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Classic Review: Mamiya RB67



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Film Camera Reviews

Background

The Mamiya RB67 and RZ67 are a series of medium-format cameras, designed primarily for shooting 6x7 cm.

There was never a camera system quite like the RB67 / RZ67.

Mainly I'm going to talk about the RB67, but there's also some comparison with the RZ67. Both

cameras are still in use by many film shooters today.

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Meet the RB67

In 1970, Mamiya introduced the **RB67 Professional**, a medium format "system camera". The design allows for interchangeable backs, lenses, and viewfinders.

Made primarily for landscape and studio work, the RB67 was designed and built like the proverbial tank. The moment you pick up one of these cameras, you know it was not intended for street photography or quick snapshots. Now, of course some of us are deliberately going to use it for that anyway, but one look at the RB67 and it's clear that this is primarily a tripod camera.

Here's an RB67 compared to one of the larger 35mm SLR's, a Canon AE-1 Program which happened to be sitting on my desk (because it needs repairs).

The '67 dwarfs a full-size 35mm SLR:



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This is a big, heavy, almost all-metal camera from the Seventies. Not for the casual snapshot-taker, that's for sure.

In 1974, Mamiya released the RB67 Pro S, and in 1990 the RB67 Pro SD. The biggest difference in the Pro S was the use of an interlock to prevent accidental double-exposure. The film backs also could no longer be removed without a darkslide in place. (See below for more differences.)

The **RZ67 Professional**, introduced in 1982, was the modernized version with electronically-controlled shutter. '82 was about the time when many cameras started having this feature. (35mm SLR's, too.)

Note the "RZ" instead of "RB"; this was a whole new line of camera, though it was based on the RB67 form factor.

The RZ67 uses more plastic than the RB67, which makes it a bit lighter and easier to handle. It's still a big camera, though.

For a while, the RB67 and RZ67 were being produced at the same time. I think the RB67 Pro SD was being made at least into the early 2000's.

Basic Use

The RB67 and RZ67 are SLR film cameras. Just like a 35mm SLR, they have a mirror that flips up and out of the way when you take the photo. This happens very quickly. At the same time, the aperture closes down momentarily to the correct setting. The shutter also opens.

The most common configuration uses a "waist-level finder", much like a TLR camera. You fold it out and up, fold out the little magnifying lens, and compose the scene on the ground glass.



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Make sure the film magazine is in place and the revolving back is not crooked. Next, cock the shutter lever on the camera body, then compose the picture by looking at the ground glass. Make sure you have also advanced the film to a fresh picture. Don't forget to pull out the darkslide. Then, press the shutter button (front of camera, lower right-hand side) to take the picture.

If you're able to use 1/250th or 1/400th shutter speed, the RB and RZ67 can actually be operated hand-held. It's a bit unwieldy for this, but it works.

By far, the better way to use an RB / RZ67 is to have it on a tripod.

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Mirror-Up Mode

Use a tripod with this. Best way to get the sharpest photos.

There is a small knob on the side of the lens. On the RB67 Pro, the choices are "M" and "N". ("M" is "mirror up", and "N" is "normal".)

On the RB67 Pro S, the "M" was changed to "Mirror Up". Either way, you have to pull the knob out and rotate it.

To use the mirror-up function, a cable release is almost not optional. Instead of attaching to the shutter release button, the cable release actually attaches to the center of the mirror-up switch on the side of the lens.

When you first try to use the Mirror-Up function, it may seem the camera is broken. That's because the shutter release button will not take a picture! Actually, it will seem to work partially, but it only makes the mirror go into the up position. Don't fret. When you're using Mirror Up, the only way to actuate the shutter is by using the mirror-up switch on the side of the lens. You can do that manually by switching from M back to N, but the best way is with a cable release.

If you're going to do mirror-up photography, you will not be able to see the subject when you take the picture. (The mirror will block your view.) Be sure to compose the photo carefully before setting the dial to "M".

On all the RB67 models, you have to do two separate steps for cocking the shutter and advancing the film. The film advance lever is on the film back, while the shutter-cocking lever is on the side of the camera. The RZ67 does both in one operation.

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Mamiya RB67 vs. RZ67

| | Mamiya RB67 | Mamiya RZ67 |
|-----------------------------------|---|---|
| Digital backs | Pro-S and Pro-SD will accept Mamiya ZD back, with adapter | Pro II and Pro IID will accept several different digital backs, w/ adapters |
| Electronic Shutter Speeds: | None | Continuous range through 1/400th |
| Exposure Modes | Manual only | Manual & Auto (AE viewfinder required) |
| Flash Sync Speed: | All | All |
| Foam Seals in Film Backs? | Yes (Pro and Pro S backs) / No (Pro SD backs only) | Yes (Pro backs) / No (Pro II / IID) |

| | | |
|--|---|--|
| Focusing: | Bellows (on camera) | Bellows (on camera) |
| Lens Compatibility: | RB lenses only (but see below) | RB or RZ lenses (but see below) |
| Mechanical Shutter Speeds: | Incremental through 1/400th | 1/400th only |
| Metering In-Camera: | No | No |
| Metering Viewfinder Available: | Yes | Yes |
| Models | RB67 Pro / Pro S / Pro SD | RZ67 Pro / Pro II / Pro IID |
| Multi-Coated Lenses? | Some | All |
| Released | 1970 / 1974 / 1990 | 1982 / 1995 / 2004 |
| Revolving Back? | Yes | Yes |
| Separate Lever to Advance Film? | Yes | No |
| Shutter Control: | Mechanical | Electronic |
| Shutter speed (Max.): | 1/400th | 1/400th |
| Shutter Type: | Leaf | Leaf |
| TTL Flash? | No | No |

Digital Backs

Believe it or not, the **RB67 Pro S** and **Pro SD** can accept a digital back. That's the [Mamiya ZD back](#). A special adapter, the HX702, is required. I have never tried this. This back was 22 megapixels, which almost isn't even worth it anymore for medium format, because you could just use a cheap [Canon Rebel](#) or a Nikon D3300. Then again, it could be fun to shoot digital through an RB67.

The **RZ67 Pro IID** was made to accept digital backs from Mamiya / Leaf, Phase One, and Kodak, to name just three. There were at least two or three other makes that should fit the Pro IID with the right adapter.

The **RZ67 Pro II** will also accept digital backs made by Phase One, Leaf, and Kodak. The Leaf "C-Most" back was definitely available for the RZ67 Pro II. Far as I know, the C-Most back was only a 6-megapixel; I don't know what other ones they made.

Imacon (now owned by Hasselblad) also made digital backs for the RZ67. There were a couple other companies too.

Medium format digital backs are not my area of expertise (too expensive). I do know that the Phase One P65+ digital backs can fit the RZ67 with the correct adapter. The P65+ is a 60-megapixel CCD back with an actual 645-sized sensor. 2009 technology, but in terms of resolution, I would suppose that it still outdoes even the new Canon 5DS (50 megapixels).

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6x7 Film Backs

The standard RB67 back uses 120 film and yields 6x7 cm images. This arrangement will give you 10 shots per roll, if you load the film correctly. (Try [this link](#) for 120 backs.)

220 film requires a 220 back. This film will give you twice as many pictures, but it has no backing paper. Some people say you don't need to load 220 film in total darkness, but I won't even load 120 film unless the room is almost dark. (It all goes back to a roll of Fujichrome that got fogged one day.)

The RB67 **Pro** and **Pro-S** backs have foam seals. **The foam is almost always bad.** As a result, these backs nearly always have light leaks. If you just want a quick short-term fix, you could just seal the back with electrical tape after you load it. You might even get some good pictures, but you will probably miss a spot and have messed-up pictures. If you do try this, be sure to seal along the film-back hinge, and the area where the revolving back meets the camera.

Good news, if you don't like installing new light seals. You can just [buy a Pro SD back](#), which has mechanical light baffles instead of foam. The RB67 Pro-SD backs will work on the Pro-SD, Pro S, and Pro.

Note that the revolving-back adapter has foam seals of its own; see "[Light Leaks](#)".

The RZ67 introduced backs that would advance the film when you cocked the shutter. This removed the extra step that had to be done with the RB67's. These backs are not backward-compatible with the RB67.

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645 Film Backs

Regular film backs are 6x7, but you can take 6x4.5 cm pictures with the RB67 if you [get a special 645 back](#). Then you can get 50% more pictures per roll of 120 film, although each picture is a bit smaller.

The backs are supposed to include a frame mask for 6x4.5, which you lay over the focusing screen. I haven't tried this yet, though, so I don't know for sure.

Also, 645 backs are natively in "portrait" orientation, because of how 6x4.5cm works. To get landscape orientation, turn the revolving back 90 degrees (as if it were in portrait orientation for 6x7).

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Other Film Backs

6x6 either doesn't exist for the RB67, or you have to use some other brand. Graflex made 6x6 rollfilm backs for their "small" large-format cameras; *some* of these fit the RB67, but no guarantees.

6x8 backs are fairly common, but you need to use Portrait orientation to get the full 6x8.

Instant film backs also exist, but they're for peel-apart film. We need someone to make RB67 backs that take Instax Wide or Polaroid Originals (Impossible Project) film.

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Light Leaks

I already mentioned the **film backs**, which usually need new seals unless they're Pro SD.

The **revolving adapter** usually needs new seals. (Try [this link](#) for a full light seal kit. Or try [this link](#) or [this one](#) for light seal foam.)

The **bellows** can have pinholes on any of the RB67 or RZ67 models. Avoid ones with major light leaks or worn-out bellows.

The **darkslide** seal can also go bad and cause light leaks.

The RZ67 Pro backs utilize foam seals; I believe the RZ67 Pro II and Pro IID did not use foam seals in the film backs.



Stray Light at Sundown

Mamiya RB67 with 90mm f/3.8 non-C lens
[Kodak Portra 400](#) film
Tripod, f/11 @ 1/4 sec (have to double-check)

Be sure to read my article on [How To Replace RB-67 Light Seals](#).

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Lenses

Mamiya lenses for the RB67 and RZ67 are superb. Even the plain "non-C" lenses, which are single-coated, have excellent sharpness. The C-series lenses were multi-coated, and the K/L lenses had even better coatings.

The 90mm is the all-around, medium focal length. This is roughly the equivalent of a 45mm lens on a 35mm camera.

I think it's difficult to go wrong with a 90mm on an RB or RZ. That's wide enough for many landscape scenes, and narrow enough for some portrait work. Even the original 90mm non-C lens has very good optics. At f/11, I doubt you'll find anything to complain about.

In fact, some people shoot medium format for years without ever changing from that basic focal length.



Rustic Winter Scene

Mamiya RB67 with 90mm f/3.8 non-C lens

[Kodak Portra 400](#) film

I think this was f/11 at 1/60th, braced.

If you're looking for something that's still good for all-around use, but better for portraits than the 90, then get the [127mm f/3.8](#); this has a 35mm equivalent of about 60mm.

If you do a lot of portraits, or close-ups of landscape features, the [180mm f/4.5](#) is a great choice. For 6x7, this has a 35mm equivalent of about 87mm.

The RB67 and RZ67 lenses have no focusing mechanism of their own. All focusing is accomplished by moving the bellows, which moves the whole lens either toward or away from the camera.

Note that most RB / RZ lenses are not that fast. For the RB67, the widest aperture is f/3.5, and you'll find that only on the 75mm and 125mm K/L lenses. Most of the rest are f/3.8 or f/4.5. Because of the huge "sensor size" (piece of film), that's still enough to get quite a bit of background blurring. And because this is a tripod camera anyway, for the most part, there's not really a need for faster lenses.

If you do need faster, there's a [110mm f/2.8](#), but it was made for the RZ67 series. (This will not work on an RB67.) I'm not aware of any other f/2.8 lenses for the RZ or RB.

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Light Metering

The basic camera has none. There are two options here.

First option, get a [metered prism](#) for the camera. Make sure to get the one made for your camera; the ones made for RZ-67 will not work on RB-67, nor the other way around.

Second option: Get yourself [one of these](#) or perhaps [one of these](#). That Sekonic has 1 degree spot metering, which is not strictly necessary but is great to have for landscape photography.

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RB67 / RZ67 Lens Compatibility

The non-C lenses, which are single-coated, were designed for the original RB67 Professional. They will fit RB67 Pro and Pro-S cameras.

An adapter is required to fit them to Pro-SD cameras.

The C (multi-coated) lenses were introduced with the Pro-S. These will also fit the Pro and Pro-S cameras with no adapter.

You STILL need an adapter to fit them to Pro-SD cameras.

You can mount most Pro-SD lenses on the Pro or Pro-S, if you remove the adapter ring on the back of these lenses.

The RZ67 will take most RB67 lenses, but not the other way around. The whole RZ67 system was designed to have electronic coupling between the various components. The RZ will shoot in manual mode if you want, though; it can operate without getting feedback from lens electronics.

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Filters

All or nearly all of the RB/RZ lenses take a 77mm filter. Mamiya stayed with 77mm across the whole system, unlike some camera makers who kept changing the filter size so you either had to buy a whole pile of different filters, or a smaller pile of different adapters.

Some people won't use any less than a [B+W filter](#), which is always a good choice no matter what the camera. As long as you're not pointing the camera into or near the sun, even [one of these](#) from Tiffen would work OK, at least for keeping the lens from getting scratched. (If for some reason you want to block all UV, get [this one](#).)

Here's one way to look at it. If you're going to the length of shooting 6x7 film, you might as well get a filter that won't cause ghosting. ([This one from B+W](#) is on my wish list.)

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Conclusion

The Mamiya RB67 and RZ67 series are classic medium-format cameras. For film enthusiasts, they are as relevant today as they ever were. Both cameras are heavy and bulky, but that's part of the fun.

If you want something that can still be repaired by many camera shops, [get the RB67](#).

If you want something more modern, not quite as heavy, and sporting electronic control, [get the RZ67](#). The only really serious drawback of the RZ67 is that if something major fails, you might not be able to get it repaired. But if you find a good working one with no corrosion or damage, it could last you for many years.

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