

**Mamiya**

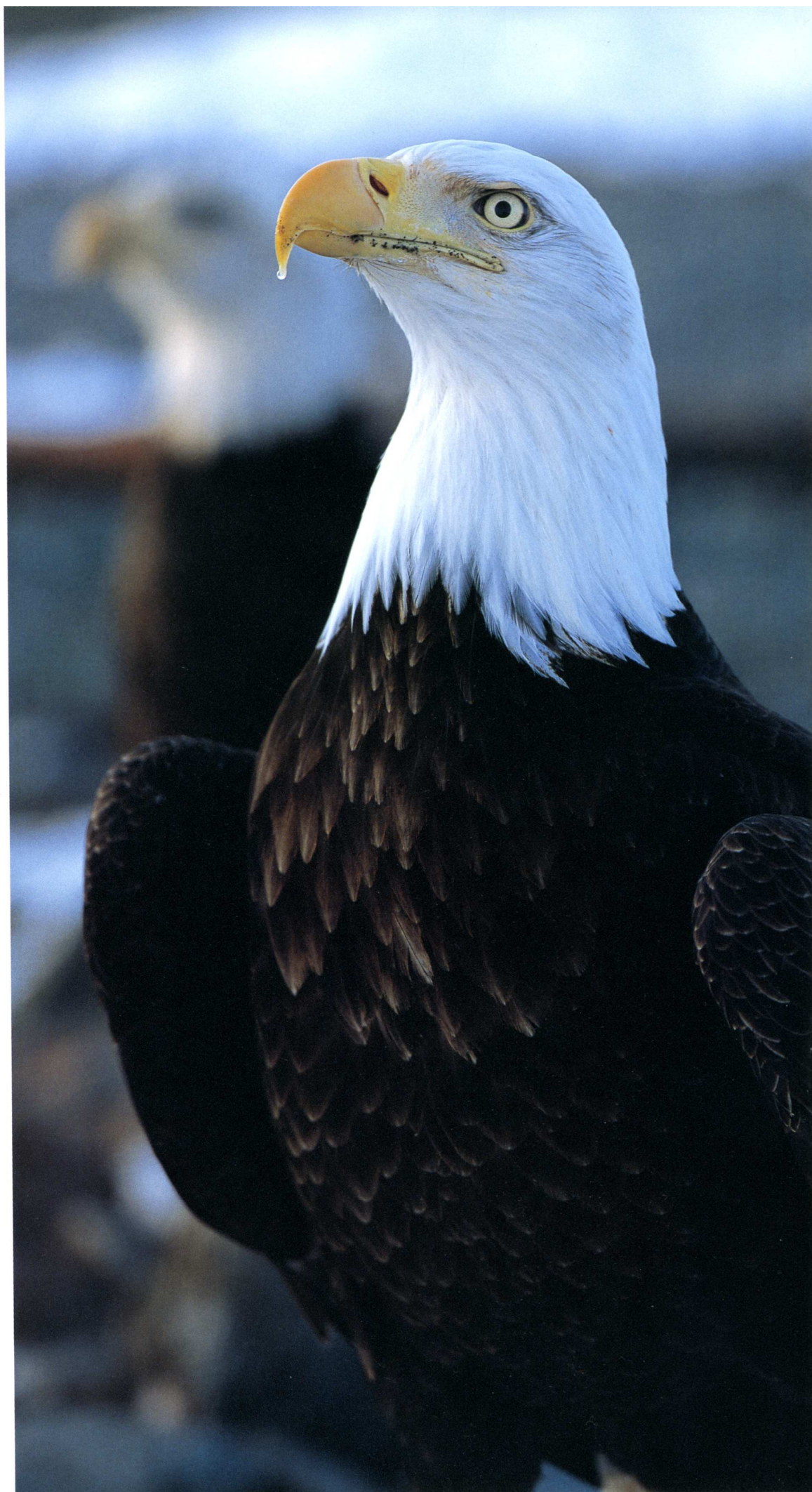
# 645AFDII



[www.ianbfoto.com](http://www.ianbfoto.com)



Mamiya





## *Intelligence & Performance*

### **645AFDII.**

**Evolve to a new standard of performance and perfection film or digital.**

Mamiya pioneered the 645 SLR system camera in 1975 and has become recognized as the world leader in the medium format field. Always striving for perfection, the new Mamiya 645AFDII medium format SLR offers improved performance and an extensive choice of convenient features that seamlessly supports film or digital capture, making it easy to have one camera system for both. Committed to the professional photographer, Mamiya offers the latest advanced camera features without locking the photographer into a single photographic medium. Responding to the demands of medium format shooters, Mamiya has incorporated the latest auto focus technology in the 645AFDII. In addition to a faster more responsive focus system, it also includes MSCE (Mamiya Serial Communication for External) that provides data exchange from the 645AFDII and a compatible digital back. Additional features such as multi-point evaluative metering, TTL flash control and compensation, 36 custom functions and more redefines what a medium format camera is.

The Mamiya 645AFDII combines sophisticated advanced features, integrated microprocessor controlled electronics, improved performance and the quality of medium format film or digital capture with the power of proven world-class AF lenses.



# 645AFDII

## *Intelligence & Performance*

- A perfect blend of proven engineering and intelligent design, the new 645AFDII puts the power of creative potential in the hands of today's professional



**Mamiya**  
**645AFDII**



6x4.5cm format : actual negative size:56x41.5cm



## Eight exposure modes to complement every photographic need.

### Eight exposure modes

With a turn of the exposure mode dial, choose the best suited mode for the composition. Select from five different AE (Auto Exposure) modes (P) Program, (PH) Program High (PL) Program Low, (Av) Aperture-priority, (Tv) Shutter-speed priority or three manual modes (M) Manual, (B) Bulb for long exposures, (X) (1/125 sec.),

## Capture every lighting scenario with the control of multi metering modes.

### Multi metering modes

Selecting the correct metering mode can make the difference between a great image or a lost moment. Offering 3 metering modes, the 645AFDII adapts to every lighting condition. Choose from (A) Center-Weighted/Average metering, (S) Spot metering or (A-S AUTO) Variable ratio metering mode.

## Capture moments faster than the naked eye. High speed 1/4000-sec shutter speed

### The vertical-travel metal focal plane shutter

provides an impressive maximum shutter speed of 1/4000 second allowing photographers to employ creative shooting techniques such as soft-focus portraits using wide apertures to razor-sharp images of very fast-moving subjects. Flash synchronization speeds up to 1/125 sec. provide the balance between ambient and flash exposures.

## Always ready for the next moment

### Automatic film advance

The 645AFDII is the only auto-focus medium format camera to have first frame auto-detection. Faster and easier film loading along with precision frame spacing offers the necessary performance required in the studio or on location.

## One-touch variable exposure control Auto bracketing function

Stop wondering if you captured the perfect exposure. With Auto bracket mode, complex lighting conditions are easily handled. Whether you're shooting the narrow latitude of transparency film or digital capture, proper exposure is within your control. The 645AFDII automatically makes three consecutive exposures, one under, one over and the normal metered value so you can select the order and compensation value quick and conveniently.

## Exposure data recorded for every image

### Exposure data imprinting

Important exposure information such as exposure mode, aperture, shutter speed, exposure compensation, index number and more can all be imprinted on the films outer edge. Referring back to previous exposure data is quick and manageable.

## Critical data at a glance

### Three Digital Displays

Three conveniently located screens, display all necessary camera functions, modes, exposure data and settings. Two external LCD panels illuminate for low light conditions. An additional LCD panel located in the viewfinder shows all shooting data.

## Enhanced precision and performance

### Faster Auto Focus Technology

The 645AFDII features a selectable faster focusing TTL phase difference detection AF system. A new highly sensitive I-I shaped CCD sensor covers a wider focus area offering increased accuracy and focus control.

## Sophisticated TTL Flash control TTL Flash Control

The 645AFDII incorporates automated TTL / OTF (through-the-lens/off-the-film) flash exposure control. Advanced features such as flash ready indicator, flash compensation, AF metering beam and auto flash synchronization are among the many functions available on the 645AFDII.

## Meets every imaging need Film or Digital....

### Interchangeable digital or film back

The 645AFDII offers the conveniences of film or digital capture. Advanced features such MSCE (Mamiya Serial Communication for External) data interface and mid-roll film changes offer today's professionals greater flexibility in the field.

## Rugged, light weight and durable Die-cast aluminum alloy body and film back

The 645AFDII is built on a solid die-cast body made from lightweight, high-strength aluminum alloy. Exceptional precision computer aided machining assures reliable, durable performance even under the harshest working conditions.

## User selectable features and settings

### 36 Custom functions

The 645AFDII features selectable custom settings to accommodate individual shooting needs and styles. Quick and easy custom functions can be modified as your shooting needs change.

Custom Function List	
Custom Functions No.	The CF (Custom Functions) settings mode provide direct activation and selection of all special camera functions. Up to three frequently used profiles can be created.
1 Aperture / Shutter speed steps	Aperture and shutter speeds can be set for 1/2 or 1/3 step increments
2 Exposure compensation steps	Flash and ambient exposure compensation steps are selectable, +/-1/3, 1/2, 2/3, 1 EV
3 Auto focus area	Change auto focusing area
4 Data imprinting	Data imprinting on 120/220 film. Select exposure data and index number, date and index number, index number only or no imprinting.
5 Aperture setting after lens change	4 aperture settings are possible when changing lenses. Maintain current aperture setting, set to smallest aperture, set to the largest or sets to selected aperture preference.
6 Metered value display time	Metered value display time setting. Set to Normal, 15sec. or 5sec. to 60sec.
7 Range of exposure compensation	Select the maximum range for exposure compensation from +/- 3 or +/- 5 EV
8 External LCD backlight	Display panel illuminates activation. Select activation by backlight button or continuous illumination during metering.
9 Mirror-up hold time	Mirror-up hold time can be set for 30sec, 60sec or unlimited.
10 Bracketing order	Select which order of auto exposure bracket is set. Normal -under - over or three other sequences.
11 Cancel auto bracket	Select how to exit auto bracketing mode.
12 Manual mode bracketing	Select how auto bracketing changes the exposure in manual mode. Choose aperture or shutter speed value
13 Front/Rear dial function exchange in manual mode	Changes front and rear function dials from aperture setting to shutter speed setting and visa versa
14 Rear function dial enabled/disabled	Activates or de-activates rear function dial in AV or Tv modes
15 Dial function direction	Changes direction of dial function value setting. Aperture and shutter speeds can increase or decrease depending on selected dial direction.
16 Program shift	Changes how program mode shifts exposure. Select Av, Tv, Av & Tv, standard program mode or none.
17 AEL & AFL function button exchange	Switches Auto Focus Lock and Auto Exposure Lock button from front button to rear button and visa versa.
18 Half-press shutter release function mode	Changes half-press shutter release function activations from Auto Focus, Auto Exposure, Auto Focus and Exposure or no function activation.
19 AEL function lock/unlock mode	Changes how to lock or unlock Auto Exposure value
20 Focus indicator selection	Changes how to display focus status. Select on, off or only in manual focus mode.
21 Exposure difference in M-mode	Metered value difference as compared to Manual value can be displayed on or off.
22 M mode one-push setting	Auto exposure over-ride correction can be set to shift shutter speed, aperture or none.
23 Bulb exposure time setting	Bulb time can be set for 1min to 60mins or unlimited
24 Bulb shutter release setting	Bulb exposure shutter release can be set to continue hold and release or pressing the shutter release twice.
25 X-mode shutter speed in m-mode	Select default flash sync speed from 1/125 to 1/40 in X-Mode.
26 Automatic sync speed setting	Select default flash sync shutter speed for dedicated 645AFDII flash units. Select 1/125 and slower or 1/60 to 1/125 range in AV or Program mode.
27 TTL flash compensation mode	TTL Flash and Ambient exposure compensation setting. Choose independent or combined correction.
28 AF beam setting	Select enable or disable Auto Focus measuring beam.
29 Copy custom function	Copy custom function profile
30 Custom function reset	Initialize custom function profile
31 Shutter release without film	Enabling and Disabling shutter release with or without film loaded in the film back
32 Auto film loading setting	Auto film loading is activated by either the shutter release or closing the film back door
33 Multiple exposure mode	Multi-exposure mode can be activated by a set number of exposures or by manually turning the mode on/off.
34 Digital back CF configuration	Automatically sets the correct custom function set, when the camera detects a digital back. Choose up to 3 different CF settings or no settings change.
35 Clock/Calendar setting	Sets the internal clock and calendar to the correct setting.
36 Index setting	Select what numerical value to start the indexing numbering at.



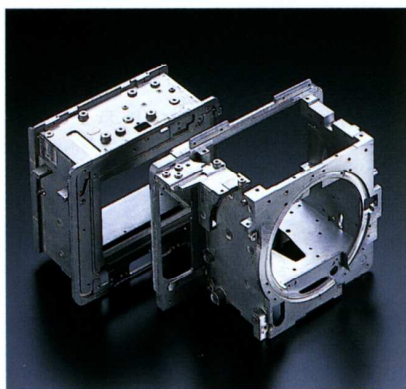
## *Intelligence & Performance*

- Elegantly design yet practically conceived for seamless integration with film and digital capture



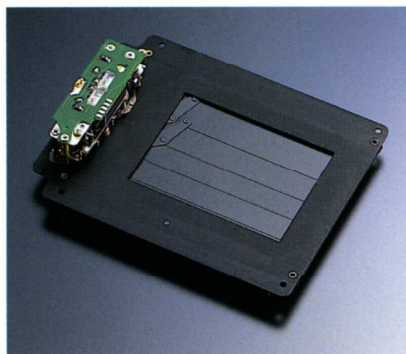
### **Magnesium Alloy viewfinder cover**

The 645AFDII incorporates the finest materials borrowed from its predecessor the 645AF. Utilizing a magnesium alloy cover ensures that the prism and digital circuitry of the viewfinder is protected. In addition to providing secure protection, this magnesium alloy also contributes to the overall compact and lightweight design of the camera. The result is an innovative configuration with a revolutionary and timeless look for today's medium format SLR.



### **Die-cast aluminum body and film back**

The body shell is die-cast from a lightweight, high-strength aluminum alloy. Exceptional precision in machining assures reliable, durable performance even under the harshest working conditions.



### **Super-fast 1/4000-sec shutter speed expands creative potential**

The vertical-travel metal focal plane shutter provides a maximum shutter speed of 1/4000 second. This permits the photographer to employ techniques, from soft-focus portraits using a wide aperture lens to razor-sharp images of even the fastest-moving subjects. The high-speed shutter also allows flash synchronization at a fast 1/125sec. which enables effective application of daylight synchronization and other flash techniques. When the film back is removed, a protective mechanism automatically opens the shutter, and closes it again when the back is replaced, to prevent accidental damages to the shutter.



### **Designed for safe, trouble-free operation**

Full digital controls and self-diagnostic circuitry eliminate problems before they happen. In the event of incorrect settings or battery trouble, the shutter release locks to protect accidental exposure.

- The best of both worlds, film and digital

### **Meeting the needs of professionals Interchangeable film and Digital back system**

Interchangeable film and digital backs offer today's professional a quick, convenient and economical choice of how they capture their image. It also offers them the greatest flexibility to provide what the client needs on demand with the same quality they expect.

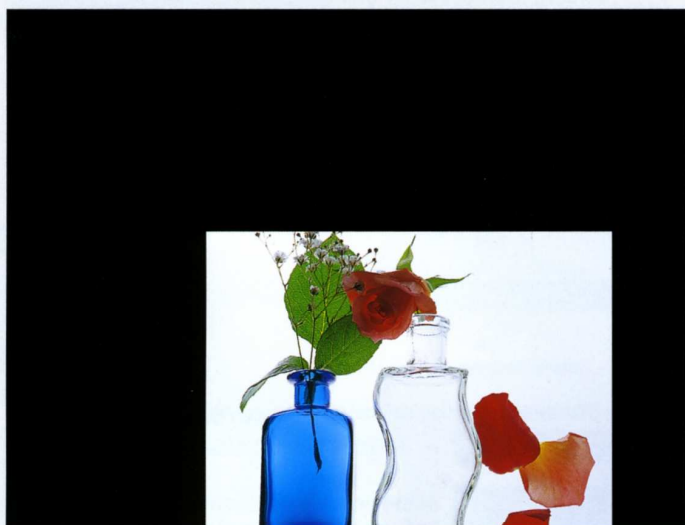






### 120/220 roll film back

The film back incorporates a microprocessor that communicates with the camera body. The back incorporates an LCD panel with ISO setting buttons. It also features an integral center mounted winding motor for smooth quick film winding. The LCD shows film speed, film type, and number of exposures at the touch of a button. A backlight and backup battery even lets the photographer view information when the back is not attached to the camera. Simply rotating the pressure plate 180 degrees switches between 120 and 220 film, and ensures that either type of film is kept perfectly flat. An easy loading feature automatically advances film to the first frame when the film back door is closed or the shutter release is activated depending on Custom Function settings. Film winding automatically activates at the end of 16 frames (120 film) or 32 frames (220 film). In addition mid-roll winding is possible by pressing the rewind button on the film back.



### Polaroid film back

Polaroid film enables a previewing of images. Simply replace the film back with the Polaroid back to obtain immediate feedback on composition, lighting and exposure, as well as the effects of complex lighting conditions, multiple exposure, or extended exposure. The image size is 6 x 4.5cm (Actual image size: 56 x 41.5mm), and the back accepts pull-type Polaroid 100 and 699 Series, as well as Fuji FP100 and FP3000B film. The Polaroid back also includes a film speed dial (ISO25 to 6400), and a storage pocket for the dark slide.

\*The Polaroid Tripod Adapter N or Polaroid Tripod Adapter N-2 is required when the camera is mounted on a tripod.



### Mamiya ZD Back

By simply attaching the Mamiya ZD Back to the 645AFDII body, the professional photographer is automatically equipped with a high resolution 21.3 effective mega pixel digital camera featuring a 48mm x 36mm large CCD. The CCD has a focusing range difference of 1.16 but there is no disruption to the feel of the camera in the switch from film to digital.

- IR Cut Filter (YB401)
- Lithium Ion Battery (PB401)
- Battery Charger (PC401)
- Development Software (Mamiya Digital PhotoStudio)
- Focusing Screen Type A (SV403)
- Protective Cover (KE403)
- Soft Case (KD403)



## Intelligence & Performance

### ■ Faster, precise, enhanced performance



#### Fast, highly precise auto focus

The Mamiya 645AFDII auto focus system operates on a TTL based phase difference detection technology. A high-sensitivity I+I shaped CCD covers a wider focus area to assure precise plane of focus even for subjects incorporating vertical and horizontal lines. The focus area can be switched to normal or spot focus selection.



AF mode switch lever

#### A choice of focus modes to suit the subject

##### Single AF Mode (S)

This mode puts priority on precise focusing at the moment the shutter is released, which is ideal for still subjects. Focus is locked when the viewfinder LCD focus mark lights. AF lock is activated in this mode.

##### Continuous AF Mode (C)

This mode continually adjusts focus even while the shutter release button is being half-pressed. It is best for moving subjects; focus is not locked even when the focus mark lights.

##### Manual Focus Mode (M)

Selecting this mode cancels Auto Focus. The focus symbol ● appears inside the viewfinder on the LCD panel when the image is in focus, and a focus aid feature indicates the rotation direction of the focus ring with ► and ◄ defocus mark.



Metering mode selector

#### Three metering modes provide detailed information about lighting conditions

##### (A) Center-Weighted Averaged Metering

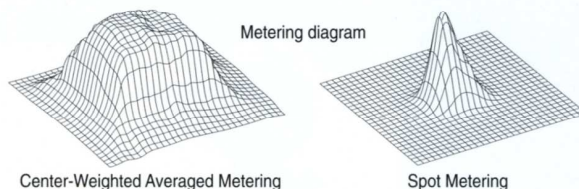
This mode meters the average reflected brightness of the entire image, with emphasis on the center of the screen.

##### (S) Spot Metering

This mode meters reflected light on the image at a specific point, indicated by the circle at the center of the focusing screen. It is optimal for use with high contrast subjects and for measuring brightness at a specific area of the subject.

##### (AUTO A-S) Variable Ratio Metering

This mode automatically switches between average and spot modes depending on the relative contrast within the overall image; it provides exposure settings suited to a wide range of subjects and lighting conditions.



\*The metering mode selector can be locked in every position.



#### Auto-Focus Infrared AF Assist Beam

The Mamiya 645AFDII is a medium format auto-focus camera with a built-in auto-focus assist beam. It goes into effect automatically under poor light and low subject contrast conditions. For sensitive situations such as political events, the AF sub-beam is switchable on/off.



## ■ Real time communication and data imprinting



### Exposure data imprinting records vital information

Apply data imprinting to generate a record of exposure data factors outside the image area. 3 modes are selectable.

DATA mode imprints exposure mode, aperture value, shutter speed, exposure compensation value, bracketing position, metering mode, index (frame) number.

DATE mode records year, month, day, and time, along with an index number.

INDEX mode records 3-digit index numbers from 001 to 999. Index numbers are stored in the camera's memory, and not cleared when a film back is removed. This allows easier record keeping and shoot management when a large numbers of images are created.



### Quick and convenient Custom function settings and modification

#### FUNCTION key, SET button

Customized functions are set by rotating the exposure mode dial to the CF position and selecting the desired custom function with the front dial. Activating or modifying a function is made with the rear dial. Alphabetical letters "A, B, C" represent the storage areas the user can save their customized settings. CF numbers and corresponding contents are displayed in the shutter speed area of the LCD; the aperture area of the panel displays contents to be set, and the exposure compensation area displays numbers representing the customized contents. Default settings or other CF selections can be copied and/or recalled by pressing the "SET" button 1 second.

DATA+INDEX Mode	A	F8.0	1/250	N+0.5E	S	007
	Exposure Mode	Aperture	Shutter Speed	Bracketing Position	Exposure Compensation	Metering Mode Index Number
DATE+INDEX Mode	'01	12	15	10:10		856
	Year	Month	Day	Time		Index Number
INDEX Mode						665
						Index Number

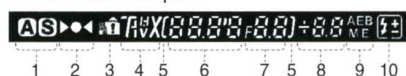
### LCD panels show exposure conditions and camera settings at a glance

A digital data communication system makes it possible to see all information on the body, viewfinder, and film back LCD panels.

The viewfinder display shows information about current exposure conditions. The body and film back displays show current settings and selections, all in an easy-to-understand intuitive format.

External LCD panels on the camera body and film back are illuminated by pressing the Back Light key or selecting continuous illumination during metering mode via the Custom Functions settings.

#### ■ Viewfinder LCD panel



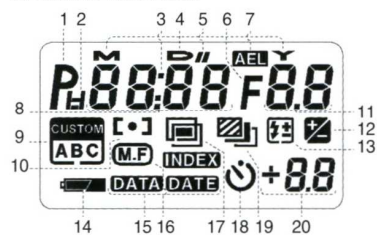
- 1 : Metering mode (A, S, Auto A-S)
  - 2 : AF indicator (defocus, focus, low contrast)
  - 3 : Camera's warning mark  
(ex: incomplete preparations like improper insertion of dark slide)
  - 4 : Exposure mode (program shift mark)
  - 5 : AEL mark (AE lock indicator)
  - 6 : Shutter speed
  - 7 : Aperture value
  - 8 : Exposure compensation value
  - 9 : AEL, multiple exposure mark
  - 10: Flash sync mark (flash compensation mark)
- \* Indicates -no- when dark slide is inserted

#### ■ Film back LCD Panel



- 1 : Film speed
- 2 : Film type
- 3 : Frame counter

#### ■ External LCD Panel



- 1 : Program mark
  - 2 : Program shift mark
  - 3 : Time mark (for clock setting)
  - 4 : M, D, Y mark (for date setting)
  - 5 : Seconds mark (for shutter speed)
  - 6 : F indicator (for identification of F value)
  - 7 : AEL mark (AE lock indicator)
  - 8 : Shutter speed
  - 9 : Custom function mark
  - 10: AF area mark
  - 11: Aperture value
  - 12: Exposure compensation mark
  - 13: Flash compensation value
  - 14: Battery power mark
  - 15: Imprinting mode (date, data, index)
  - 16: Manual focus mark
  - 17: Multiple exposure mark
  - 18: Self-timer mark
  - 19: Auto bracketing mark
  - 20: Exposure compensation value
- \* Indicates -no- when dark slide is inserted



## Intelligence & Performance

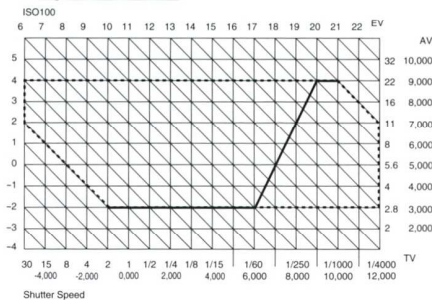
### ■ Less constraints, more freedom in exposure selection



#### (P) Program AE Mode

This mode automatically determines optimal exposure settings, using pre-programmed aperture and shutter values to ensure exposure accuracy under ambient lighting. This mode is ideal for general photography without the need to make adjustments.

Program Shift Chart



#### (Av) Aperture Priority AE Mode

This mode emphasizes the depth-of-field effect of aperture setting on the image.

Simply adjust the aperture value with the digital dial to the appropriate setting, and the camera automatically adjusts shutter speed to match. Aperture values can be set in 1/3 or 1/2 steps. Depth-of-field is checked in the viewfinder by pressing the preview button, in each AE mode.

#### (Tv) Shutter Speed Priority AE Mode

This mode emphasizes the effect of shutter speed on the image. Set the desired shutter speed via the digital dial and the camera automatically adjusts aperture value to match. Shutter speed values can be set in 1/3 or 1/2 steps.

#### (M) Manual Mode

This mode enables the photographer to have total control over both aperture and shutter speed, and is best used to adjust settings based on readings from a separate exposure meter. The rear dial adjusts aperture value while shutter speed is set using the front dial. Both values can be set in 1/3 or 1/2 steps.

The difference between the set value and metered value are displayed on the viewfinder LCD panel. Pressing the AEL button for 1 second will display the shutter speed resulting from the metered value.

The adjustment range is  $\pm 6\text{EV}$ , displayed in 1/3 steps ( $\times 3 / \times 7 / \times 0$ ). In Manual Bulb mode (electronically controlled) extended time exposure is possible.

#### (X) X Mode

This mode locks the shutter speed at the maximum sync speed of 1/125sec. In this position, the dials lock and cannot be rotated. Modifications possible with CF.






## ■ Ensuring perfect image capture with precision automated exposure control

### Auto bracketing for one touch exposure control

Auto bracketing is effective under complex lighting conditions when determining proper exposure settings is difficult, or for shooting with narrow latitude slide films or digital capture. It can be set for 2 to 3 shots per sequence, with normal (metered value), under (minus) and over (plus) exposures adjustment. Changing the order of the exposure adjust is easily selected through the CF mode. The exposure increments can be preset to 0.3, 0.5, 0.7, or 1EV, and auto-bracketing can also be used in combination with the  $\pm 3\text{EV}$  exposure compensation function. Settings are possible in Manual (M) Mode and in any AE mode.



### $\pm 3\text{EV}$ exposure compensation

The 645AFDII offers exposure compensation to provide photographers with the ability to enhance creativity. In electronic dial position , adjustments can be made with the rear dials. In electronic dial position, compensation values can be adjusted in 1/3, 1/2, 2/3 and 1/ EV.



$\pm 0$



-0.7



+0.7



## *Intelligence & Performance*

### ■ TTL flash metering and lighting control



TTL flash sensor measures flash exposure off the film plane

#### Sophisticated TTL Flash Control

The Mamiya 645AFDII incorporates automated TTL-OTF (through the lens/off-the-film) flash control, with an X-sync hot shoe and dedicated circuitry.

The flash system is compatible with the Metz SCA3002 System, which provides exceptional flash control.

Using a Metz flash with the SCA3952 adapter enables transfer of aperture, film speed and other data for automated synchronization as well as power zoom control link and automatic operation of the Auto Focus measuring beam.

In AE modes "AV" and "P", the shutter speed is automatically set to 1/125sec. or slower.

All this technology provides versatile flash photography capability.

Furthermore, the SET button allows individual exposure compensation of flash and ambient light.

Recommended flashguns:  
Metz Mecablitz 70MZ-5, 54MZ-4i

#### Advanced Flash Features

- Flash ready indicator in camera viewfinder
- Correct exposure confirmation in viewfinder
- Auto flash sync speed control (only in P and Av mode)
- TTL flash control
- Cordless TTL with Metz compatible flash units
- Motor zoom control
- AF assist beam control
- Auto Transfer of ISO
- Auto Transfer of lens aperture
- Flash compensation +/-3EV
- Flash bracketing in flash auto mode with compatible Metz flash unit
- Program auto flash mode
- Exposure compensation transfer
- Wake-up function for camera/flash

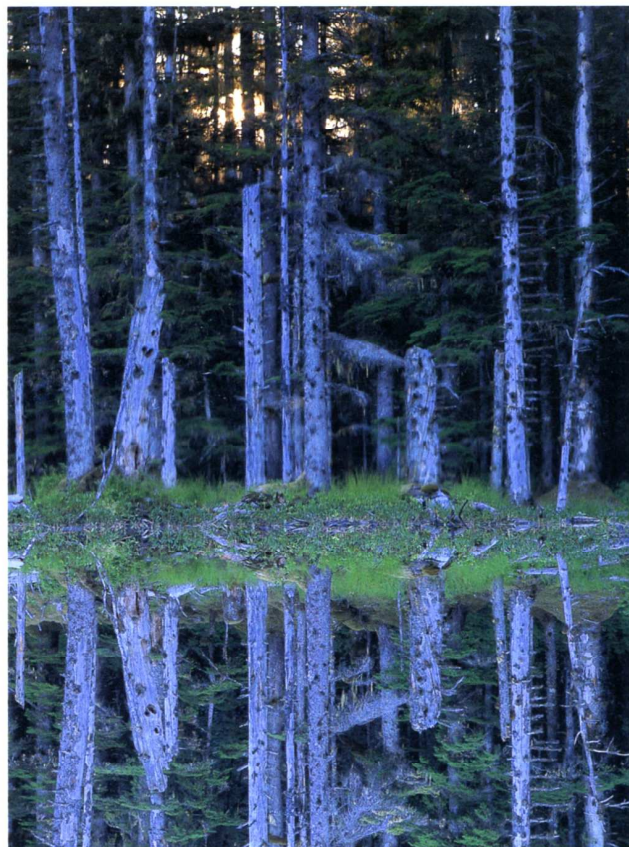
Note: Some Metz flash units do not support all features.



#### Flash status viewfinder display

When the flash unit is connected and achieves full power, the viewfinder LCD displays the flash charge mark. This symbol flashes after each shot to indicate that the flash made a correct exposure.

\*When using the SCA3952 adapter



## ■ Performance in every detail of photography



AF 35mm f/3.5

### One-touch multiple exposure activation

Enter Multi Exposure Mode by pressing the dedicated button, then set the desired number of exposures in a range of 2 to 6 with the digital control dial. Digital cancellation of film winding assures precise registration of multiple images on a single frame.

### Self-timer

The MODE button can be used to change the initial default self-timer setting of 10 seconds to a value in the range of 2 to 60 seconds.

Settings can be made in 1-second steps from 2 to 10 seconds, and in 10-second steps for settings longer than 10 seconds.

### Preview Depth of Field

Hold down the preview button to stop down the lens to the working aperture. Preview can be used in all exposure modes.

### Mirror Up

The 645AFDII is designed and engineered to minimize mirror vibration. The Mirror Up function eliminates the shock entirely during tripod-mounted slow speed, macro or multiple exposures. Use AE lock or manual settings in this mode.

### Diopter adjusts Viewfinder to Vision

The built-in diopter enables adjustment of the viewfinder image to suit individual vision. Rotate the dial towards + or - to adjust within a range of -2.5 to +0.5 diopter. Optionally available diopter lenses extend this range to -5 to -2 or 0 to +3.

### Eyepiece Shutter

The eyepiece shutter protects against stray back light entering through the eyepiece and affecting exposure values.

### Electronic Shutter and Remote Triggering Connection

For long exposures such as bulb or slow shutter speeds, use of the electronic shutter release cable avoids camera vibration.

(Available cord length in 1m (3ft.) or 5m (17ft.). Wireless remote triggering possible with radio triggering system)

### Interchangeable Focusing Screens

Select the viewfinder screen that suits your particular photographic needs. Each screen comes with a tweezers for safe, quick and easy installation.

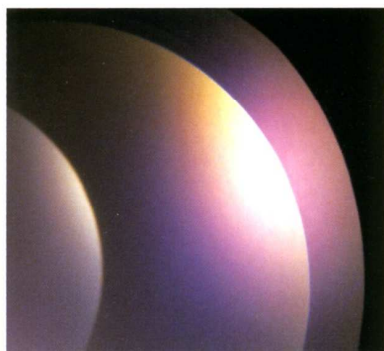
### Powered by AA-size Batteries

The Mamiya 645AFDII is powered by six easily obtainable AA-size batteries, and can also use low temperature resistant, long-life lithium batteries. Batteries are housed in the grip.



## Intelligence & Performance

### ■ Advanced optical designs coupled with precise digital control provide unmatched image performance



The world's most stringent quality control is applied at each phase of the design and manufacture of these optics – especially for glass material control, polishing and coating – and in the precision machining of metal parts.



AF 35mm f/3.5

### Wide Angle

#### SEKOR AF 28mm F4.5D Aspherical Lens

With an angle of view of 102 degrees, this aspherical lens is equivalent to the 17mm wide angle lens in the 35mm format. It has been developed to ensure superior image quality of high contrast from infinity to a 35cm minimum focusing distance. This long depth of field renders it possible to produce unique optical displays of perspective in a variety of photographic scenes, especially landscapes and architectural images. With a one-touch action moving the focusing ring back or forward, AF and MF functions are easily selected.



#### AF 35mm f/3.5

With an angle of view of 90 degrees, this is a wide-angle lens approximately equivalent to a 20mm lens in 35mm format. The built-in floating mechanism provides the photographer with the ability to obtain images with high contrast and quality from infinity to 14" minimum focusing distance. This lens is perfect for landscapes where maximum depth-of-field is required. Furthermore, the lens itself is equipped with an Auto/Manual focus switching ring, allowing one touch selection of Auto or Manual focus.

	AF 28mm f/4.5	AF 35mm f/3.5	AF 45mm f/2.8	AF 55mm f/2.8	AF 80mm f/2.8	AF 150mm f/3.5
Optical Construction	14 elements 10 groups	9 elements 7 groups	9 elements 7 groups	7 elements 6 groups	6 elements 5 groups	5 elements 5 groups
Angle of View	102 degrees	90 degrees	74 degrees	64 degrees	47 degrees	26 degrees
Minimum aperture	32	22	22	22	22	32
Diaphragm	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Focusing System		Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual
Minimum Focusing Distance	35cm	35cm	45cm	45cm	70cm	150cm
Maximum Magnification Ratio	0.15	0.156	0.13	0.18	0.15	0.12
Area Covered	319X239mm	274X375mm	310X418mm	226X305mm	279X377mm	341X461mm
Equivalent Focal Length for 35mm	17mm	22mm	29mm	34mm	50mm	93mm
Filter Diameter	AAAAAAA	77mm	67mm	58mm	58mm	58mm
Lens Hood	Built-in	Bayonet	Bayonet	Bayonet	Bayonet	Bayonet
Dimensions (length x diameter)	136X90mm	62X84mm	73.5X77mm	65.5X77mm	49.5X77mm	80.5X79mm
Weight	886g(00oz.)	480g(17oz.)	495g(17.5oz.)	445g(15.7oz.)	300g(10.6oz.)	540g(19oz.)



AF 55mm f/2.8

**AF 45mm f/2.8**

With an angle of view of 74 degrees, this lens is approximately equivalent to a 29mm lens in 35mm format. Its wide angle of view and depth of field makes the lens appropriate for any situation, from snapshots to scenics. Low-dispersion glass minimizes chromatic aberration. A floating mechanism lends uniformity to image resolution, from center to periphery. This lens is also suitable to architectural photography and other subjects dominated by straight lines, and it offers sharp and crisp image rendering.



**AF 55mm f/2.8**

With an angle of view of 64 degrees, this lens is approximately equivalent to a 35mm lens in 35mm format. With minimal perspective change, it produces the most natural image of all the wide-angle lenses. A floating mechanism improves resolution at the periphery in close-ups, for image sharpness all the way out to infinity. This lens is suitable for a wide range of situations, from general photography to scenics. It is designed to provide the feel of a standard lens with a slight wide-angle effect.



AF ULD 210mm f/4 IF	AF APO 300mm f/4.5 IF	Zoom AF 55-110mm f/4.5	Zoom AF 75-150mm f/4.5	Zoom AF ULD 105-210mm f/4.5	Macro MF 120mm f/4
7 elements 5 groups	8 elements 8 groups	11 elements 10 groups	11 elements 10 groups	13 elements 11 groups	9 elements 8 groups
19 degrees	14 degrees	65 ~ 35 degrees	50 ~ 26 degrees	36 ~ 19 degrees	33 degrees
32	32	32	32	32	32
Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Auto / Manual	Auto / Manual	Auto / Manual		Auto / Manual	Manual
200cm	300cm	150cm	100cm	150cm	40cm
0.13	0.11	0.04 ~ 0.08	0.11	0.09 ~ 0.18	1.00
332×448mm	371×500mm	55mm +986×1331mm 110mm +520×702mm	75mm +545×409mm 150mm +293×220mm	105mm +441×595mm 210mm +230×312mm	42×56mm
128mm	182mm	34 ~ 68mm	47 ~ 93mm	65 ~ 130mm	73mm
58mm	77mm	67mm	77mm	58mm	67mm
Built-in	Built-in	Bayonet	Bayonet	Bayonet	Bayonet
141×86mm	213×99mm	110×86.5mm	145×86mm	158×82mm	111×83mm
750g(26.5oz.)	1,430g (50.4oz.) (with lens holder)	870g(30.7oz.)	1,140g(00.0oz.)	990g (35oz.)	845g(30oz.)



## *Intelligence & Performance*



AF 150mm f/3.5

### Standard & Telephoto

#### **AF 80mm f/2.8**

With an angle of view of 47 degrees, this lens is equivalent to a 50mm lens in 35mm format. This is the standard lens for the format, with a field of view approximating natural human sight. It is the most general-purpose lens in the series, and works well in various applications for close or distant subjects. Packing high performance into a compact, lightweight configuration, it is well corrected for distortion, producing a natural, well-balanced image.



#### **AF 150mm f/3.5**

This medium telephoto lens has a 26 degree angle of view, approximately equivalent to a 93mm lens in the 35mm format, a focal length perfect for portraits or scenery combined with a compact configuration for general versatility. This is the first AF medium telephoto lens that offers a quick select ring for auto or manual focus. The ring does not rotate in AF mode, to assure focusing accuracy.







AF ULD 210mm f/4 IF



AF APO 300mm f/4.5 IF



#### AF ULD 210mm f/4 IF

With an angle of view of 19 degrees, this lens is approximately equivalent to a 128mm lens in 35mm format. Its natural focusing effect suppresses the compression typical of telephotos while still isolating the subject.

Excellent for a wide range of situations, and particularly for portraits. Super low-dispersion glass assures good contrast even for close-ups.

The internal focusing mechanism makes handling easier, with no change in the balance between overall lens length and weight.



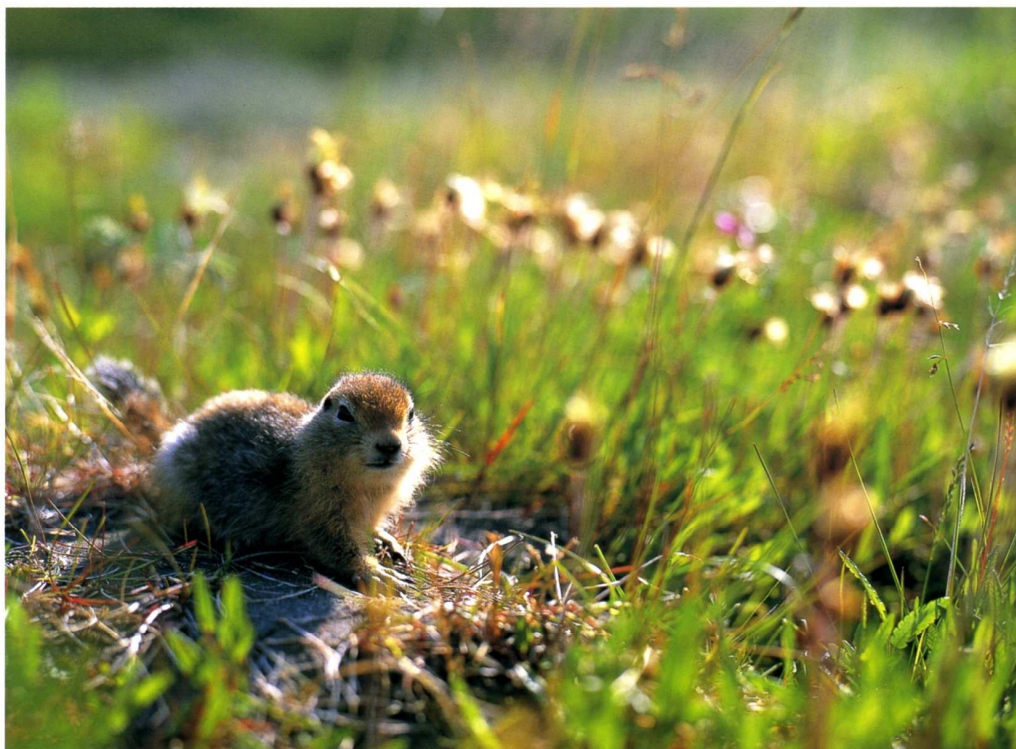
#### AF APO 300mm f/4.5 IF

With an angle of view of 14 degrees, this lens is approximately equivalent to a 182mm lens in 35mm format.

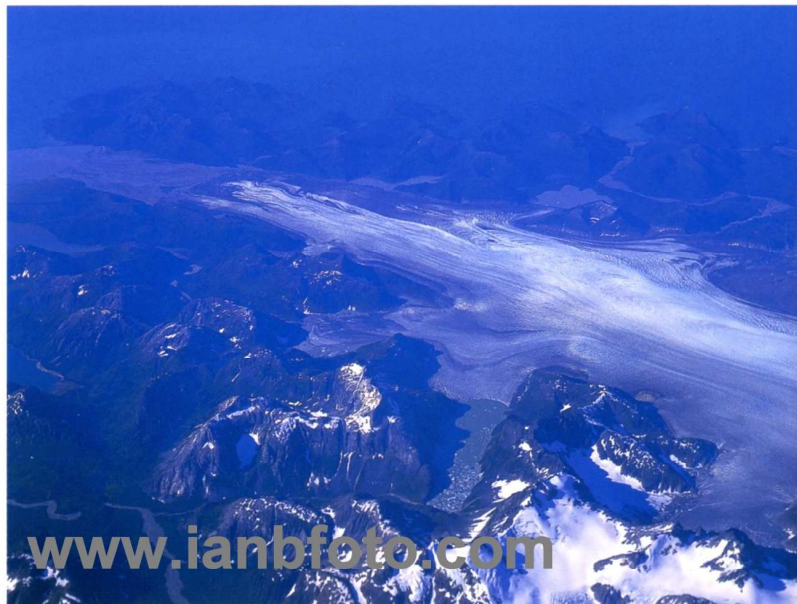
Superb correction of color and spherical aberration enables a clear, high-contrast image from center to periphery. The APO design lens gives exceptional resolution along with sharp colors and tonal fidelity. The internal focusing mechanism keeps balance uniform from front to back, making this lens extremely easy to handle.



## *Intelligence & Performance*



Zoom AF ULD 105-210mm f/4.5



Zoom AF 55-110mm f/4.5

### **Zoom & Macro**



#### **Zoom AF 55-110mm f/4.5**

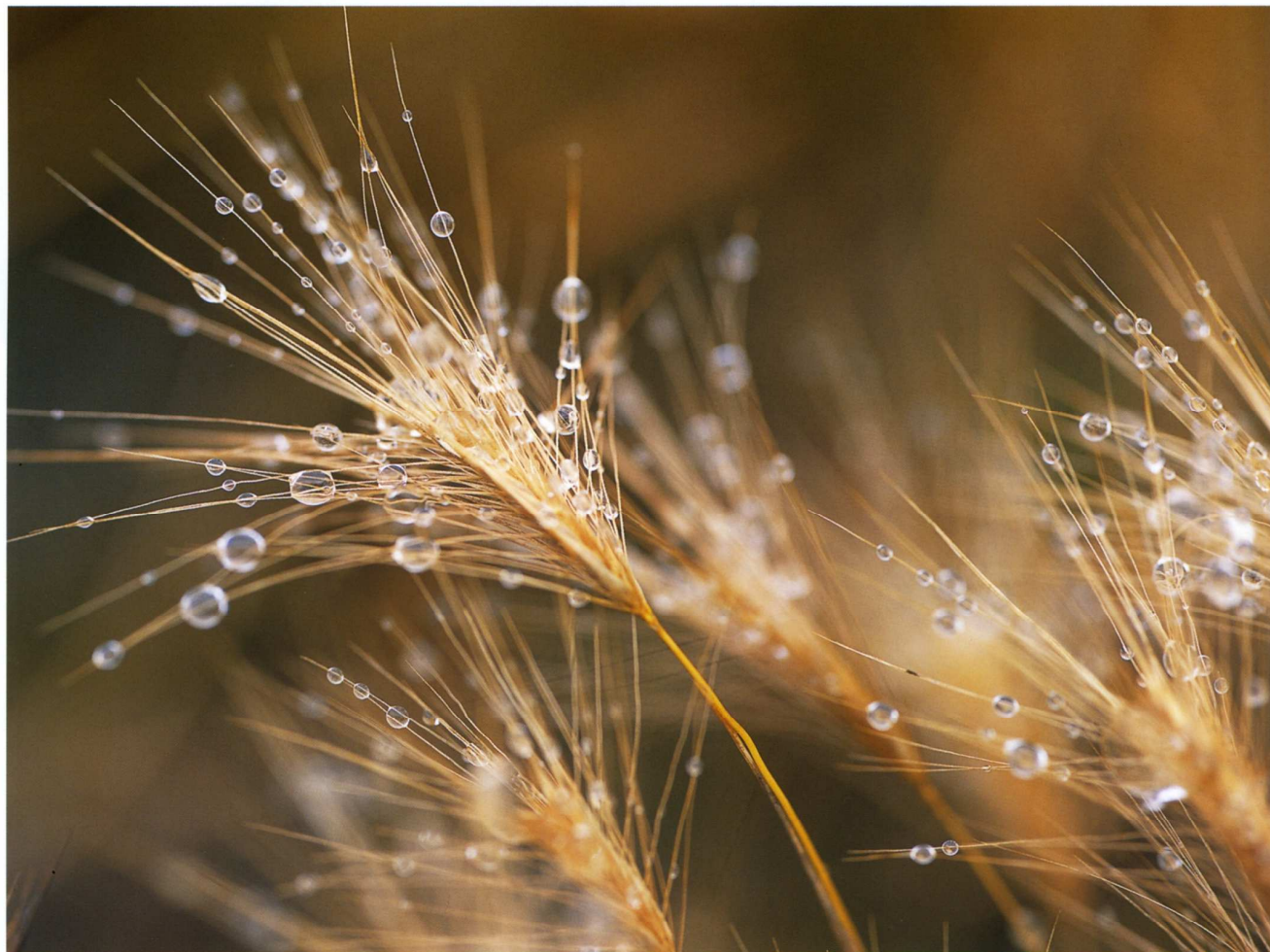
With an angle of view ranging from 65 to 35 degrees, combined with auto-focused and zoom capability, this lens can serve triple duty over the focal lengths of wide/normal/portrait and is equivalent to 34-68mm in the 35mm format. Internal focusing eliminates the risk of vignetting when combined with front-element filters, and a unique "flower" design lens hood prevents stray reflections from striking the lens surface.



#### **Zoom AF ULD 105-210mm f/4.5**

With an angle of view ranging from 36 to 19 degrees, equivalent to the 65-130mm focal lengths in the 35mm format, this medium-telephoto zoom lens has the reach to capture distant subjects and the versatility to work in close when needed. It is an ideal choice for all-purpose photography. Low dispersion glass lens elements provides excellent resolution of fine detail. The internal focusing mechanism allows use of front filters with no degradation of image quality.





Macro MF 120mm f/4



#### SEKOR AF 75-150mm F4.5D

This lens is equivalent to the 47-93mm standard to medium telephoto lens in the 35mm format. Its comparatively short minimum focusing distance of 1 meter and 50-26 degree angle of view render this zoom lens capable of a variety of common scenarios, ranging from snap shots to portrait photography. For a high shield effect in the entire zooming range, the lens comes with a floral shaped lens hood.



#### Macro MF 120mm f/4

With an angle of view of 33 degrees this versatile lens offers the perspective of a 73mm focal length in the 35mm format, ideal for portraiture, landscapes or general photography. Pinpoint sharpness with manual focus is assured from infinity to 1:1 magnification by a green diode in the finder providing focus confirmation. Lens elements of anomalous dispersion glass equalling APO lens performance in terms of contrast, resolution and correction of color aberrations are utilized for superior image reproduction. A floating mechanism assures uniform sharpness from center to the corners.



## Intelligence & Performance

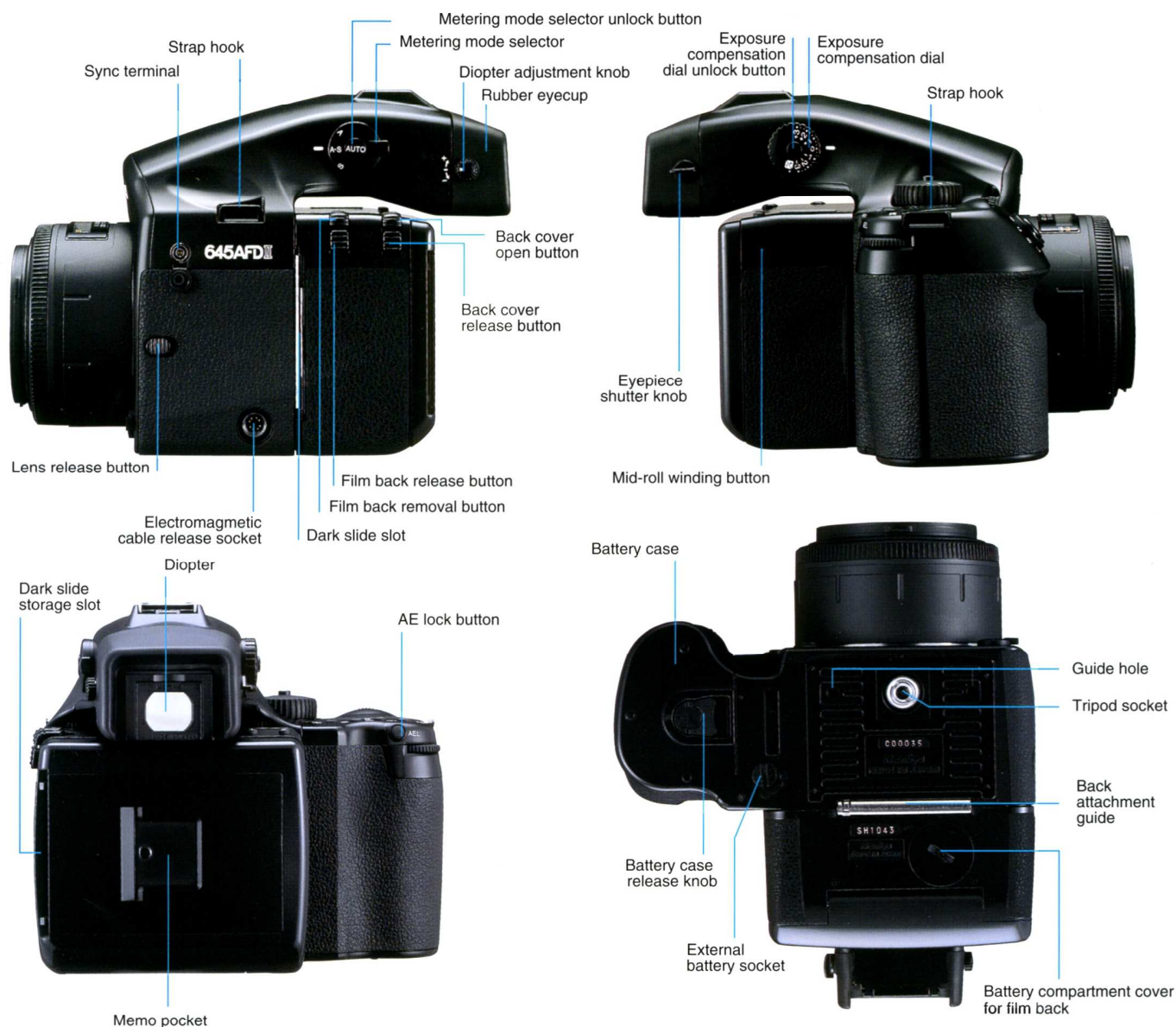
### Parts Names and Body Specifications



### Mamiya 645AFDII Specifications

Camera Type	6 × 4.5cm format, electronically controlled focal-plane shutter, TTL multiple mode AE, AF single lens reflex	AF infrared beam	Activates automatically under low light, low contrast. Range: about 9m; automatic switching to flash unit 's built-in infrared beam when Metz flash unit is attached (ON, OFF selectable)
Actual Image Size	56 × 41.5mm	AF Lock	With AFL button or half-press shutter release button in focus S mode
Film Type	120 roll film (16 exposures); 220 roll film (32 exposures); Polaroid Land Film back (requires special HP402 back)	Exposure Modes	Aperture-priority AE, Shutter-priority AE, Programmed AE, Manual
Lens Mount	Mamiya 645AF Mount, compatible with M645 mount (manual focus, focus aid, stop-down exposure metering)	Shutter speed / Aperture steps	Shutter speed and aperture both can be set in 1/3, 1/2 steps; electronic dial lock
Viewfinder	Fixed prism viewfinder magnification x0.71; built-in diopter adjustment (-2.5 to +0.5, optional diopter lenses provide adjustment ranges of -5 to -2 diopter and 0 to +3 diopter); built-in eye-piece shutter	Metering Mode	TTL metering; Center-weighted average (A), Spot(S), Variable ratio (auto A-S) EV 2 to EV 19 (with ISO 100 film, F2.8 lens)
Focusing Screen	Interchangeable between Matte (standard) and Checker and manual focus microprism for M645 lenses	Metering Range	+/-3EV or ± 5EV (1/3, 1/2, 2/3, 1/1 steps)
Field of View	94%(*) of actual image	Exposure compensation	ISO 25 to 6400
Viewfinder Information	Focus mark, defocus mark, aperture value, shutter speed, metering mode (A, S, A-S AUTO), exposure compensation value (difference between set value and metered value), bracketing position, flash charge completion mark, AE lock	Film speed AE lock	With AEL button; cancelled by re-pressing or power switch off.
		Shutter speed AE	Electronically controlled vertical metal focal-plane shutter Shutter speed AE : 30 to 1/4000sec. (1/8step), Manual : 30 to 1/4000sec., B(Bulb), X Automatic shutter curtain retraction

(\*)This information is based on a linear (horizontal/vertical) measurement.



	(to protect the shutter when film back is detached)		
Auto-Bracketing	Enabled with auto bracketing button, 0.3, 0.5, 0.7, 1-step units	Data Imprinting	7 segment dot matrix, ON/OFF selectable DATA mode : exposure mode, aperture value, shutter speed, exposure compensation, bracketing position, metering mode, ID number DATE mode : year, month, date, time, ID number INDEX mode : ID number only
Flash Synchronization	1/125sec. in X mode. Automatically sets to 1/125sec. or slower in M, Tv modes and 1/60~1/125sec. in P, Av modes when using TTL flash control. X synchronized speed can be customized.	Sync terminal	X contact (sync speed 1/125sec.)
Flash control	TTL direct metering, supports Metz SCA3002 system (with SCA3952 Adapter)	Cable release socket	On shutter button
Film transport	Automatic via built-in motor, single or continuous exposures	Remote-control terminal	On side of body; electromagnetic cable release
Film loading	Automatic advance to first frame (Easy loading)	Self-Timer	Possible with shutter release selector 2 to 60sec.
Multiple Exposure	Enabled with multiple exposure button (2 to 6 exposures) or unlimited	Depth-of-field confirmation	Possible with preview button
External LCD	On camera body: program mark, time mark, M,D,Y mark, aperture value, shutter speed, AF area mark, exposure compensation mark, battery power mark, auto bracketing mark, etc. On film Back: ISO speed, type of film (120/220), exposure number	Tripod Socket	U 1/4 inch and U 3/8 included
		Power Requirements	6 AA-size batteries (alkaline-magnesium, lithium)
		Size(w/ AF 80mm f/2.8 and 120/220 film back)	153(W)×128(H)×184(D)mm 6"(W)×5"(H)×7"(D)
		Weight	1,730g(w/o battery)(61 ounces)

Specifications are subjects to change without notice.



## Intelligence & Performance

### ■ System accessories provide the tools for versatile photographic expression



#### Magnifier FD402

This magnifying eyepiece enables precise focusing for macro and telephotography by magnifying the center of the viewfinder image to twice normal size. After focusing, it can be flipped up without detaching to confirm overall composition. Weight: 46g(1.6oz.)

#### Angle Finder FA401

The Angle Finder enables confirmation of image composition from a comfortable posture for low-angle, macro, and other situations. It can be rotated a full 360 degrees (for easy viewing from any angle. Weight: 140g(5oz.)

#### Auto Bellows NC401

This high-precision macro accessory enables continuous adjustment of magnification ratio for precision manual focusing.

A data cable transmits diaphragm information to the lens mount, enabling use of aperture priority AE mode or exposure confirmation in manual mode. The AF 80mm lens reverse ring allows reproduction at magnifications greater than 1:1 with minimal aberration over a range of 0.75 to 2.20 times with the AF 80mm f/2.8 lens. The camera mount can be rotated 90 degrees (for simple selection of vertical/horizontal composition. The upper and lower rails can be used in combination at a right angle, enabling the auto bellows to shift horizontally and enable reproduction of vertical images at the same magnification ratio. Weight: 1,340g(47oz.)

#### Remote Control Set RS402

The remote control set takes full advantage of the automated functions of the 645AFDII, opening the way to a new world of remote control photography. The wireless unit operates via near-infrared impulses transmitted to a receiver that attaches to the camera. Wireless operation is possible from up to 100ft. outdoors; 3-channel switching eliminates signal interference. Power Requirements:

Transmitter: Two AA-size alkaline batteries

Receiver: One S-006P 9V zinc-carbon battery

Weight:

Transmitter: 130g(4.6oz.) (without batteries)

Receiver: 140g(5oz.) (without batteries)

#### Magnetic Cable Release RE401 (1m)/RE402 (5m)

Connects to the camera's electronic shutter release, and provides vibration free operation.

RE401 comes with a 1-meter (3ft.) spiral cord; the RE402 comes with a 5-meter (17ft.) straight cord.

Weight: RE401 = 50g(1.8oz.), RE402 = 80g(3oz.)

#### Auto Extension Rings

NA401 (No.1)/NA402 (No.2)/NA403 (No.3)

This set of macro extension rings supports the automatic diaphragm capabilities of the AF lens series. AF operation using focus marks is possible in manual mode. Rings are available in three lengths (No. 1, No. 2, No. 3), which can be used to achieve the desired magnification ratio.

Using all three rings with the 80mm lens provides maximum magnification of 1:1. Optimal Lens: AF 80mm f/2.8  
Weight: No.1 = 95g(3.4oz.), No.2 = 125g(4.4oz.), No.3 = 155g(5.5oz.)

#### External Battery Case PE401

This case protects against deterioration of battery capacity and performance when shooting in extreme cold. Insert the battery into the case, which can then be placed inside a pocket; a cord from the case to the camera provides power for camera operations. Holds six AA-size batteries. Weight: 115g(4oz.)

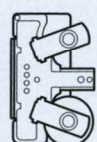
#### SCA3952 Adapter (Metz Strobe)

This adapter is designed for use in combination with a SCA3002 Flash System strobe. It provides various useful features, including TTL direct flash control and a power zoom function that automatically matches the coverage angle to the focal length of the lens. Use of the SCA300 System strobe's requires a separately SCA3000C converter cable. Weight: 38g(1.3oz.)

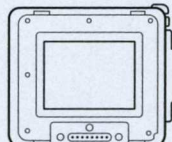


# Mamiya 645AFDII System

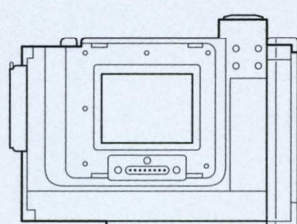
## Film Backs



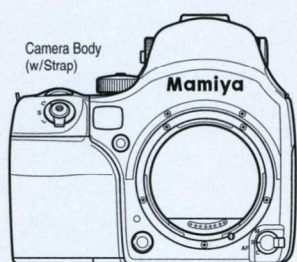
120/220 Roll Film Insert IN401



120/220 Roll Film back HM401



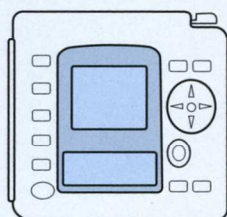
Polaroid Film Back HP402



Camera Body (w/Strap)

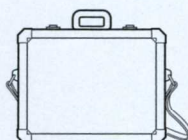
Mamiya

## Digital Camera Back



Mamiya ZD Back

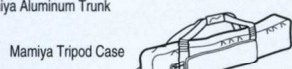
## Cases/Strap



Mamiya Aluminum Trunk



Soft Lens Case type A  
type B  
type D



Mamiya Tripod Case

## Mamiya Aluminum Trunk

Model No.	Outside:WxDxH mm	Weight kg
	Inside:WxDxH mm	
KM706	502x371x183	4.9
	470x350x115	
KM707	615x371x183	5.7
	580x350x115	

## Viewfinder Equipment



Eye Correction Lens DE401



Eye Correction Lens DE402



Eye Correction Lens DE403



Focusing Screen Type A(Matte) SA402



Focusing Screen Type A4(Checker) SD402



Focusing Screen Type C(Microprism)



Focusing Screen SA403 Type A4



Focusing Screen SV403 Type A

## Close-up Equipment



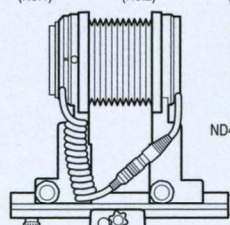
Auto Extension Ring NA401 (No.1)



Auto Extension Ring NA402 (No.2)



Auto Extension Ring NA403 (No.3)

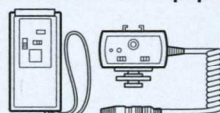


Auto Bellows NC 401 (with Reverse Ring)

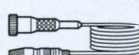


ND401(58)

## Remote Control Equipment



Remote Control Set RS402



Electro-Magnetic Cable Release RE402(5m)

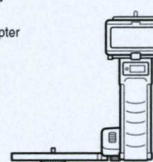


Electro-Magnetic Cable Release RE401(1m)

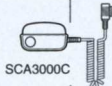
## Flash Equipment



SCA 3952 Adapter



SCA3002



SCA3000C



SCA300 60CT-4 45CL-4

## Body Accessories



Quick-shoe AQ701

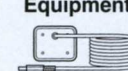


Tripod Adapter N for Polaroid Pack Film Holder



Tripod Adapter N-2 for Polaroid Pack Film Holder

## External Power Equipment



External Battery Case PE401

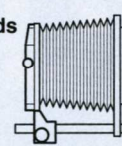


2X Magnifier/Diopter FD402



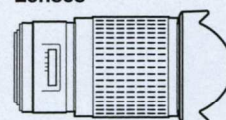
Angle Finder FA401

## Hoods

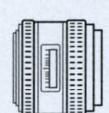


Bellows Lens Hood

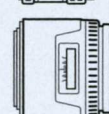
## Lenses



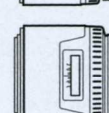
AF 28mm f/4.5D



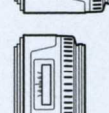
AF 35mm f/3.5



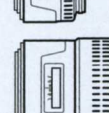
AF 45mm f/2.8



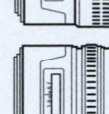
AF 55mm f/2.8



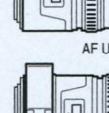
AF 80mm f/2.8



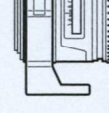
AF 150mm f/3.5



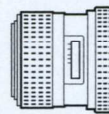
AF ULD 210mm f/4 IF



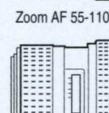
AF APO 300mm f/4.5 IF



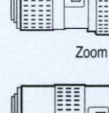
Zoom AF 55-110mm f/4.5



Zoom AF 75-150mm f/4.5D



Zoom AF ULD 105-210mm f/4.5



Macro MF 120mm f/4

Wide-angle

Normal

Telephoto

Zoom

Macro

Interchangeable lens and film back systems expand the systems' capability.  
Mamiya 645 NON-AF Series lenses are compatible with Focus Aid, in manual mode.



# Mamiya 645AFDII

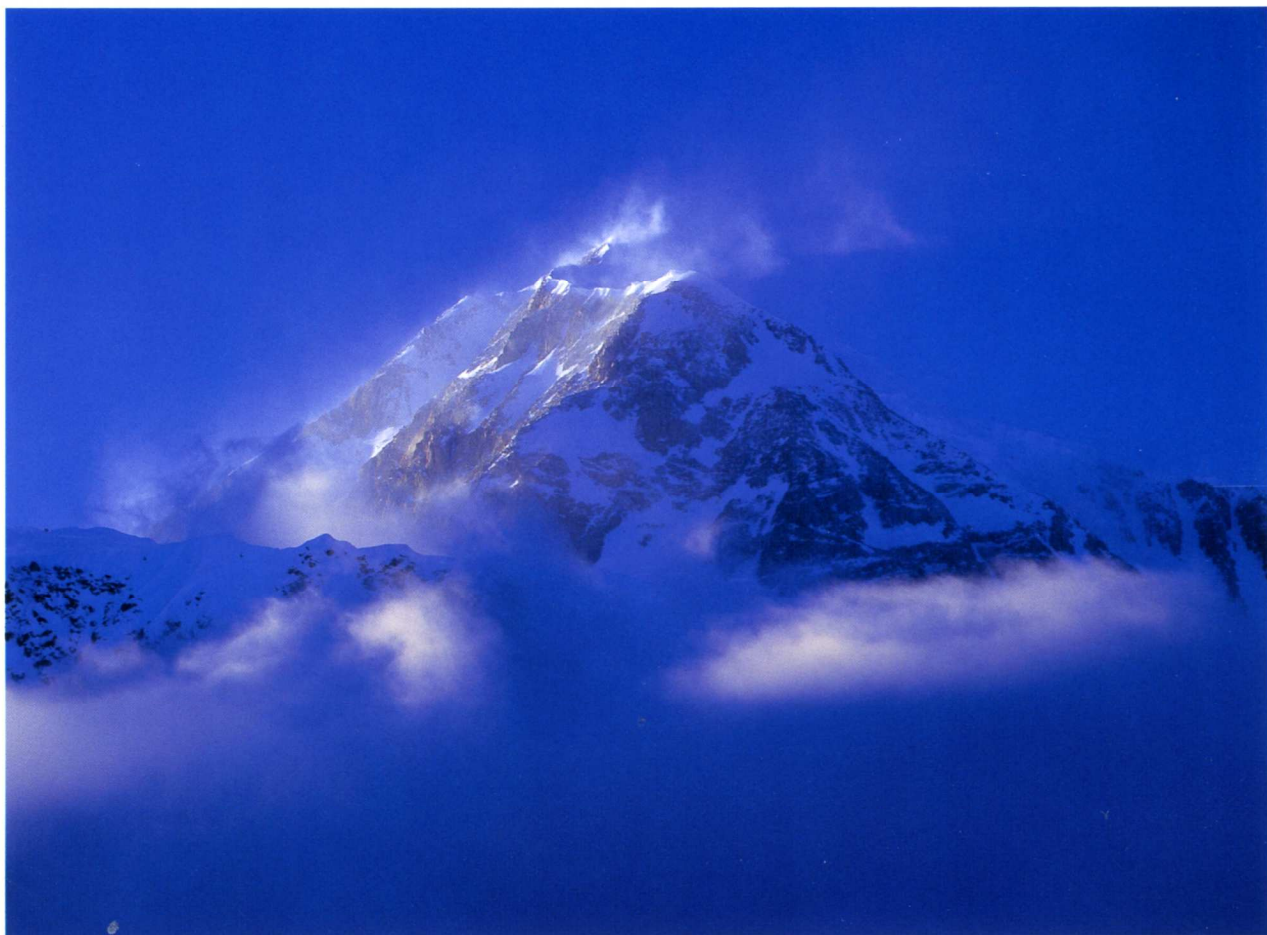


Photo by Toru Sonohara

AF ULD 210mm F4 IF