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# 645 PRO

Mamiya



*Butkefong*



HANDY POCKET GUIDE

## Your Handy Pocket Reference

This pocket guide to the "Mamiya 645 PRO" is a condensed user's manual which briefly explains the major features and basic operations of the camera. References on identifying the various LED displays (which "illuminate" or "blink") in the viewfinder and procedures to load the film are included. Additional general photographic information and steps to take for trouble shooting may also be of help to you.

This handy pocket guide should be your constant companion.

**This is not an instruction manual. So, please refer to the larger manual for detailed answers to specific questions.**

### 1 Aperture Ring Coupling Pin

When the lens has been mounted, make sure that the Aperture Coupling Pin of the camera engages the notch on the Aperture Ring of the lens.

### 2 Shutter Release Selector

When setting the selector to red dot ●, the Shutter Release Button is locked. Set it to the white square □ position for normal photography. When set to the yellow clock symbol, the self-timer will be actuated.

### 3 Shutter Release Button

### 4 Battery Check Button

### 5 Lens Release Button

### 6 Mirror Lock-up Lever



### 7 Focusing Screen

Various types of interchangeable focusing screens can be used.

### 8 Shutter Speed Dial

At the A or AEL position, automatic exposures can be made with the AE Prism Finder.

### 9 Shutter Speed Dial Lock Release Button

To unlock the Shutter Speed Dial Lock when it is in the A or AEL position, turn the dial while pressing down on this button.

### 10 Film Advance Crank AC401

To mount the Power Drive Grip, simply detach the Film Advance Crank.

### 11 Multiple Exposure Lever



# Assembling the system

## 1 Film Holders



### Attaching the film holder

Securely position the bottom coupler **2** of the holder so that it aligns with the Film Holder Mounting Bracket **1** on the camera body, as shown by the arrows.

### Removing the film holder

To remove the holder, insert the Dark Slide between the white guide lines **1**, and then push the button **3** while pressing down on the button **2**.

## 2 Lenses



### Removing the lens

Turn the lens in the direction of the arrow while pressing the Lens Release Button.

Please note:  
The Front Body Cap is removed just like a lens.



### Attaching the lens

Make sure the Aperture Coupling Pin **1** is all the way to the left. Align the red Lens Alignment Dot with the red Camera Alignment Dot. Then turn the lens in the direction of the arrow until it clicks and locks into place.

### 3 Film Advance Crank Power Drive Grip



To detach the Film Advance Crank from the camera body, turn the Lock Release Lever on its bottom in the direction of the arrow. To attach the Crank to the camera body, turn the Lock Release Lever in the opposite direction of the arrow.



To attach the grip, set the Multiple Exposure Lever on the camera to the white square □ and push the grip locking lever downward. To detach, push the lever upward while at the same time pressing the blue button in.

### 4 Prism Finder



#### Attaching the Finder

Insert the front Finder Mounting Latch ② into the side body slot ①, and press the finder down until the rear latch securely locks.



#### Removing the Finder

Hold the Finder Lock Release Button in while pushing down on the button ▼ on the opposite side of the finder.

# Loading Roll Film



Pull the Roll Film Insert out of the film holder.  
Open the Spool Stud and load film in order of 1 to 4.

— **Film has been loaded correctly if the curled black paper faces out** —  
(Please see page 18 of the 645 PRO instructions for complete details)



# A Quik Guide to AE Photography (with AE Prism Finder)

1



Be sure to set the ISO dial on the film holder to the correct film speed.

2



Select "A" (auto aperture) on the lens.

3



Set the Shutter Speed Dial to "A".

4



Select any of the following metering modes on the finder.

## Film Speed Index of film holder (ISO)

25 • • 50 • • 100 • • 200 • • 400 • • 800 • • 1600 • • 3200 • • 6400  
(32) (40) (64) (80) (125) (160) (250) (320) (500) (640) (1000) (1250) (2000) (25000) (4000) (5000)

**AV** (average metering)  
**SP** (spot metering)  
**AUTO A-S**  
(AV/SP metering)

## AE photography

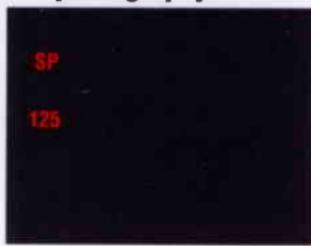


Correct speed **Illuminates**



Correct speed  
When two shutter speeds illuminate in the viewfinder, an intermediate speed is selected.

## AEL photography



Lock speed **Illuminates**



## Intermediate Speeds (Reference)

Shutter speed	Intermediate speed
1/1000 sec.	
	1/720 sec.
1/500	1/360
1/250	1/180
1/125	1/90
1/60	1/45
1/30	1/22
1/15	1/11
1/8	1/5.6
1/4	1/2.8
1/2	1/1.4
1	

★No LED display in the viewfinder.

## Manual exposure photography



Set speed **Illuminates**

Correct speed **Blinks**



Set speed **Illuminates**  
Correct speed 1/45 sec.

**Over exposure** Quickly **Blinks**



**Battery low AE** Slowly **Blinks**



**LT** (Long time) **Illuminates**



**Under exposure** Quickly **Blinks**



**Manual** Slowly **Blinks**



**This dark slide inserted  
Shutter be not cocked**

Slowly **Blinks**

- Display modes blink in both the AE and manual modes.



**Bulb (B)  
photography** **Illuminates**



- When the AE Prism Finder is used with 300mm f/5.6 C (old type) lens, be sure to compensate the exposure  $-1 \frac{1}{3}$  EV by rotating the Exposure Compensation Dial. If the exposure is not compensated, a correct metering value cannot be obtained.



## Comparing Focal Lengths of 35mm and Medium Format Lenses

To determine comparison between focal lengths of 35mm and medium format lenses, use this simplified table:

### Conversion of Medium Format Into 35mm Format Lens

Medium Format	Conversion factor	
6x45	Focal length of lens used	x0.6
6x6	"	x0.55
6x7	"	x0.5
6x8	"	x0.46
6x9	"	x0.43

Example: What is the equivalent to a 645 300mm lens for a 35mm camera?

Answer :  $300\text{mm} \times 0.6 = 180\text{mm}$

★ This conversion factor is rounded.

## The Joy of Macrophotography

Discover the secret beauty of nature and the world around you with the 80mm f/4 Macro Lens N for your 645 PRO. It can focus as close as 18.3 cm from the camera and with the optional macro spacer can make pictures from half to full life size. Its "floating lens elements" system assures utmost sharpness to the every corners.



## Auto Winding Mode / Auto Exposure Mode

With the AE Prism and the Power Drive Grip attached to your 645 PRO, you eliminate the need of manually advancing the film or worrying about correct exposure settings. It makes picture taking easy and pleasurable.

## Batteries Used

### [Camera]

4LR44 alkaline-manganese battery,  
4SR44 silver oxide battery or 2CR1/3 lithium  
battery x 1

### [Power Drive Grip WG401]

AA size dry battery, Alkaline or Ni-Cd battery x 6

★ Check battery capacity from time to time and replace batteries at an early stage if capacity appears to be dropping off.

## Self-timer Operation

Set the shutter Release Selector to the self-timer mode.

## Time Exposure

Self-timer mode → 

Dial in the B position → 

### Checker lamp



Timer ON

Illuminates for 8 sec.



Blinks for  
2 sec.



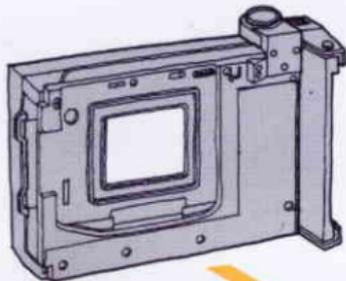
Set Shutter Speed Dial to "B".

Pressing the Shutter Release Button will open the shutter and it will stay open until you press again. While open, a battery saving circuit will automatically switch off power.

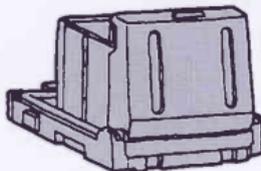
(Important for night and star photography.)

# 645PRO System Chart

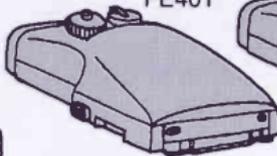
Polaroid Pack Film Holder HP401



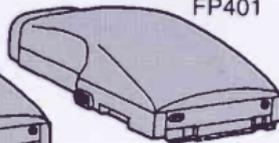
Waist Level Finder N



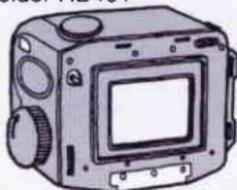
AE Prism Finder FE401



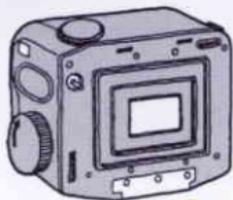
Prism Finder FP401



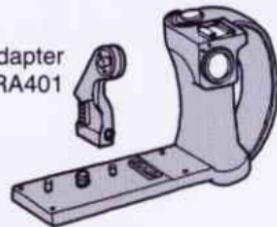
120 Roll Film Holder HA401  
220 Roll Film Holder HB401



135 Roll Film Holder HC401



Left Hand Grip GL401



Terminal Adapter RA401



Power Drive Grip WG401



Film Advance Crank AC401

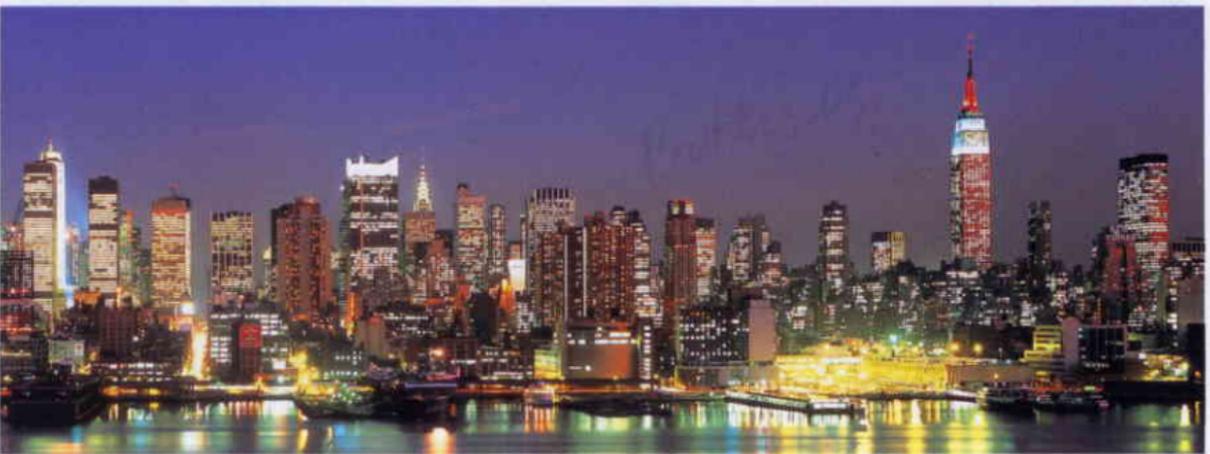


645 PRO Body



Lenses

The actual products may be different from this illustration.



Panoramic photography is quick and easy. Simply use the 35mm film holder with its Panoramic Adapter Kit.

**Panoramic film area: 13x36mm**





## AEL (AE Lock)

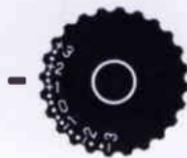
Use the exposure compensation feature when the brightness differs significantly between the light on the primary subject and the background, or when shooting against the light. It can also be used when taking available light or high contrast photos. (i.e. low/high key).

By using the spot metering mode on the faces of the subjects (see above) the bright background is prevented from causing the wrong exposure.



## Exposure Compensation +1.5

In the above snow scene, average metering mode was used to create silhouette effect but additional exposure compensation helped to render important details.





### When shooting a moving subject ...



f-stop ..... F16  
Subject distance ... 5m  
Depth-of-field ..... 3.2~20m

*Set values*

Set the f-stop and subject distance in advance, e.g. the f-stop to 16 and subject distance to 5. At this setting the depth of field extends from 3.2m to 20m, an ideal range for action and sports photos.



## Using the Electronic Flash for Fill-in Light



Using electronic flash to brighten subjects photographed against the light or bright backgrounds will add a great deal to the quality of a picture.

Three lenses with leaf shutters - normal, wide angle and tele - are available for the 645 PRO and are particularly desirable for synchro flash photography, because they can be synchronized at all speeds.

## Minor Trouble Shooting

- 1. The Shutter Release Button cannot be pressed.**
  - Is the Shutter Release Selector in the white dot  position?
  - Will the Battery Check Lamp glow? (If not, replace the battery)
  - Has the Film Advance Crank been advanced as far as it will go?
  - Has the Dark Slide of the roll film holder been removed?
- 2. The mirror will not go down.**
  - Is the Mirror Lock-Up Lever lined up horizontally against the white square ?
- 3. Though the fixed number of exposures has been taken, the developed roll has fewer exposures than it should have.**
  - Has the Start Mark on the film been aligned correctly?
- 4. The roll film holder cannot be removed from the body.**
  - Has the Dark Slide been inserted into the roll film holder?



### Camera Maintenance

- Never touch the Shutter Curtain or the Mirror. If either needs cleaning, use blower or soft brush to gently remove dust.
- When the mirror is in the up position, the focal plane shutter curtain may be damaged if the camera faces strong light sources, especially the sun. Return mirror to viewing position or keep lens capped.
- Do not remove the safety cover on the X-synchro terminal when it is not in use.
- Always keep the electric contacts on your camera and accessories clean.

Batteries?!

Shutter?!

Aperture?!



### ★ Important photos

The Mamiya 645 PRO should be checked periodically to ensure proper performance. Camera functions should be checked by taking trial photos, particularly before going on a trip, or before important assignments.

### Impact Damage

A camera is a precision instrument. Do not let it drop. Protect it against impact damage. Keep lens hoods attached to protect the front lens surface.



### High Temperature

Avoid storing the camera in an environment warmer than 40°C, in the trunk of a car or other hot places. Also avoid direct sunlight anywhere—at the seashore or on a hot summer day. Remove batteries when the camera is inactive for a long time.



### Low Temperature

Be sure to protect your camera when it is being used at temperatures below -10°C: use your coat or other protective device. Extreme temperature fluctuations (+) (-) may cause condensation to develop on the lenses or camera: try to avoid these conditions as much as possible.

### Rain

Be careful around water as your new camera is not waterproof! Do not expose it to salty air or use it for prolonged periods in areas of high humidity.



★ The consequences of such exposure may be significant battery deterioration or other malfunctions.

### Consulting the Mamiya Service Center

Should any malfunction occur, please be sure to read the Instruction Manual carefully and do some troubleshooting. If you cannot resolve the problems encountered, please feel free to consult your nearest Mamiya Service Center.