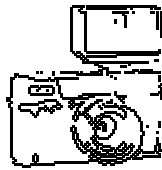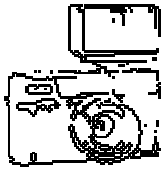# Konica Hexar

Personal additions to the user manual

Frank van de Wiel

January, 1999

Konica Hexar

Preface

I have compiled some information which I could find in the original manuals from Konica, the internet and magazines and have put it together in this small booklet. It took me some time to gather this information and maybe it saves you some time.

Most information is valid for the original Konica Hexar standard model and probably for some newer models too but there may be some small differences.

This booklet is certainly not complete and additional information is always welcome.
I owe an upgraded Konica Hexar standard model camera myself and enjoy using it very much.
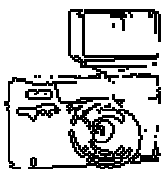
PS. I am in no way related to Konica co-operation.

For suggestions and remarks send an e-mail to: Frank.van.de.Wiel@cwi.nl

Contributions by:

Peter van de Haar:
Hexar Silent Photography, Hexar S-mode (sort of, anyway...)

Konica Hexar

Table of Contents

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Pictures of the camera

Front view

Top view

View inside the camera

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Did you know..?

How many different Hexar camera models there are?

There are currently five different models of the Konica Hexar camera.
- Standard (Black)
- Date (standard model with date back)
- Classic (Chrome)
  the Hexar *Classic* has one extra function than an upgraded standard model Hexar namely automatic bracketing!
  Three exposures +- up to 2 EV in 1/3 EV steps. This may be of interest for those who make slides. But this camera may be hard to find (special anniversary model 120 years Konica 1993, only 2000 cameras are made and half of it stayed in Japan).
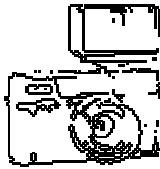- Rhodium (Pink)
  The *Rhodium* has all the functions identical to an upgraded Hexar standard model.
- Hexar Silver
  the *Silver* has all the functions identical to an upgraded Hexar standard model but no silent mode.

It is possible to upgrade the camera software of a standard model Hexar
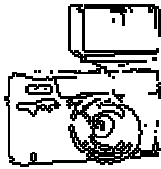
If you own a Konica Hexar *standard* model, you can upgrade your camera with four extra functions. Therefore, you have to return your camera to Konica support services. They will upgrade and check your camera completely for about $30.

The extra functions you get are:
- multiple exposures
- one step exposure setting in manual mode
- guide number setting
- infra red film setting

There is some kind of identification of your negatives

On my standard Hexar model there is a small triangular piece cut away from the negative frame in the camera. Therefore, this is visible on all my negatives.
It is at this location where during the production process of the camera the opening for the film frame is made.

Tips and tricks

How to press the buttons

This is of course personal but for me it is the best way to use the camera.
Use your middle finger to press the release button and your index finger to press the up or down button.
This way you can look through the viewfinder while adjusting settings.
It will also reduce the possibility that one of your fingers covers the photocell on the front side of the camera.

Filters and short focussing distance

The camera was designed to get the highest quality pictures possible and that means no filters. Lucky for you the Konica engineers where kind enough to add a filter screw thread (size 46mm).
If you really want to use filters, be careful. When you try to focus at a distance of 60cm your camera may display an error message EEE on the LCD panel.*
This is caused by obstruction of the lens by the filter mounted.
This message stays there even when you have switched off your camera.
Removing the battery will clear the LCD panel error message.
You have to remove the filter before using your camera again.
If you want to use filters, focussing at a distance 60cm, return your camera to Konica support service. They will add a very thin metal ring to your camera which will keep the filters just out of range of the autofocusing lens and the problem will be solved.
Adjust for exposure compensation by using the up/down button or by adjusting the ISO speed.
* This problem may be solved on the newer models but I have no information about this.

Using non DX films

The camera automatically sets the ISO value to that of the loaded DX-film.
There maybe situations where you may want to adjust filmspeed and you don't like to do this with the exposure adjustment (0+-2 EV).
One way to do this is tape the filmcartridge DX-code and set manually the ISO value you want.
- Switch your camera to A mode and press the Select button for more than 1 second.
- Adjust the ISO value with the Up or Down button.
  The camera will use this ISO value for all next films until you load a DX-coded film or remove the battery.
When using a filmcartridge without a DX code you may have to press the release button before filmloading starts.

Saving battery lifetime.

When not using the flash unit for a long time switch of the power of your flash unit.
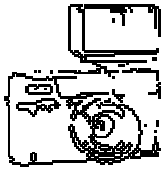
Konica Hexar

Hexar Silent Photography

With the Silent Mode, the Hexar is an extremely quiet camera. Some circumstances may however require even less obtrusive operation (e.g. ceremonies in church, candid photography). The following considerations will be helpful in achieving this.

The causes and solutions to noise from the Hexar

Focussing
The noise of focussing is lessened by the Silent Mode. It can be eliminated by manually selecting focus in advance, and sticking to that. Combined with a fixed Aperture for a hyperfocal setting, this approach would be most effective.

Aperture
The noise of the aperture opening up or closing down is not affected by the Silent Mode. It can be eliminated by manually selecting the aperture in A-mode or M-mode in advance, and sticking to that. Combined with a fixed Focussing for a hyperfocal setting, this approach would be most effective.

Film Advance
The noise of film advance is lessened by the Silent Mode. It can not be eliminated, but the film advance can be delayed by keeping the shutter release pressed. Release the shutter when the Hexar is hidden under a piece of cloth, or the sound is camouflaged by other noise.

Film rewind
The noise of film rewind is lessened by the Silent Mode. One's best bet however, is to make sure that film rewind does not need to occur.

Shutter
The noise from the shutter is not affected by the Silent Mode. It is however by far the least obtrusive noise generated, even by Silent Mode standards. The only solution would of course be to not press that shutter release at all :-)

Switching on/off
When switching off, the aperture opens up completely, and the lens moves back to its base position. When switched on again, the aperture closes down to the one selected immediately. The lens will move again when focussing takes place either manually or automatically. This means that for candids, switching off and on again of the Hexar should be avoided.
Taking the above at heart, your Hexar should make a whisper sound like a bang by comparison.
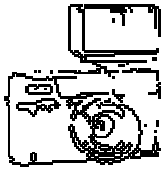
Konica Hexar

Hexar S-Mode (sort of, anyway...)

Yep, it's true; the Hexar does not support a shutter priority mode. Programmed aperture preference (P-Mode), Aperture priority (A-mode) and full manual (M-Mode), it's all there. However, there's no way to crank the selector button all the way up to an S-Mode.
What the Hexar does have though, is a user programmable camera shake critical speed. Combined with the P-Mode, it offers a programmed shutter preference mode with full stop speed settings from 1/4 to 1/60th plus 1/250th.

Here's how it works:
- Select P-Mode.
- For the slower speeds (1/4, 1/8, 1/15, 1/30, and 1/60), set the camera shake critical speed to the shutter speed required -attainable by keeping the Select button pressed.
- Set the aperture wheel to 22.
This very small aperture will cause the Hexar to use the slowest shutter speed available to it. This will be the selected camera shake critical speed, and when there's still too little light -as is often the case with f22 and the slower films the Hexar particularly favours- will automatically open up the aperture to one appropriate to the camera shake critical speed.
- For the fastest speed (1/250), turn the aperture wheel to 2.
This large aperture will cause the Hexar to use the fastest shutter speed available to it. This is the shutter top speed of 1/250, and when there's still too much light -as is often the case outdoors with f2- will automatically close down the aperture to one appropriate to the camera shake critical speed.

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Flash photography

Using the flash unit Konica HX-14 auto
There are three main modes of taking pictures with this flash unit:
- Full automatic, full flash output with automatic adjusted aperture
- Automatic, fixed aperture and variable flash output depending on subject distance
- Manual, nothing automatic

* When mounting your flash unit to the camera be sure that both camera and flash unit are switched off.

Full automatic
Available light, subject distance and camera-shake critical speed is taken into account to get a correct exposure. The flash unit is set for maximal light output. The picture is made by an exposure with the available light and then immediately changing the aperture of the camera to a value which gives a correct exposure with the full flash output fired just before closing the shutter.

How to:
- Mount the flash unit on camera
- Set camera to mode P
- Set flash unit to mode P-FULL
  When the flash unit is completely charged a [FL] message appears in the LCD panel and the pilot lamp on the flash unit is burning*.
- Press the release button

*If the flash unit is not fully charged a picture is made only with the available light and the flash does not fire.

Automatic
The flash light output is changed depending on subject distance. The aperture setting is fixed. Subject distance must be between 0.6m - 3.5m for ISO 100. The HX-14 flash unit is now functioning like a normal electronic flash light.
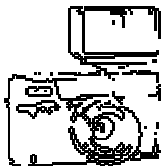
How to:
- Set flash unit to mode A
- Set camera to mode A or M
- Set the aperture on camera depending on filmspeed

Film speed (ISO)	aperture
50	2.8
100	4
200	5.6
400	8.0
800	11

- Press release button
*In poor light conditions always use a tripod to support your camera.

M mode

Nothing automatic. Flash unit is set for maximal light output. You have to set the aperture on your camera manually to a value calculated by the following formula:

$$F = GN \,/\, m$$

F   = aperture
GN = guide number of your flash unit (14 for HX-14 with an ISO 100 film)
m   = distance to subject in meters

* Important when the distance changes to your subject you have to recalculate the aperture value.

How to:
- Set flash unit to mode P-Full
- Set camera to mode A or M
- Calculate and set aperture on camera (e.g. Film ISO 100, GN=14, m=5 then F is 2.8)
- Press release button
*If the flash unit is set to mode A the available light is not measured.

Using other flash units

Almost any flash unit can be used with your camera.
Only automatic and manual flash modes are available for non HX-14 flash units.

Fill-in flash

- Set camera to mode A.
- Choose a correct aperture for the available light and use the same aperture value for your flash unit.

To get a more subtle effect set the work aperture on the flash unit one or two stops larger than the aperture on your camera. E.g., camera aperture F8 set flash unit to F5.6 or F4.

Depending on your flash unit, you may also reduce the flash output instead of changing the aperture.

Try different combinations of aperture settings on your camera and flash unit to see what is best in your situation.

This mode is very well suited for outdoor photography with fill-in flash.

Camera software upgrade

After a camera software upgrade of a standard or classic model, the following functions are added to the camera.

One step exposure time setting in M(anual) mode

- Switch the camera to mode M
- Set the aperture of your choice with the aperture dial.
- To set immediately the exposure time corresponding to the selected aperture value, you have to press the release button half way down and press the up or down button at the same time (**one step**).
  The light reading is made for an circular spot area of 4 degrees.

- The exposure time will be kept in memory until you explicitly set another value or switch of the camera.

Setting the guide number

This option allows you to use other flash units with your camera. You can choose between 36 different guide numbers.

How to:
- Switch camera to mode P while pressing and hold the Select button.
- Press the up or down button until the required guide number appears in the LCD panel. When the guide number is set [PFL] appears in the LCD panel. As long as the camera is switched on this setting is kept in memory. Just switch back to mode P while pressing the select button

- Switching off the camera clears the guide number setting.

* When a guide number is not available choose the nearest lower setting, e.g. Guide number 22 is not available set guide number to 20.

Multiple exposure

Normally only one exposure is used for a negative. With the multiple exposure setting unlimited exposures are possible for one frame.

How to:
- Switch camera to mode P while pressing the SELF-button.
- The LCD panel displays a zero left from the framenumber: 0[12]. Which in this case means 0 multiple exposures on frame number 12.
  Everytime you press the release button the number left from the frame number will be increased. The LCD panel can only display a maximum of nine multiple exposures: 9[24]. You can however continue with multiple exposures.

Tip: Reduce the aperture setting as many stops as exposures you want to make on one filmframe.

- Switching off the camera will advance the film and the multiple exposure function will be disabled.
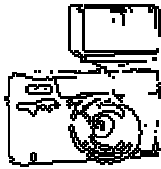
Konica Hexar

Infrared film setting

When using infrared films without compensating for the wavelength your images will be out of focus. With the infrared compensation your camera is ready for using Konica and Kodak infrared films.

How to:
- Load film and switch on your camera
  You probably have to press the release button before the camera starts filmloading.
- Switch camera to mode A.
- Press SELECT button until ISO value appears in the LCD-panel.
- Now within 3 seconds press theDown button until **---** appears in the LCD-panel.
- Press once the MF button and [750] appears in the LCD-panel, press MF button one times more to see [850].
These numbers corresponds to Konica [750] and Kodak [850] infrared film.
Three seconds after selecting the film [ISO 100] appears in LCD-panel.
- For the correct film exposure settings follow film instructions.

- Loading a new film will disable the infrared setting.
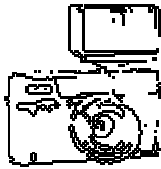
Konica Hexar

Viewfinder information

Autofocus area indicator
Four lines (cross hair) indicate the central area of the image. In P and A mode the area of exposure metering area covers 15 ° and is square shaped just covering the area of the cross hair.
In M mode the exposure metering area is circular shaped and covers 4 ° and is as large as the central area of the cross hair.

Image frame area indicator
The five thick lines frames the negative image area. The top and left line will move depending on the distance set (parallax compensation).

Distance indicator
The top thick line in the viewfinder points to a small break in the diagonal line in the top right corner of the viewfinder, which is the distance indicator.
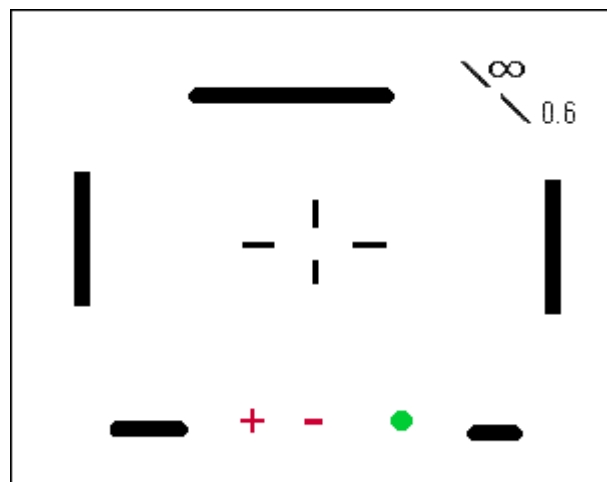
Viewfinder led information
●	burning continuously	distance set correctly
●	flashing	distance set less than 0.6 meter
-	burning continuously	under exposure
+	burning continuously	over exposure
-	and + burn alternating	exposure set correctly within 1/3 aperture

Hyperfocal distance

Briefly
If you set the focus of your camera to the hyperfocal distance the depth of field range from half that distance to infinity. It is of course strongly depending on the aperture.

Formula used:

$$H = \frac{F^2}{f \times c}$$

H = hyperfocal distance (mm)

F = focal length (35mm)

f = aperture (f value)

c = circle of diffusion (0.033mm)

Aperture	2	2.8	4.0	5.6	8.0	11	16	22	f
Hyperfocal distance	18.56	13.26	9.28	6.63	4.64	3.37	2.32	1.69	m
Set manually focus to	20	20	10	7	5	3.5	2.4	1.7	m
Sharp from x till infinity	10	10	5	3.5	2.5	1.75	1.2	0.85	m
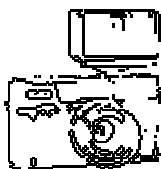
Konica Hexar

All camera settings
**(upgraded Hexar standard model)**

Time	Guide Number	ISO value	Fixed focus distances	Aperture	Exposure correction	Camera shake critical speed
s			m	f	f	s
1/250	1.0	6	0.6	2.0	0.0	1/60 **
1/200	1.1	8	0.7	.	0.3	1/30
1/160	1.3	10	0.8	2.8	0.7	1/15
1/125	1.4	12	0.9	.	1.0	1/8
1/100	1.6	15	1.0	4.0	1.3	1/4
1/80	1.8	19	1.1	.	1.7	
1/60	2.0	25	1.2	5.6	2.0	
1/50	2.2	32	1.3	.		
1/40	2.5	40	1.4	8.0		
1/30	2.8	50	1.5	.		
1/25	3.2	64	1.6	11		
1/20	3.6	80	1.7	.		
1/15	4.0	100	1.8	16		
1/13	4.5	125	1.9	.		
1/10	5.0	160	2.0	22		
1/8	5.7	200	2.2			
1/6	6.3	250	2.4			
1/5	7.1	320	2.6			
1/4	8	400	2.8			
1/3.2	9	500	3.0			
1/2.5	10	640	3.5			
1/2	11	800	4.0			
1/1.6	13	1000	5.0			
1/1.2	14*	1200	7.0			
1	16	1600	10			
1.3	18	2000	20			
1.6	20	2500	999 (infinity)			
2	23	3200				
2.5	25	4000				
3.2	29	5000				
4	32	6400				
5	36					
6	40					
8	45					
10	51					
13	57					
15	64					
20						
25						
30						
T						

* HX14 flash unit guide number
** Advised setting when using the flash unit
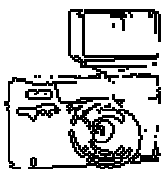
Konica Hexar

General camera functions

In the table below the display values may differ depending on the use of the Up and Down buttons, light conditions, focusing distance and aperture setting.

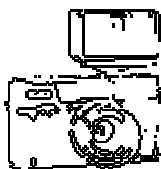| All modes P A M		
Function	**Photographer's Action**	**Display**
Focus Lock	press and hold release button halfway down and press MF button. make your composition and release shutter	1.5 1/30
Focus Lock with other light reading	press and hold release button halfway down and press MF button. point to another subject and press and hold release button halfway down again. go back to your previous composition and release shutter.	7.0 2.4 1/30
Set focus at infinity	press MF button	999
Set fixed focus distances	press MF button for more than 1 second	0.6
Silent	press and hold MF button while switching the camera on until L appears	L[0]

Camera functions (*mode dependent*)

In the table below the display values may differ depending on the use of the Up and Down buttons, light conditions, focusing distance and aperture setting.
Personal adjustments can be made by using the Up and Down buttons.

|	**Function**	**Photographer's Action**	**Display**
P	over or under exposure	press Select button	± 0.0
	camera shake critical speed	press Select button for more than 1 second	1/30L
	guide number	press and hold Select button while switching the camera on switch to A mode if you don't use the Hexar X14 flash unit	. . . P36 PFL
	multiple exposure	press and hold Self button while switching the camera on	9[3]
A	set over or under exposure	press Select button	± 0.0
	set film speed (ISO value)	press Select button for more than 1 second	100
	infra red film setting	press and hold Select button until ISO value appears press Down button within 3 seconds when **. . .** appears press MF button once or twice (750 = Konica 850 = Kodak)	100 . . . 750 [100]
M	set manually exposure time spot reading (4°)	press Select button and press Up or Down button simultaneously. Exposure time corresponding to the aperture set is fixed. Make composition and release shutter.	1/250 . . . 1/125
	set time and aperture	press select button to set exposure time set aperture	Picture will be taken with your settings

Konica Hexar

Reset camera functions

Reset functions	Reset by
focus lock f correction multiple exposure guide number spot reading	switch camera off and on
ISO value (only if next film has DX code) infra red film setting	open back cover
reset all personal settings	remove battery

Error situations

Mode	LCD	Display error	To solve the problem
P A M		no ISO value or frame number is displayed	press select button
P A M	[0]	flashing	load film again or remove rewinded film
P A M	b.c.	flashing / continuously displayed	replace battery (Li2cr5) / immediately
P A M	. . .	continuously displayed	switch to M mode and back
P A M	EEE *	continuously displayed	camera lens blocked, remove battery and / or obstruction For instance a mounted UV filter and short focus distance
P A M	dark	continuously displayed	temperature to high, keep camera in shade
P A M		slow reaction	temperature to low, keep camera warm (-10°C +40°C)
A	1/250	flashing	over exposure, set aperture to larger value
A	30	flashing	under exposure, set aperture to smaller value
M	2	flashing	under exposure, set exposure time to larger value
M	22	flashing	over exposure, set exposure time to smaller value
M	shutter speed	flashing	exposure exceeds Exposure Display Range (EV 3-18) This has no effects on camera functioning
Silent mode		flashing, film rewinding stops	low battery voltage press rewind button or switch camera off and on

*See Filters and short focusing distance.
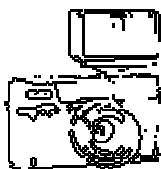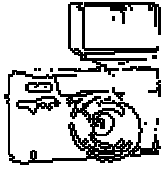
Konica Hexar

Flash modes

Combinations of the Hexar camera and the HX-14 Konica flash unit.

Camera mode	Flash unit mode	Function
P	P-full	all automatic, maximal flash output, variable aperture
A	A	automatic correction for available light, fixed aperture, variable shutter time, variable flash output
M	P-full	nothing automatic, fixed aperture, fixed shuttertime, maximal flash output
M	A	no correction for available light, fixed aperture, fixed shuttertime, variable flash output

HX-14 flash distance range (in meters)

	Aperture							
	2	**2.8**	**4**	**5.6**	**8**	**11**	**16**	**22**
ISO 50	5	3.6	2.5	1.8	1.2	0.9	0.6	-
100	7	5	3.6	2.5	1.8	1.2	0.9	0.6
200	10	7	5	3.6	2.5	1.8	1.2	0.9
400	14	10	7	5	3.6	2.5	1.8	1.2
800	20	14	10	7	5	3.6	2.5	1.8

*HX14 flash unit guide number is 14 at ISO 100

Konica Hexar

Other information

Books

Language	German
Title	Konica Hexar
Author	Heiner Henninges
Year	1992
Type	paperback, 132p
Publisher	Verlag Laterna Magica, Germany
ISBN	3-87467-502-5

Internet sites

`http://www.cwi.nl/~frankw/hexar`   *Konica Hexar*

`http://photo.net/photo/hexar.html`   *Hexar reviewed*

`http://swissnet.ai.mit.edu/photo/ncliffe/hexarcable.html`
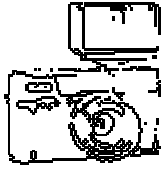   *Hexar cable release*

Konica Hexar

Below some pictures which I have made in 1994 in Andalusia (Spain).

Film: Kodak Gold, ISO 100

Alhambra, Granada