cock the shutter slinger.

**Note:** If the selected camera mode is AB, D or Z the shutter speed button is not set on the lens slinger. Hence, the shutter must be set manually to the preselected F-stop. Alternately shutter speeds faster than 1/125s are displayed and the warning symbol starts flashing to warn against possible lens problem, esp. with older equipment. In the M mode, setting the camera's shutter speed ring at C turns off the auto-indexing system. The viewfinder display shows only (c) (c) for the shutter speed when the exposure or pre-release button is depressed. The AE-lock button is inoperative.

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**Flash photography with CF-lenses**

The CF-lenses have a built-in X-type flash synchronization at all shutter speeds. Flash connection is the PC socket located on the left hand side of the lens, close to the depth-of-field scale.

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**APPENDIX A**

**Hasselblad 200FCC with CF- and C-lenses**

- The CF- and the C-lenses differ from the FE- and F-lenses through their built-in leaf shutter with shutter speeds from 1 to 1/500 and 8. Both types have full flash synchronization on all shutter speeds. The CF-lenses also have an additional shutter setting for F (set in the local plane shutter and the instant-return mirror.

The new C-lens on the 501C dominates identical to the CF-lens except that it has no F-setting and the scale is all white.

**Note:** Avoid using the 200FCC with a C-lens at temperature conditions below 6°C (43°F).

---

**APPENDIX A:**

**How to use the CF-lens**

A. Lens in M mode (leaf shutter open)

**Suggested Procedure:**

1. Turn the shutter speed ring to F setting.
2. Operate the camera as described for the F-lens

B. Lens in C mode (leaf shutter working)

When using the full-leaf shutter of the CF-lens, the local plane shutter in the camera body must be disengaged. By setting the camera's shutter speed ring in the C position (page 52, 72) the local plane shutter is turned into an auxiliary shutter, only used to protect the film frame (manual exposure).

**Note:** The leaf shutter remains closed unless the viewfinder screen darkens until the camera is rewound.

**Suggested Procedure:**

1. Check that the lens' shutter speed ring is set on C.
2. Reset the F-lens' catch button depressed while turning the camera's shutter speed ring to align the C at the end of the scale with the red index mark.
3. Release the lens catch button to lock the shutter speed ring in the C setting.

**Lens in F mode**

**Dedicated and non-dedicated Flash Units**

The procedures are identical to the corresponding procedures for the F-lens (page 76).

---

**APPENDIX A:**

**Lens in C mode**

**Dedicated Flash Unit**

Although the PCD metering system is disconnected from the meter in Manual mode when the camera shutter is set at C, the TTL/DCC system is still working to control the dedicated flash unit directly — as with the Hasselblad Profoto 4504 — or through an adaptable adapter. However, since the local plane shutter is not working as a shutter, the triggering of the flash must come from the shutter in the CF-lens. The green "nude" flash symbol works and the "F FLASH" and "2 FLASH" warning indications may appear in the viewfinder when the exposure button is released.
How to use the Dedicated Flash
(Camera shutter speed set at C)
Suggested procedure:
1. Attach the flash to the camera if desired.
2. Connect the TTL cord according to the flash instruction.
3. Connect the PC connector to the socket on the CB-1, not to the PC-socket in the camera body.
4. Set the flash unit in the desired mode of operation and switch it on. The green flash symbol in the viewfinder lights up when the flash is ready to fire.
5. Select shutter speed and pre-set aperture on the lens.
6. Press and release the exposure button to make an exposure, observing the viewfinder display for warning indications.
7. Rewind the camera to get the viewfinder image back, cock the shutter and advance the film to the next frame.

NOTE: When used at full power some electronic flash units have a flash duration longer than 1/1000 s. To take advantage of the full flash power in such cases and to avoid ‘La FLASH’ warning and under-exposure you are recommended to use shutter speeds of 1/125 s or slower.

C-lenses
The older C-lenses (production terminated in 1966) look different but are in most respects identical to the CF-lenses. These are, however, four major differences:
1. There is no F-setting on the shutter.
2. The shutter speed and aperture rings are normally interlocked.
3. There are two different flash synchronization modes.
4. There is a built-in mechanical self-timer.

How to use the C-lenses
Avoid using the focal plane shutter together with the older C-lenses, if it cannot be avoided follow the procedure below:
1. Set the lens shutter at B.
2. Pre-set the desired aperture.
3. Set the camera shutter at the desired shutter speed.
4. Press the exposure button to make an exposure.
5. Rewind the camera to get the viewfinder image back, cock the shutter and advance the film to the next frame.

Lenses in C mode
The procedure is identical with the CF-lens procedure (page 87).

Non-dedicated Flash Units
The non-dedicated flash unit should be connected to the PC-socket on the camera body. The exposure is controlled either by the flash itself or by aperture value settings calculated from the guide number of the flash (see the flash manual). There will be no indications or warnings in the viewfinder.

How to use the Non-dedicated Flash Unit
(Camera shutter speed set at C)
Suggested procedure:
1. Attach the flash to the camera if desired.
2. Connect the synch cord to the PC-socket on the CF-lens, not to the PC-socket in the camera body.
3. Set the flash unit in the desired mode and switch it on.
4. Select and pre-set aperture and shutter speed (preferably 1/125 s or slower).
5. Press the exposure button to make an exposure.
6. Rewind the camera to get the viewfinder image back, cock the shutter and advance the film to the next frame.

Flash photography with the C-lens
Using the camera’s focal plane shutter With the lens set at C the lens can be used as an F-lens.

Dedicated and Non-dedicated Flash Units
Follow the corresponding procedures for the F-lens (page 75).

Using the C-lens leaf shutter
Make sure that the flash modes selector is set at X.

Dedicated and Non-dedicated Flash Units
Follow the corresponding procedures for the CF-lens (page 89).

APPENDIX B: Spotmetering Angle for all Hasselblad Lenses

<table>
<thead>
<tr>
<th>Lens type</th>
<th>F</th>
<th>FE</th>
<th>Lens with PC-Motor 1/2x</th>
<th>Lens with Motor 2x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hasselblad CF 35</td>
<td>11.4</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Hasselblad CF 50</td>
<td>0.6</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Hasselblad CF 90</td>
<td>0.4</td>
<td>0.2</td>
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*The Motor-Planar CF-35 mm lens can only be used together with the extension bellows or the variable extension tube for close-up work.