

Beaulieu

5008 S multispeed



INSTRUCTIONS FOR USE

*Thoroughly reading this manual
and carefully studying all instructions
will help you to get the best performance possible
from your camera.*

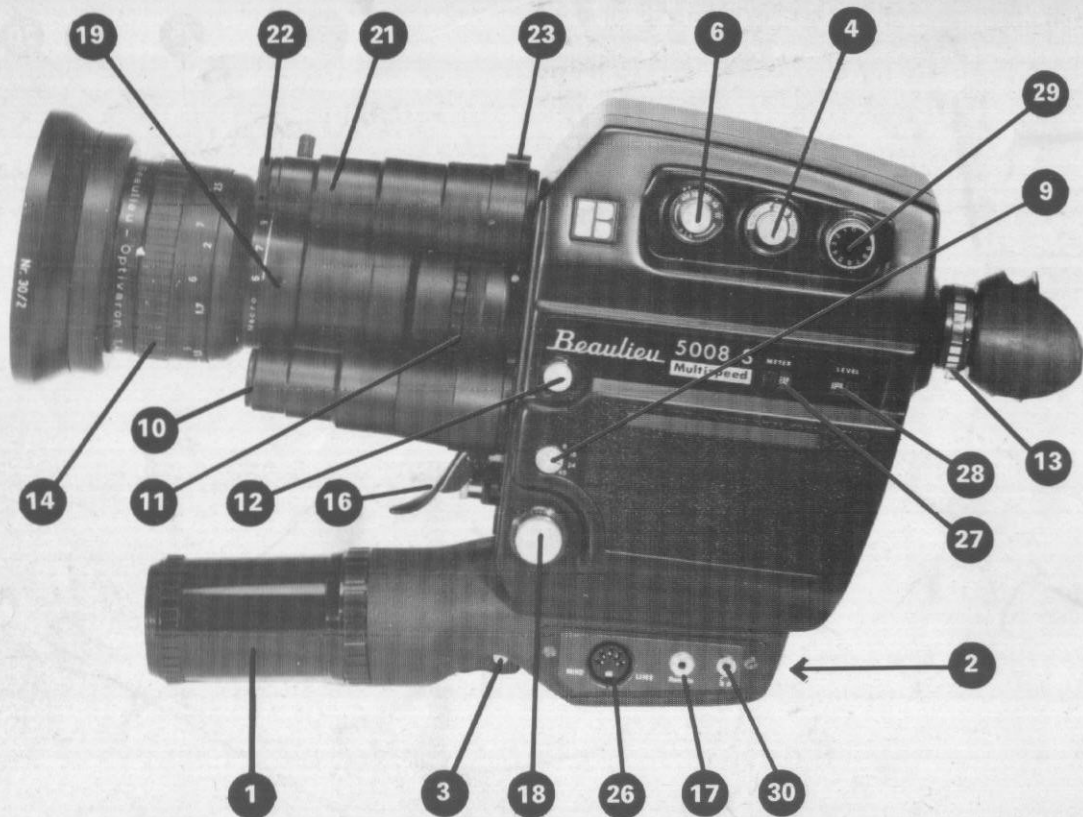
*Do not discard the foam polyurethan packing
your 5008 S Multispeed has been supplied in.
It will ensure the most efficient protection
for the camera when storing and/or when shipping
to a Beaulieu service facility for a check.*

*The Beaulieu worldwide Guarantee Registration Card
you were given by your dealer
is to be returned to the Beaulieu service facility
in the country where you reside.*



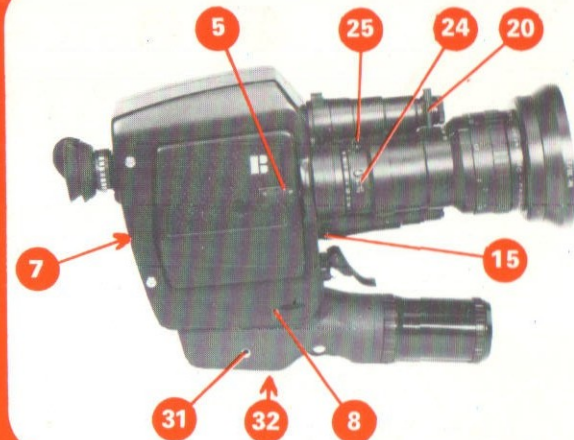
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PRELIMINARY DESCRIPTIONS

- 1 - Battery
- 2 - Battery recharging socket
- 3 - Power supply switch
- 4 - Exposure control knob
- 5 - Film chamber door latch
- 6 - Film speed setting dial (ASA)
- 7 - Footage counter
- 8 - Built-in filter control
- 9 - Film running speed control
- 10 - Automatic exposure control system (Reflexmatic motor)
- 11 - Diaphragm ring (and aperture T/number scale)
- 12 - Focusing screen control knob
- 13 - Eyesight adjustment ring
- 14 - Focusing ring (and distance scale)
- 15 - Prefocus control push-button
- 16 - Release button (and cable release socket)
- 17 - Remote control socket
- 18 - Double system sound synchronization socket
- 19 - Zoom ring (focal length scale)
- 20 - Zoom control lever



- 21 - Power zoom
- 22 - Power zoom speed control ring
- 23 - Power zoom control push-buttons
- 24 - Zoom range limit switch
- 25 - Macro inverter
- 26 - Sound input socket
- 27 - Viewfinder Needle Function Surtch
- 28 - Auto/manual sound level switch
- 29 - Manual sound volume control
- 30 - Earphone socket
- 31 - Wrist-strap attachment socket
- 32 - Tripod attachment socket.

HOLDING THE CAMERA



The picture shows how you should hold your camera when filming. The Camera Power Supply Switch is held in the "on" (depressed) position by the thumb. This means the camera has power available and is ready to film. For filming, all you have to do next is depress the Release Button with the side of your forefinger.

Note : It is best to film with the strap around your wrist.

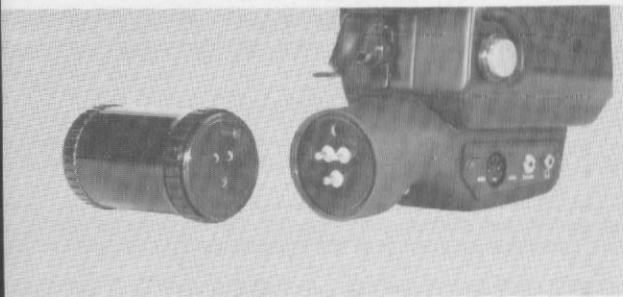
POWER SUPPLY

1 - NICAD battery

The camera is powered by a 500 mA/7.2 V NICAD rechargeable battery that supplies the film transport motor, the automatic exposure control servo-motor (when switched on) and the built-in amplifier (with sound cartridge in). The battery features a steady voltage and a long-life span. The operating time varies according to the temperature, the selected filming speed, the selected exposure control mode (automatic or manual) and the film cartridge used (sound or silent). At normal temperatures, i.e. between 41° and 122 °F (5° and 50 °C) a fully charged battery will power:

Film cartridge type	Filming speed			
	8 fps	18 fps	24 fps	45 fps
Sound	6 to 8 cartridges	8 to 12 cartridges	10 to 15 cartridges	15 to 20 cartridges
Silent	9 to 10 cartridges	10 to 15 cartridges	13 to 18 cartridges	18 to 25 cartridges

Under 41 °F and over 122 °F, the battery will be less operative.



2 - External power supply

The battery forms the handgrip of the camera. To detach it, unscrew its attachment ring and pull. Detaching the battery is necessary when an external power supply is required (for instance to allow the operator to put the battery in his pocket to protect it from the cold, thus ensuring reliable service at low temperatures). In such cases, first remove the battery from the camera, and then attach the Contact Handgrip. Connect the Contact Handgrip to the Separate Battery Container by means of the External Power Supply Cord. Then attach the battery to the connecting cap.

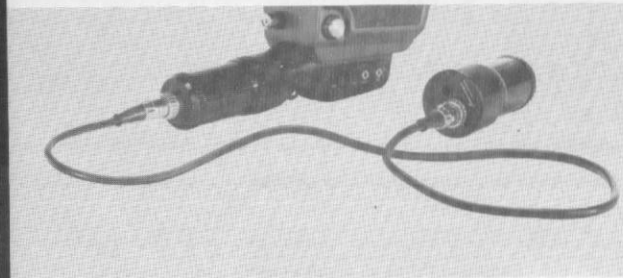
Note : *The Contact Handgrip, Battery Container, and External Power Supply Cord are available as separate accessories.*

3 - Powering the camera

The power is turned on or off by means of the three-position Power Supply Switch.

Power OFF:

When the Power Switch is released (in its middle position "B") the power is turned off. A safety catch pin makes it possible to lock the Power Switch in this position to prevent battery drain that would result from accidental switching. To engage the safety catch, depress the broadest end of the white pin. To release, depress the other end. Locking the Power Switch is recommended when the camera is not used (i.e. stored or carried).



Power ON:

* For hand-held filming, power the camera by depressing the Power Switch with the web of your thumb (Picture "C"). This powers the meter, the automatic exposure control system (if the mode knob is set on "AUTO"), and the sound recording amplifier (if you are filming with a sound cartridge). The power is turned off as soon as you stop depressing the Power Switch.

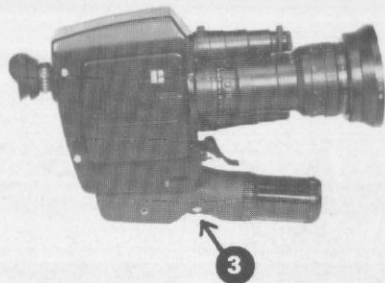
IMPORTANT: Never stop filming by releasing the Power Switch first. This would turn the power off, and the shutter might stay partially open. Consequently, you would get incorrectly exposed images. With sound movies, you would also get a slowdown of the amplifier (such as when you stop your Hi-Fi by pulling the plug from the wall). The same goes for starting to film.

* To film with the camera mounted on a tripod, or by remote control, power the camera by pulling the Power Switch all the way out (click stop) as shown in picture "A".

4 - Checking the battery

To check the battery, first set the Exposure Control Knob to "TEST". Then depress the Power Switch and look through the viewfinder. If the power of the battery is adequate, the needle in the viewfinder swings up above the right side notch (or beyond). If it does not, then recharge the battery.

When the battery check is completed, make sure to set the Exposure Control Knob back to the desired filming position.



A



POWER ON

B

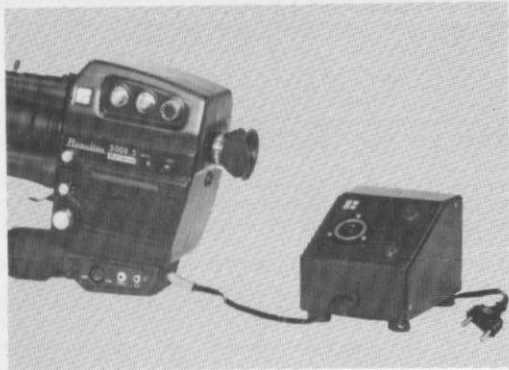


POWER OFF

C



POWER ON



5 - Recharging the battery

There are several ways to recharge the battery. The battery may be recharged either attached to the camera or separately (attached to the Separate Battery Container). The latter method permits recharging of the battery attached to the Separate Battery Container while a spare battery is being used.

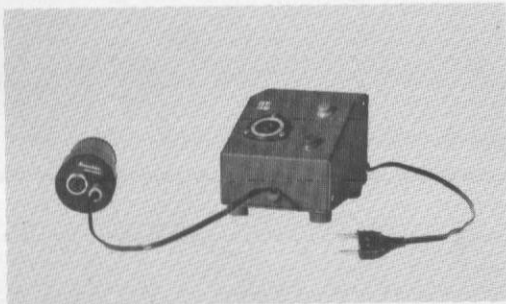
To recharge the battery when attached to the camera, the Power Switch must be set in its middle position (off).

There are several different chargers available for use in charging the 5008 S camera battery.

Quick charger (Pictured at left)

Turn the coin-slotted voltage selector until it clicks into place opposite 127 or 220 V according to mains voltage. Plug the output lead into the recharging socket of the camera (or into the Separate Battery Container) and then, plug-in the charger: The green and red lights will come on. The red indicator light keeps glowing vividly as long as the quick recharging proceeds. Quick recharging of a completely depleted battery is completed up to approximately 80 % of battery capacity within three hours. Afterwards, recharging proceeds at normal rate. A built-in protective device prevents the battery from damage by overcharge. The quick charger is protected against misuses by a 200 mA fuse located inside the voltage selector. (To change it, simply bring the red indicator on the coin-slotted voltage selector to the position opposite the hole, then pull.)

Note: After three or four quick recharges, the quick recharge capacity of the battery decreases. Conse-



quently, it is recommended to recharge the battery for several hours at normal rate after several consecutive quick recharges to make sure the battery recovers its original capacity, and therefore a longer operating time.

Standard charger

Set the voltage slide switch (underside of charger) to proper mains voltage. Plug the output lead into the recharging socket of the camera (or into that of the Separate Battery Container) and then, plug-in the charger. The indicator light intensity will decrease as the battery gets recharged. However, it will never go out completely. Approximately 15 hours are required to recharge a fully discharged battery.

DC/DC charger

Recharging can be effected from 12 V batteries of cars, boats, aircrafts, etc. with this accessory. Plug the output lead of the DC/DC charger into the recharging socket of the camera or into that of the Separate Battery Container and then, connect the crocodile clips to the 12 V battery terminals. No attention need be paid to polarity. It requires about 12 hours to recharge a fully discharged battery in this mode.

IMPORTANT

When recharging, make sure to follow instructions in the right order. In particular, never power (or, plug-in) the charger before it is linked to the battery.

New batteries, and batteries not used for more than three months, require an exceptional charge. To "retrain" the battery, **double** the charging time. Then,

run the camera without film continuously for ten minutes at 18 fps and recharge the battery again for the regular time.

To ensure maximum battery life, charge batteries once per month when not in use. There is no danger in recharging the battery after a short filming session. Never leave batteries completely discharged.

LOADING THE CAMERA



1 - Loading the film into the camera

The camera accepts two types of Kodapak instant load cartridges containing 50 ft (15 m) of Super 8 film :

- regular Kodapak cartridges for silent movies;
- sound Kodapak cartridges containing striped film for sound movies.

To load the camera, unlatch the film chamber door and swing it open until it is at a right angle to the camera (see picture) To insert the cartridge in the chamber, engage the cartridge middle notch under the positioning pin, its label facing outwards. Then push the cartridge forward until it clicks into place, and close the door. The film type designation on the label is visible through the film chamber window.

(1) Kodapak is a registered trademark of Eastman Kodak



2 - Setting the ASA film speed

The film speed settings of the 5008S Multispeed camera range from 25 to 400 ASA.

To set the ASA film speed, turn the film speed setting dial until the proper ASA value of the loaded film is opposite the green dot.

Comply with the data provided by your film manufacturer on the instruction sheet enclosed with the film. The speed of an outdoor-indoor film should be set according to the lighting conditions, i.e. to the given value for daylight movies, to the given value for tungsten light movies (see p. 13). Check film speed setting for possible readjustment when you switch from one lighting situation to another, and set the built-in filter accordingly (see p. 14).

The use of the white and red dots is explained on p. 17 ("Exposure correction" paragraph).

Film	Film speed setting (ASA)	
	Daylight	Tungsten light
Kodachrome 40 type A	25	40
Ektachrome 160 type A (1)	100	160

3 - Footage counter

It indicates the length of film available, both in meters (right) and in feet (left).

It automatically resets to 15 m (50 ft) when removing the cartridge from the camera.



4 - Unloading the film

When the film advance indicator (visible at the bottom of the viewfinder) stops flickering, the end of the film has been reached. At that time, the film counter scale shows "O", unless the loaded cartridge was a partially exposed one (remember the counter automatically resets every time the film cartridge is removed). Make sure the Power Supply Switch is in its middle position (power off), then open the camera and remove the cartridge which shows the word "EXPOSED" on the film appearing through the front window of the cartridge.

(1) Kodachrome and Ektachrome are registered trademarks of Eastman Kodak.

BUILT-IN THE FILTER



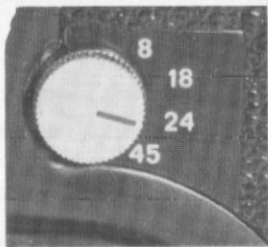
The built-in filter is a Wratten 85 type filter for color correction. When shooting outdoors with an outdoor-indoor film intended for tungsten lighting (such as Kodachrome 40, type A), the built-in filter control should be set to its backward position, thus showing the symbol ☼.

When shooting with such a film indoors under tungsten light, remove the filter by sliding the built-in filter control forward so that it uncovers the symbol Q. (Readjust the film speed setting accordingly. See pp. 12-13.)

Filters are also available as accessories. But be careful since the use of a filter between lens and lenshood will cause slight vignetting. If such a filter is needed, use it in conjunction with the 5008 S Lens Hood.

(1) Wratten and Kodachrome are registered trademarks of Eastman Kodak.

SETTING THE FILM ADVANCE SPEED

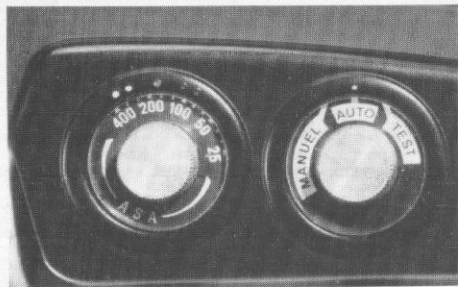
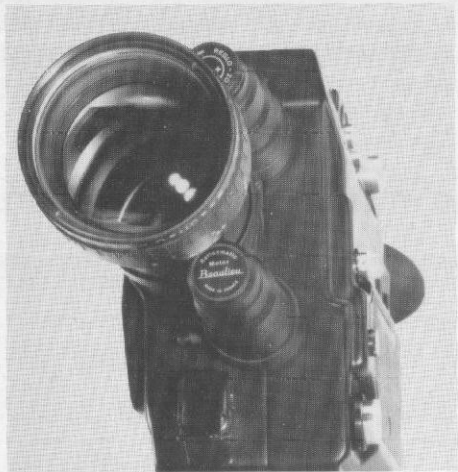


The 5008 S Multispeed offers four running speeds, no matter what kind of Super-8 cartridge (silent or sound) is used : 8, 18, 24 and 45 fps. The speed is electronically regulated.

To set the desired running speed, turn the running speed knob until the proper speed indication is opposite the white dot. Shutter speeds are 1/20 second at 8 fps, 1/40 second at 18 fps, 1/60 second at 24 fps and 1/100 second at 45 fps. Exposure compensation is automatic when switching.

Note : Changing the running speed can be done while filming as exposure compensation is automatic when switching.

As for standard running speeds, filming at 24 fps ensures steadiness of projected images and a better sound quality greater frequency response and increased dynamics. But filming in low light conditions, especially indoors, is made easier at 18 fps, because of the slower shutter speed.



EXPOSURE CONTROL

The 5008 S Multispeed camera features an automatic exposure control system (Reflexmatic motor) with manual override, driven by the TTL metering system, which is activated as soon the camera is powered.

At the F 6 mm focal length, the widest geometrical aperture is f/1.4. The f/1.4 aperture is maintained or « held » up to F 40 mm.

1 - Automatic control

For automatic exposure control operation, set the Exposure Control-Knob to "AUTO".

Taking into account the film sensitivity and the film advance speed, the TTL metering system controls the iris diaphragm servo-motor which automatically and continuously sets the aperture according to scene brightness variations to provide an even and correct exposure. The correct operation of the automatic exposure control system can be observed inside the viewfinder: the pointer should remain within the notch, provided the Viewfinder Needle Function Switch is set to the left, uncovering the word "EXP".

In automatic exposure control operation in extreme low light conditions, the diaphragm ring is forced to butt at the widest aperture (f/1.4) and as a result the motor tends to slip. It is advised then to go to manual control.

Note : Depressing the "prefocus control" button makes the servo-motor open the diaphragm to its widest aperture (f/1.4).

2 - Manual control

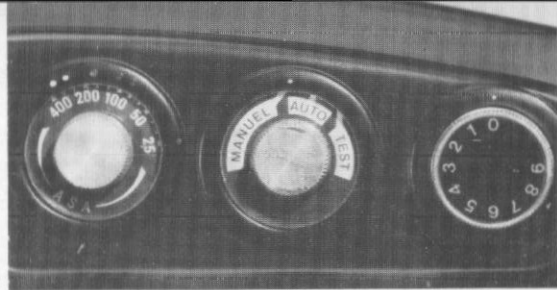
For manual control, set the Exposure Control Knob to "MANUEL" and turn the diaphragm ring to maintain the pointer centered within the notch, the Viewfinder Needle Function Switch being set to the left so that the word "EXP" appears.

Note: Manual exposure control does not prevent you from using the power zoom.

3 - Exposure correction

High contrast lighting conditions may result in over — or under — exposures. To ensure correct exposure, the metering system must be "fooled" by readjusting the film speed setting.

When filming backlighting subjects or subjects against bright backgrounds, over-exposing is necessary. This is achieved by turning the film speed setting dial counter-clockwise so that the film speed rating value goes toward the white dots.



When filming extremely bright subjects against a dark background, turn the speed setting dial clockwise (film speed rating value toward the red dots) in order to under-expose.

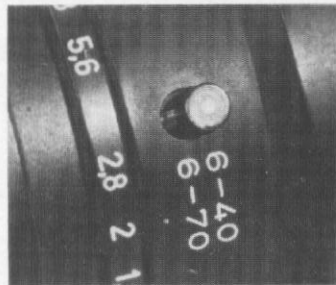
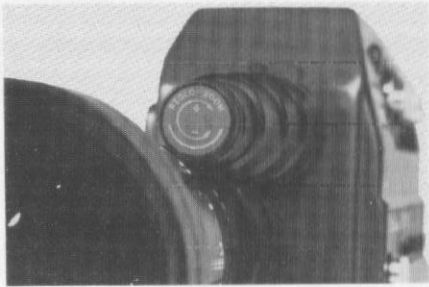
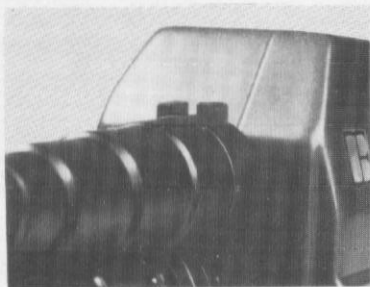
Inner dots correspond to one — half f/stop, outer ones to a whole one. Remember to reset the film speed dial to the green dot when correction is no longer necessary.

Note: When you want to film indoors (with light bulbs likely to appear in your finder from time to time), it is better to set the Exposure Control Knob to "MANUEL". So, you make sure the exposure for the main subject will always be correct.

4 - Filming under extreme lighting conditions

Under extreme lighting conditions, the pointer may settle above or under the notch, thus warning you of over — or under — exposure. Depending on the case, either attach a neutral density filter to the lens to cut down the amount of light entering the camera, or switch to a faster film.

ZOOMING



Once it's focused, the Schneider f/1.4 6-70 mm zoom lens remains in focus throughout its entire zoom range

1 - Power zooming

Two push-buttons are used to control the focal length variation, wide-angle to telephoto position, and vice versa.

Adjusting the zooming speed is achieved by turning the ring at the end of the power zoom system on the lens. Travelling the full focal length range takes about 4 seconds at the fastest speed; and about 12 seconds at the slowest speed.

Still it is sometimes wiser, especially when hand-holding the camera, not to zoom all the way from 6 mm to 70 mm, as it might result in a slight flicker. The Schneider 6-70 mm zoom is fitted with a special knob to limit zooming from 6 mm to 40 mm, if you desire. All you have to do is slide the knob to the desired position.

The camera power zoom is powered whatever the position of the Exposure Control knob. So, power zooming remains possible in any circumstance.

2 - Manual override

To zoom in or out, look through the viewfinder and turn the zoom control lever upward or downward until the viewing image squares with the desired framing.

Important: Avoid hand-held filming at the longest focal lengths, as you might get bouncy images. For long focal shots, use the camera on a support or mounted on a tripod. In such cases, release the camera by means of the 5008S special cable release. As the depth of field decreases when the focal length increases, it is wise to focus at the longest focal length before zooming: once focused at 70 mm, the lens will remain in focus throughout its whole zoom range.

FOCUSING

1 - Retractable focusing screen

The viewing image is formed on the focusing screen provided it is inserted in the optical path (focusing screen control knob turned fully counter-clockwise). This screen is retractable (by turning the control knob fully clockwise) for some special applications at fixed focus. In this case, the viewing image is aerial.

For the most critical and accurate focusing, use this focusing screen.

2 - Eye-sight adjustment

The eyepiece is adjustable within ± 2 diopters. To adjust the eyepiece to your own eyesight, first make sure that the focusing screen is placed in the optical path and the Exposure Control Knob set to "MANUEL". Then aiming at the light, look through the viewfinder and turn alternately the eyesight adjustment ring and the diaphragm until the grains of the focusing screen appear sharp and crisp. Once the eyepiece is adjusted, the ring can be locked by means of its screw.

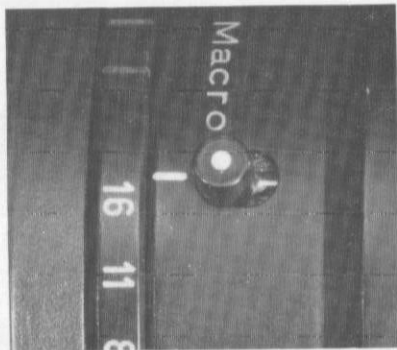
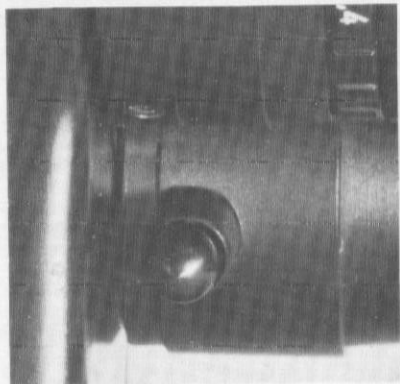
Note: You can also adjust the eyepiece by focusing on an object in the distance, if you prefer.

3 - Focusing ring

Now you can focus by turning the focusing ring until the viewing image is the sharpest. The Schneider 6-70 mm zoom lens allows continuous focusing down to 5 ft. (1.5 m) from the film plane.

The lens can also be prefocused by setting the estimated lens-to-subject distance on the distance scale of the focusing ring.

FOCUSING



4 - Prefocus control

When the diaphragm is under automatic control, a fingertip pressure on the prefocus control opens the diaphragm to its widest aperture, and zooms the lens to its maximum telephoto position. Thus the camera operator is instantly provided with the shallowest possible depth of field required for critical focusing.

5 - Macrocinema

Your Schneider 6-70 mm zoom lens is equipped with a macrocinema control, which makes it possible to frame tiny little subjects very close. Proceed in either following way:

- 1) With the inverter in the "macro" position, you can film at various distances down to 0 mm. Focus with the zooming ring set in its "macro" position. The focusing ring should be set on ∞ . Right close to the front lens, the field covered is 31 mm \times 42.5 mm (1 1/4 in. \times 1 2/3 in.). At a distance of 4 mm, it is 34 mm \times 45 mm (1 1/3 in. \times 1 3/4 in.). At 25 mm (1 in.), 45 mm \times 61 mm (1 3/4 in. \times 2 2/5 in.).
- 2) Whatever position the inverter is given, you can also shoot macrocinema at a distance of 1.1 m (3 ft 7) from the film-plane, i.e. about 0.95 m (3 ft 1) from the front lens. All you have to do is focus and then bring the zooming ring to a telephoto position chosen according to the desired magnification ratio. The smallest possible subject field is 52 mm \times 77 mm (2 in. \times 3 in.).

CAMERA RELEASE

1 - Release button. Remember: never control the camera start/stop by actuating the Power Supply switch. The camera is activated by means of the release button. This button has 3 positions:

- "free": the film does not move;
 - "depressed": this position puts the film in motion;
 - "depressed and turned 90° clockwise": this position locks the release button and allows continuous filming.
- If you do so, the camera always stops with the shutter closed in viewing position.

Note: If you stop and start your camera by actuating the Power Supply Switch, you are likely to have trouble with the exposure and the amplifier (see "powering the camera" parag.) and besides, your sound film might get irreparably jammed.

2 - Film advance indicator. A film advance indicator visible in the lower edge of the viewfinder flickers to indicate the film is correctly driven. It stops flickering to warn you the end of the film has been reached (footage counter shows "O" unless the loaded cartridge was a partially exposed one) or the cartridge is defective.

3 - Cable release. The cable release socket on the release button accepts the Beaulieu 5008 S special screw-in cable release which is available as an optional accessory. Recommended use of the special screw-in cable release is for operation of the camera when mounted on a tripod.

4 - Remote control. Operating the camera from remote control is possible at 8,18 and 24 fps. First plug the jack of the remote control device into the remote control socket on the camera. Then pull the Power Supply Switch all the way out and depress the camera release button all the way. Start/stop is controlled by actuating the tumbler switch of the remote control device.

5 - Single-frame filming. A special Beaulieu accessory makes single-frame filming with the 5008 S Multispeed possible. Each pressure on the cable release will expose one frame (see p. 32).

REVERSE WIND

The 5008 S Multispeed camera allows reverse wind, provided you own the reverse wind device (available as an accessory) and **provided you use a sound cartridge**. In other words, **you must not try reverse wind with the 5008 S Multispeed if it is loaded with a regular silent cartridge**, as you would be sure to break your film.

1 - Reverse wind device

The reverse wind device is to be screwed into the double system sound sync socket. It is basically made up of two concentric rings: a knurled ring, and a ring with bright notches. The knurled ring is to tighten the device in the sound sync socket, while the notched ring is intended to manually advance the film in reverse. This notched ring is fitted with two click-stop positions:

- engaged, when pulled away from the knurled ring,
- disengaged, when pushed against the knurled ring.

Mounting the reverse wind device

- disengage the notched ring,
- set the shaft key so that it matches the slot of the sound sync shaft,
- screw-in the device (clockwise),
- engage the notched ring, and lock the device by turning the knurled ring.

When not using the device, the notched ring should be disengaged; otherwise, battery life would be appreciably reduced.

2 - How to achieve a superimposition effect

Reverse wind can be very interesting, especially since it enables you to achieve a superimposition effect. When you intend to achieve a superimposition effect, proceed as follows:

Ending a scene :

- make sure the exposure control is manual (Exposure Control Knob on "MANUEL"),
- under-expose by one f/stop the length of film you will film again (100 frames at maximum) by actuating the diaphragm ring,
- then stop filming,
- put the cap on the lens,
- lock the three-position Power Supply Switch in the "off" position by engaging the safety-catch pin,
- attach the reverse wind device,
- rotate the notched ring clockwise (1 revolution per frame), making sure you do not exceed 100 frames,
- remove the lens cap,
- set the Power Supply Switch to the desired position.

Beginning the next scene :

- start filming again on the length of film already filmed once, still underexposing by one f/stop,
- then, without interruption, come back to normal exposure by turning the diaphragm ring or by setting the Exposure Control Knob back to "AUTO".

Both sequences should be filmed with the camera mounted on a tripod.

Achieving a really good and precise superimposition effect is not easy and requires some experience. Be patient.

Important

- Never try a reverse wind if your 5008 S Multispeed camera is loaded with a silent cartridge.
- Never run more than 100 frames in reverse wind as it would result in blocking and damaging all the film in the cartridge.
- It is obvious that, when superimposing a sequence, you must be particularly careful with sound. The best thing to do is to run only one sequence with sound (the superimposed one being silent).

DEPTH OF FIELD

The depth of field depends on the three following factors:

- focal length setting,
- diaphragm aperture,
- focused distance.

The charts on pp. 41-42 give you the depth of field both in feet and meters for the Schneider 6-70 mm zoom lens with the above factors.

Refer to these charts for special shots to determine the front and rear limits within which your subject can move, primarily for critical depth of field at short distance, long focal length or wide aperture.

CHANGING THE LENS

The 5008 S Multispeed comes with the Schneider 6-70 mm zoom lens, but it accepts any "C" mount lens (the mechanical extension of the camera is 11/16" = 17.52 mm).

In addition, the camera accepts almost all 35 mm still photography lenses which can be attached to the camera by means of mount adapter rings available separately as accessories.

As the servo-motor (Reflexmatic motor) of the automatic exposure control system is housed on the Schneider 6-70 mm zoom lens mount, the use of other lenses can be done only under manual control.

Before removing the lens, unscrew the trigger release switch and button off the camera.

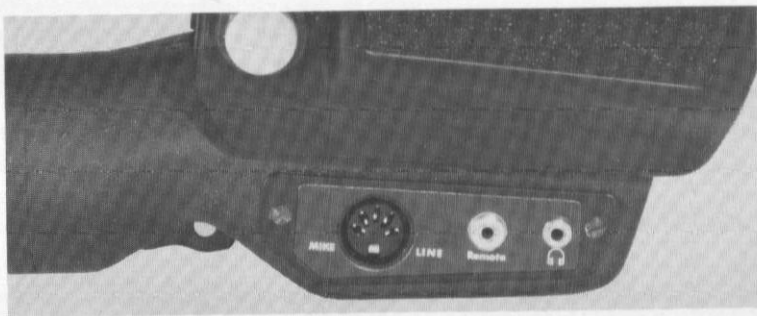
Removing the lens gives you access to the mirrored shutter. Be careful not to scratch its surface. If the shutter is open, do not put anything through the gate as you may damage the built-in filter engaged in the optical path.

When the lens is removed, check the electrical contacts around both camera and zoom lens mounts. Keep them clean. When remounting the lens, do not overscrew and check that camera-to-lens contacts are engaged by testing the automatic exposure control system.





SOUND RECORDING



1 - Single system sound recording

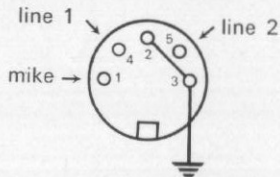
The separation between image and sound is a standard 18 frame gap.

If a sound cartridge is loaded in the camera, the built-in amplifier of the 5008S Multispeed is powered when you power the camera.

Plug into the sound input socket either a mike or a line output (signal from a recorder, etc.), or the output lead of the Beaulieu sound mixing box (available as an accessory) intended to mix two sound signals (mikes or mike + line) with a balance control.

Level check

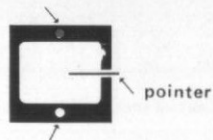
When the Viewfinder Needle Function Switch is set to the right, the pointer indicates the recording level. When the switch is set to the left, the pointer acts as a meter needle. In both cases, an indicator LED (light emitting diode) pulsates to indicate that sound is definitely being recorded on your film as you are filming. In other words, the indicator LED pulsates if (1) there is a sound cartridge in the camera, (2) the microphone is correctly plugged into the camera, (3) the battery is in charged condition, and (4) there are sounds to record in the scene you are filming.



sound input socket

(front)

sound recording indicator diode



film advance indicator



Automatic gain control

Slide the Auto/Manual Sound Level Switch to the right ("AUTO" visible). Sound level control is 100 % automatic. There is no manual sound volume control adjustment required.

Now set the Viewfinder Needle Function Switch to the left ("EXP" visible). The pointer inside the viewfinder acts as a meter needle, indicating whether the aperture you have chosen is correct or not. (Remember too that the 5008S Multispeed camera is fitted with an automatic exposure control system, see p. 16).

Manual level control

Set the Auto/Manual Sound Level Switch to the left ("MAN" visible) and the Viewfinder Needle Function Switch to the right ("VU" visible). The recording level is indicated inside the viewfinder by the Needle. It must be controlled manually by actuating the manual sound volume control knob so that the Needle never swings up beyond the upper edge of the notch.

Since the Needle in the viewfinder indicates the recording level, you cannot check the exposure. So, filming with manual control of sound should always be done under automatic exposure control (see p. 16). When you decide to film with manual control of sound, it is better to check the average sound level **before** you start filming, and set the manual sound volume control knob accordingly so that the Needle never swings up beyond the notch when you are filming. Do not modulate too much while filming. (To that extent, manual control of a sound recording is the same with the 5008 S Multispeed as it is with any tape recorder.) Manual recording is advised whenever you want to get high quality results as far as sound recording is concerned, especially for music.

Caution: Never switch from manual to automatic control of recording level while filming, as it would result in a „moment's blank" in your film sound recording.

2 - Double system sound recording

Double system refers to sound recorded outside the camera with a tape recorder.

Depending on the tape recorder and synchronization outfit you select, screw into the 1RPF (1 revolution of the shaft per frame) sound synchronization socket either a synchro-pilot generator intended to deliver an AC synchronization signal or an Erlson Contact Switch intended to deliver synchronization pulses. Connect the output lead of the synchro-pilot generator or Erlson Contact Switch with the input to a track of the tape-recorder.

3 - Choice of microphone

The quality of your sound recording will always depend on the quality of the microphone you use (just as the quality of the sound reproduction depends on the sound projector and loudspeaker chosen). So choosing a microphone for your Beaulieu 5008S Multispeed movie camera should require your greatest attention.

Some microphones will give you fair results when recording speech, but will not be satisfactory for music recording. And vice versa.

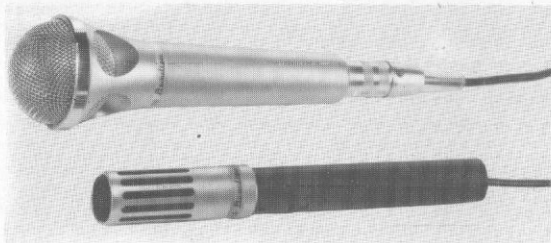
Besides, various kinds of microphones are available, designed for various kinds of situations:

- an omnidirectional microphone records sounds from all directions. Consequently, it must be placed in the best possible position to avoid unwanted back-

ground noise. It is very useful for sound recordings with people talking from many directions.

- a unidirectional microphone will almost exclusively record the sounds coming from the direction it points at. With such a microphone, you can keep closer to the subject filmed, with no problem of unwanted noises.

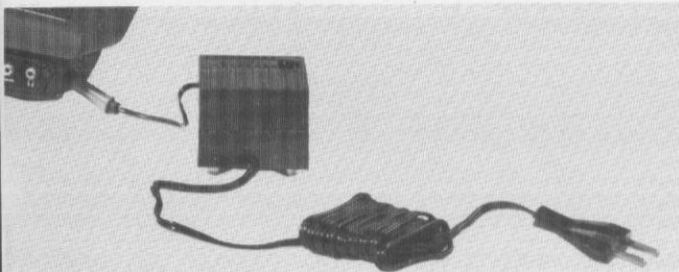
The Beaulieu 5008 S Multispeed movie camera accepts any microphone fitted with a 3 or 5 pin DIN-standard plug, for example the microphone of your cassette-recorder. But, to get the best results from your camera's capabilities, we advise the use of a **high quality unidirectional mike, with an impedance between 50 and 5,000 Ω , fitted with a 3 or 5 pin DIN-standard plug.**



(Two Beaulieu/Sennheiser mikes with those characteristics are available as optional accessories.)

ACCESSORIES

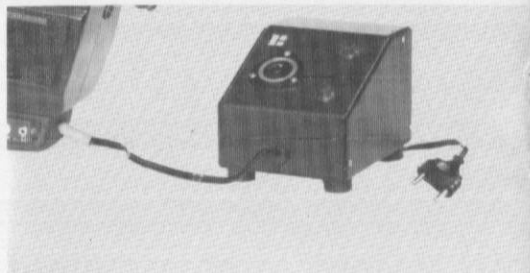
1 - POWER SUPPLY



Standard 50 mA, 7.2 V Charger

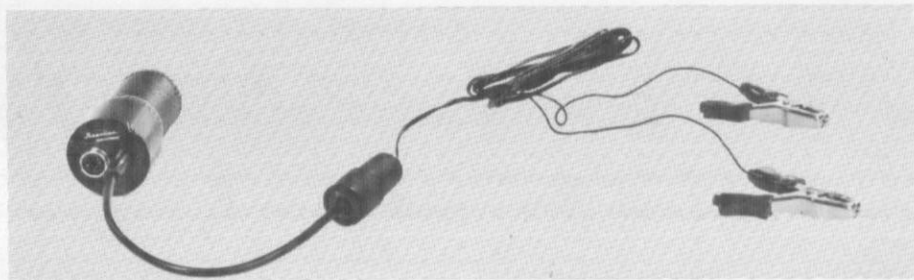
Voltage: 127/220 V. Frequency: 50-60 Hz.

Provides a full charge in 15 hours.



Quick charger

Voltage: 127/220 V. Frequency: 50-60 Hz. Charges at 80% of full capacity in 3 hours. Then continues charging at normal rate automatically.



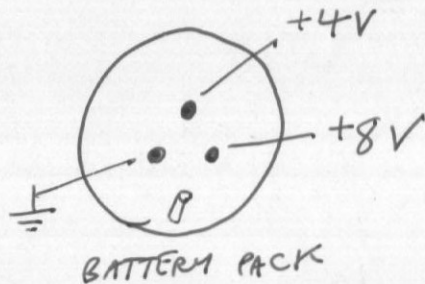
DC/DC charger

Connecting cord with crocodile clips for charging from a 12 V car battery. Charges in 10 hours.



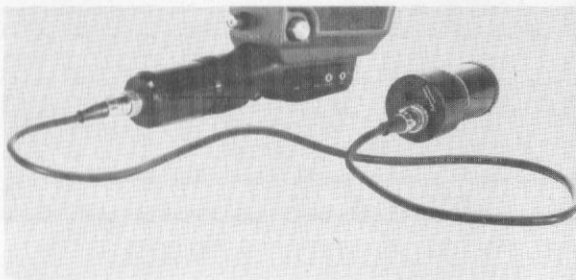
Contact Handgrip

Attaches to the camera when the battery is being used externally.



External power supply cord (1 m = 3 ft)

Used to connect the Separate Battery Container to the Contact Handgrip.



Separate Battery Container (for external power supply)

To charge battery out of camera, and use the camera Ideal when charging the battery out of the camera.

ACCESSORIES

2 - REWIND KNOB



Accessory used to achieve superimpositions (with sound cartridges only).



Beaulieu 5008S special cable release

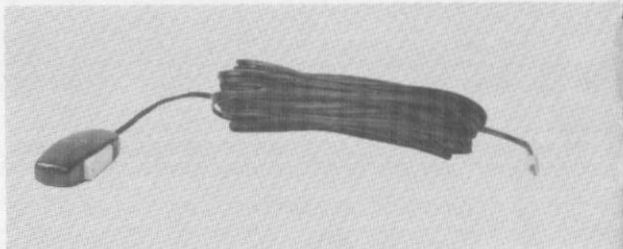
Most useful when the camera is on a tripod. This accessory screws into the release button of the camera.

Note: Always use the 5008S special cable release. Other cable releases (including cable releases for other Beaulieu cameras) would not exert a strong enough pressure.

For single-frame filming, this accessory screws into the single-frame filming device. Depressing the cable release exposes one frame.



3 - CAMERA RELEASE



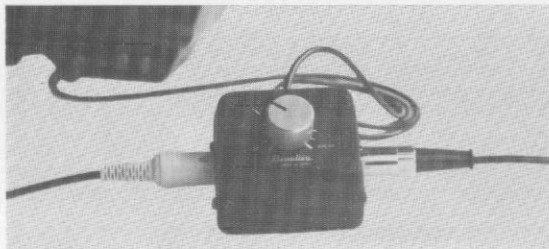
Remote control cord with switch (10 m = 33 ft)

Very useful when filming requires discreet operation (nature scenes, etc.) or is dangerous (wild animals, car races or scientific experiments, etc.).

Just plug the lead connection into the remote control socket of the camera, lock the release button in the filming position, pull the power switch all the way out, and control the filming by means of the switch.



4 - SOUND RECORDING



Sound mixing box

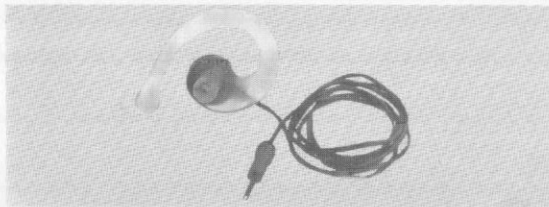
For recording and mixing two sounds from various origins simultaneously.

Insert the DIN plug of the mixing box into the sound input socket of the camera.

Plug one mike into one of the mixing box sockets and another mike (or a line cord leading to a Hi-Fi, etc.) into the other socket. The knob on the mixing box allows you to mix the two sounds as you wish.

Mixing can be checked by means of an earphone (available as an accessory).

Note: Mind echo-like phenomenon when using two mikes: if they are not at the same distance from the sound source, they will both record the same thing, but with a lag.



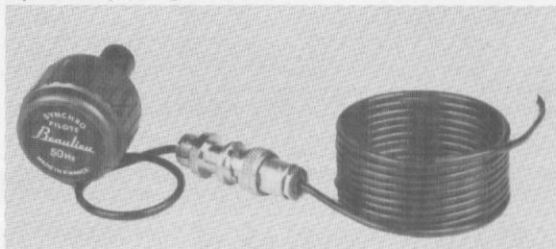
Mikes

Unidirectional.

Line cords

To record directly from a radio-set, Hi-Fi, etc. (1 mV or 1 V).

Synchro-pilot generator



For double system sound recordings using a sync tape recorder. This accessory delivers an AC sync signal to allow perfect synchronization.

To be plugged and screwed into the camera double system sound synchronization socket, the end of the cord going to the tape-recorder.




Contact switch

Similar in function to the synchro-pilot generator, but delivers pulses.

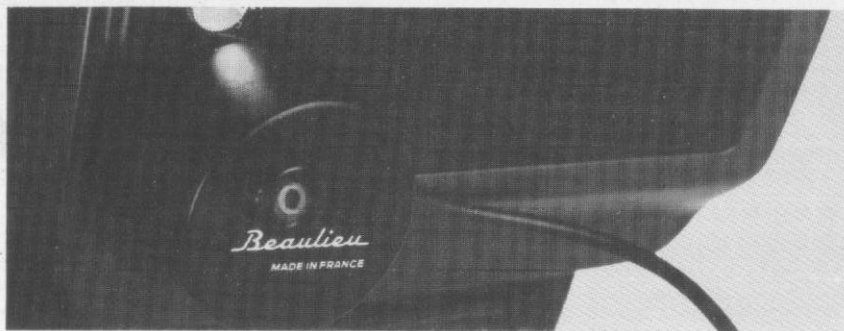
Intended for Erlson or Super-8 Sound recording systems.



Earphone

Plugged into the earphone socket (symbol ) , it enables you to hear what is recorded and how it is recorded at the very moment you are filming. The earphone is particularly useful to check the recording balance when you mix sounds with the Beaulieu sound mixing box.

ACCESSORIES



5 - SINGLE-FRAME FILMING UNIT

Plug the single-frame filming unit into the double system sound synchronization socket of the camera. To do so, insert it, the name Beaulieu being horizontal (turned in the way you read it) and the driving-pin in upper position, and screw-in the back part of it.

Insert the jack into the remote control socket of the camera and plug the 5008S cable release into the socket of the accessory.

Then, put the power supply switch "on" (see p. 9), and turn the camera release button in continuous filming position.

Depressing the plunger of the cable release will expose one frame.

6 - MISCELLANEOUS

Mount adapter rings for 35 mm photo lenses

- \varnothing 42 mm screw mount (Pentax, Praktica, Fujica, Yashica, Edixa, etc.)
- Leica (screw type)
- Leica (bayonet type)
- Leicaflex
- Alpa
- Canon (SLR)
- Minolta
- Miranda
- Contarex
- Nikon (with E2 ring)
- Nikon (without E2 ring)
- Exakta
- Olympus
- Icarex
- Rollei (SL 35)
- Konica

Filters

Series 8,5

- Yellow - Green - Orange - Red - UV.
- Wratten (1) 1 A, 80 B, 85 type.
- Neutral density:
 - 0.30 (50 % of light is transmitted = open by one f/stop),
 - 0.60 (25 % of light is transmitted = open by two f/stops).
- Polarizing. — X ?

Close-up lenses

Series 8.5

- 1 d - ● 2 d - ● 3 d - ● 4 d.

Screw-in rubber eyecup

Lens hoods

Slip-on rubber eyecup — X

Wrist strap

(1) Wratten is a registered trade mark of Eastman Kodak

Cases



- Large luxury model case.



- Small-size case.

MAINTENANCE

1 Lens

Lens surfaces must be kept extremely clean. Outside surfaces should be wiped with a fine, clean, lint-free cloth. This cloth should never be moistened. After filming, screw in the front lens cap.

2 Film gate

The gate should be cleaned frequently (every 3 or 4 films) with the hand blower.

Caution

Never slip anything (hand blower, brush or cloth) through the gate, as this will damage the gelatin filters. To remove any possible specks of dust, carefully clean with the hand blower.

3 Reflex system

The mirror and focusing screen can be reached through the lens mount opening. Unscrew the lens: the mirror becomes visible. If there are dust specks on it, remove them with the hand blower.

4 Lubrication

This should always be done by an authorized Beaulieu service facility. After three years, it is advisable to send your camera to a Beaulieu Service Facility for a complete overhaul.

5 Beware of water !

When using this camera near water, especially salt water (at the sea-side, etc.), guard against splashes and even mere spray. They might damage the camera's metallic parts and electrical contacts. In such filming situations, keep the camera body in a plastic water-tight bag, letting out only the lens front.

5008 S TECHNICAL DATA

FORMAT : Super 8.

DIMENSIONS :

- overall length = 13 1/2 in. (35 cm).
- overall width = 4 1/2 in. (11 cm).
- overall height = 8 1/2 in. (21 cm).

WEIGHT

3 lbs 11 oz (1.670 kg) without lens,
5 lbs 11 oz (2.570 kg) with Schneider 6-70 mm zoom lens.

LENS : "C" mount lens interchangeability.

Normal lens: Schneider 6-70 zoom lens (maximum aperture: f/1.4).

● **Diaphragm:** fully automatic settings provided by a servomotor (Reflexmatic motor).
This automatic device is with manual override.
Correct exposure check (by means of a meter pointer in the viewfinder).

● **Zooming:** electric power zoom.
Variable zoom range from 4 to 12 seconds.
Instant start/stop.

● **Automatic prefocus control:** fingertip pressure on the prefocus control button instantly and automatically zooms the lens to its maximum telephoto position and, at the same time, automatically opens the diaphragm to its maximum aperture. The camera operator is instantly provided with the shallowest possible depth of field required for critical focusing.

VIEWFINDER

- Reflex.
- "Divided grain" focusing screen (retractable).
- An indicator inside the viewfinder (bottom) flickers to indicate the film is advancing.
- Eyepiece: eyesight correction: ± 2 diopters; 2 rubber eyecups.

SHUTTER:

- Guillotine type.
- Frame exposure time at 8 fps = 1/20 second, at 18 fps = 1/40 second, at 24 fps = 1/60 second, at 45 fps = 1/100 second.

SPEEDS:

Standard speeds: 8, 18, 24 and 45 fps.

EXPOSURE METER:

CdS photo cell.

AMPLIFIER TECHNICAL DATA

CAMERA LOADING :

Instant loading with 50' (15 m) Kodapak type cartridges (sound or silent).

FILTER :

Wratten 85-type/built-in.

RELEASE :

Self-locking release button (cable release possible).

FOOTAGE COUNTER :

Graduated both in feet and meters

- indicates amount of film remaining in the cartridge,
- automatically resets when unloading the camera.

SUPPLY :

- NICAD rechargeable battery (500 mA - 7.2 V),
- three-position power switch

SOUND :

- recorded on magnetic striped film, inside the camera
- (recording of sound on separate tape recorder possible),
- built-in amplifier,
- separation picture to sound: 18 frames,
- a diode flickers inside the viewfinder (top) when sound is recorded.

Inputs: 3 sensitivities-voltage

1 - 0.15 mV to 20 mV

2 - 3 mV to 150 mV

3 - 30 mV to 1.2 V

$Z \leq 5 \text{ K}\Omega$

$Z = 100 \text{ K}\Omega$

$Z = 500 \text{ K}\Omega$

Power supply: 15 V. DC.

Bias: HF signal 60 KHz $\pm 5\%$.

"Non attenuated" noise/sound ratio : 57 dB.

Distortion at maximum modulation $< 0.75\%$.

V.U. zero level — 10 dB with regard to track saturation.

Sound level control:

- **manual** by potentiometer,
- **automatic** maximum voltage on socket: 1 = 20 mV.

Frequency response:

50 Hz to 12 KHz $\pm 1.5 \text{ dB}$ at 24 fps

Frequency response:

50 Hz to 9.5 KHz $\pm 1.5 \text{ dB}$ at 18 fps.

Sound check: 1 headset $Z > 1.5 \text{ K}\Omega$.

Modulation indicator: pointer in the viewfinder, and LED (light emitting diode).

Wow and flutter: $< 0.4\%$ "attenuated peak".

The characteristics of the amplifier make very good sound recordings possible. However, remember that getting a high quality sound also depends on the microphone and the projector used.

(1) Kodapak and Wratten are registered trade-marks of Eastman Kodak

MICROPHONE TECHNICAL DATA

BEAULIEU MICROPHONE MD S 8

TECHNICAL DATA:

Type: Dynamic pressure gradient receiver.
Frequency range: 50...15 000 Hz.
Sensitivity at 1 000 Hz: 0.13 mV/ μ bar (-73 dBV).
Impedance at 1 000 Hz: 200 ohms ± 20 %.
Nominal actual load impedance ≥ 200 ohms.
Directional characteristic: cardioid.
Noise/sound ratio ≥ 67 dB.

DIMENSIONS:

170 mm \times 49 mm \varnothing .

WEIGHT:

320 g.

Supplied with windscreen.

BEAULIEU MICROPHONE ME S 8

TECHNICAL DATA:

Type: Dynamic pressure gradient receiver.
Frequency range: 50...15 000 Hz.
Sensitivity at 1 000 Hz: 2 mV/ μ bar (-76.5 dBV).
Impedance at 1 000 Hz: 15 000 ohms ± 20 %.
Nominal actual load impedance $\geq 1 500$ ohms.
Directional characteristic: cardioid.
Noise/sound ratio ≥ 64 dB.
Powering: 5.6 V mallory battery.
Autonomy: > 600 hours.

DIMENSIONS:

172 mm \times 22 mm \varnothing .

WEIGHT:

500 g.

Supplied with support and connecting cord.

ACCESSORIES:

Windscreen
ME 20 omnidirectional head
ME 30 hypercardioid head

GUARANTEE

The World-wide Guarantee Registration Card, on which your camera registration number is indicated, certifies that the camera it corresponds to is brand new. Fill in the Registration Card, then have it validated by your Beaulieu distributor who will mail the card 2 (unless you do it yourself) to the Beaulieu service facility of his country. Within a month, you will receive a guarantee card valid for one year at any of the Beaulieu service facilities in the world, subject to the conditions listed on the card.

Beaulieu distributors are the only ones to give you a Beaulieu World-wide Guarantee Registration Card. We will not guarantee a camera sold without a Registration Card since it could be second-hand.



SCHNEIDER f/1.4 6-70 mm ZOOM LENS DEPTH OF FIELD CHART

F	Object distance (meters)	1.4	4	8	16
6 mm	∞	1,53	0,61	0,37	0,24
	3	1,09	0,55	0,35	0,24
	1,5	0,84	0,50	0,34	0,23
8 mm	∞	2,39	0,90	0,50	0,30
	3	1,40	0,75	0,46	0,29
	1,5	0,99	0,63	0,43	0,28
10 mm	∞	3,66	1,34	0,71	0,40
	3	1,72	0,98	0,62	0,38
	1,5	1,12	0,78	0,54	0,35
12 mm	∞	5,21	1,87	0,97	0,52
	3	1,97	1,21	0,78	0,47
	1,5	1,21	0,90	0,65	0,43
15 mm	∞	8,08	2,86	1,45	0,75
	3	2,24	1,52	1,03	0,63
	1,5	1,30	1,04	0,79	0,55
20 mm	∞	14,30	5,01	2,51	1,26
	3	2,51	1,92	1,42	0,93
	1,5	1,37	1,19	0,98	0,73
28 mm	∞	28,00	9,76	4,86	2,41
	3	2,72	2,32	1,89	1,37
	1,5	1,43	1,31	1,17	0,95
40 mm	∞	57,00	19,90	9,88	4,88
	3	2,85	2,61	2,31	1,87
	1,5	1,46	1,39	1,30	1,14
48 mm	∞	82,1	28,6	14,2	7,02
	3	2,89	2,71	2,47	2,10
	1,5	1,47	1,42	1,35	1,22
60 mm	∞	128'00	44,70	22,20	11,60
	3	2,93	2,80	2,63	2,34
	1,5	1,48	1,44	1,39	1,29
70 mm	∞	175,00	60,90	30,30	15,00
	3	2,95	2,85	2,71	2,47
	1,5	1,48	1,46	1,41	1,33

(DISTANCES IN METERS) DIAMETER OF CIRCLE OF CONFUSION: 0.02 mm

SCHNEIDER f/1.4 6-70 mm ZOOM LENS **DEPTH OF FIELD CHART**

F	Object distance (feet)	1.4	4	8	11
6 mm	∞ 10 5	5'00 ∞ 3'07 ∞ 2'09 64'01	2'00 ∞ 1'10 ∞ 1'08 ∞	1'02 ∞ 1'02 ∞ 1'01 ∞	0'09 ∞ 0'09 ∞ 0'09 ∞
8 mm	∞ 10 5	7'10 ∞ 4'08 ∞ 3'03 11'04	3'00 ∞ 2'05 ∞ 2'01 ∞	1'08 ∞ 1'06 ∞ 1'05 ∞	1'00 ∞ 1'00 ∞ 0'11 ∞
10 mm	∞ 10 5	12'00 ∞ 5'08 47'10 3'09 7'09	4'05 ∞ 3'03 ∞ 2'07 ∞	2'04 ∞ 2'00 ∞ 1'09 ∞	1'04 ∞ 1'03 ∞ 1'02 ∞
12 mm	∞ 10 5	17'01 ∞ 6'06 22'01 4'00 6'08	6'02 ∞ 4'00 ∞ 3'00 18'00	3'02 ∞ 2'07 ∞ 2'02 ∞	1'08 ∞ 1'07 ∞ 1'05 ∞
15 mm	∞ 10 5	26'06 ∞ 7'05 15'05 4'04 6'00	9'05 ∞ 5'00 ∞ 3'05 9'04	4'09 ∞ 3'05 ∞ 2'08 75'04	2'06 ∞ 2'01 ∞ 1'10 ∞
20 mm	∞ 10 5	46'11 ∞ 8'04 12'06 4'07 5'06	16'05 ∞ 6'04 23'02 3'11 6'10	8'03 ∞ 4'08 ∞ 3'03 10'07	4'02 ∞ 3'01 ∞ 2'05 ∞
28 mm	∞ 10 5	91'09 ∞ 9'01 11'02 4'09 5'03	32'00 ∞ 7'08 14'02 4'04 5'10	15'11 ∞ 6'03 24'01 3'10 6'11	7'11 ∞ 4'06 ∞ 3'02 11'02
40 mm	∞ 10 5	187'00 ∞ 9'06 10'07 4'10 5'02	65'03 ∞ 8'08 11'09 4'08 5'05	32'05 ∞ 7'08 14'02 4'04 5'10	16'00 ∞ 6'02 23'10 3'10 7'01
48 mm	∞ 10 5	269'00 ∞ 9'08 10'05 4'11 5'01	93'11 ∞ 9'00 11'02 4'09 5'03	46'08 ∞ 8'03 12'08 4'06 5'07	23'01 ∞ 6'11 17'00 4'01 6'04
60 mm	∞ 10 5	421'00 ∞ 9'09 10'03 4'11 5'01	147'00 ∞ 9'04 10'09 4'10 5'02	73'00 ∞ 8'09 11'07 4'08 5'05	36'01 ∞ 7'09 13'09 4'04 5'11
70 mm	∞ 10 5	573'00 ∞ 9'10 10'02 4'11 5'01	200'00 ∞ 9'06 10'07 4'10 5'02	99'05 ∞ 9'00 11'02 4'08 5'04	49'03 ∞ 8'03 12'07 4'05 5'08

(DISTANCES IN FEET) DIAMETER OF CIRCLE OF CONFUSION: 0.02 mm

IMPORTANT

Before sending your Beaulieu 5008 S Multispeed Super 8 camera in for repair, please note the following:

In case of malfunction, this guide may help you to put your Beaulieu 5008 S Super 8 camera back into operation.

If the problem still persists (or, for other malfunctions not shown on this guide), it is recommended that you send the camera (complete with lens, battery and charger) in for service.

Condition	Possible cause	Correction
Camera drive inoperative	a) Discharged battery	a) Recharge battery (refer to battery charging sheet)
	b) Defective battery	b) Replace battery
Image blurred	a) Eyepiece improperly set	a) Refer to instruction manual
	b) Improper focusing	b) Refer to instruction manual
Reflexmatic motor inoperative	a) Defective battery	a) Replace battery
	b) Defective reflexmatic motor	b) Camera requires service
Reflexmatic motor sets to widest or smallest aperture only	a) Defective battery	a) Replace battery
	b) Defective reflexmatic motor	b) Camera requires service



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