

PENTAX Primes

Starting with wide angle lenses and naturally progressing toward the telephoto end of Pentax Lens' lineup, here we go...

15mm

K15/3.5 is a rectilinear lens, which is thought to have the same optical design as its SMCT predecessor. It's been reported, possibly due to the sample-to-sample variations, that it's optical performance has been improved, especially in corner sharpness no matter what f-stop was used.

16mm

While I don't have the summary for this fish-eye lens yet, you might want to look at these pictures that compare it to the K15/3.5 rectilinear .

Also look at Rob's page for Fisheye to rectilinear image mapping examples and details . [Go Directly To...](#)

18mm

K18/3.5 is an excellent rectilinear lens; it is quite large and bulky though. It's correction of spherical and coma aberrations seems far better than that of A20/2.8, and it is surprisingly sharp edge to edge. Its coma wings are also smaller than those of K24/2.8, K28/2, or K30/2.8.

Yoshihiko Takinami also notes that the corner resolution of K18/3.5 is higher than that of A20/2.8, and the only defect of K18/3.5 seems to be the lack of normal or UV filter though it has four filters built-in.

BTW, there's no A18/3.5.

20mm

Among f2.8 versions of K, M, A, F, and FA lens, A seems to be the best with excellent contrast, color rendition, barrel distortion. OTOH, it's not as good in resolution, coma aberration and contrast in the corners as K15/3.5 or K18/3.5, even closed down.

FA version is said to have the same optical formula as the A version, and to be very sharp in the center when stopped down. Not much vignetting , but slight "droplet" distortion was mentioned once. All 20mm lenses are said to have great build and prices to match.

K20/4 and the M20/4 produce very slight distortion. K20/4 is also known to flare. However, when comparing K20/4 to K18/3.5, Nikkor 20/2.8 AIS (current model) and Tokina 17/3.5 (current model.), the K20/4 still beats them in every aspect, especially flare control.

24mm

K and A 24/2.8's are optically identical. Pentax K24/2.8 is a great lens with very few distortion, high resolution, great color rendition, and good color saturation.

There's no M24/2.8.

A 24/2.8 is very resistant to flare and ghosting, very sharp when stopped down. A 24/2.8 is reputed to be better than M24-35/3.5 and M24-50. Comparing K(A)24/2.8 and K24/3.5, K(A)24/2.8 has higher center resolution/sharpness and lower corner resolution/sharpness. Both of them are excellent performers.

FA24/2 AL IF is said to be an excellent lens, and optically better than both K(A)24/2.8 and K24/3.5. FA version is very well build and exhibits excellent contrast and sharpness. Its handling is very good, especially when used as a manual focus lens due to it's focus clutch mechanism whereby you pull back on the focusing ring, which now has a relatively nice manual focus feel.

28mm

Rare K28/2 is an excellent performer. Its resolution and uniformity of image quality in all over the frames are very impressive at f/8 or f/11. (Yoshihiko Takinami)

Keep away from M/A/F series 28mm lenses because of their "relatively" poor performance when comparing them to their f3.5 relatives. FA28/2.8 performs only marginally better than its predecessors.

Yoshihiko Takinami has indicated that the best 28mm from Pentax, in terms of its optical performance, is the old K28/3.5. The only two defects in K28/3.5 is its size and weight and some light fall-off towards the corners, which seems better than M28/3.5 or FA28/2.8AL in comparison, but it does exist.

M28/3.5 is also an excellent performer and is compact in size. Go for K28/3.5 when your concern is performance, and go for M28/3.5, or FA28/2.8AL, when your concern is size and weight besides performance. If you are concerned about distortion, go for the K28/3.5 or M. Distortion is under 0.5% for both. Otherwise, the M(or A)28/2.8 is quite nice in terms of weight and dimensions. The FA 2.8/28 is far better, though, but not 100% distortion-free either.

Note: FWIW, there were two versions of the M 28/2.8. The earlier one, with the silver ring on front, was said to be 'slightly' superior. The later version is the 'upgraded' Takumar Bayonet 2.8/28, which now features multicoating. Either one is not as sharp or as contrasty as M 50/1.7 or the M 135/3.5, or the 20-35/4 zoom.

28/3.5 shift lens features good sharpness (a bit less sharp than the K35/2.8), excellent flare control (unless the sun is at the edge of the image), and almost no distortion, although at full shift, there is some slight pincushion distortion barely discernable at the edge.

For additional information about tilt and shift lenses, you might want to take a look at this page.

30mm

K30/2.8 "is excellent optically; it has well-corrected aberrations, very few distortion, very high actual/visual resolution, good color rendition. K30/2.8 is far better than M28/2 [or] M28/2.8 Look here for more info. "[Yoshihiko Takinami]

35mm

K35/2, with 52mm thread size, is the "best K-mount 35/2 lens ever made", because of its sharpness and color renditions.

The other "best 35mm that Pentax ever made" are the new FA35/2AL and the old K35/3.5. Both of them are very high resolution lenses with excellent sharpness, impressive color renditions, and very natural bokeh. "Their three-dimensional image descriptions are really amazing. "[Yoshihiko T.]

Note: FWIW, the "certain" magazine's quality/price/love factor rating for FA35/2 AL was VG/VG/VG

M35/2 doesn't have the bokeh of K35/2.

SMC Pentax A35/2 is also said to be very good, as is Super Takumar 35/2 (the one with the 67mm filter, it controlled flare well, and seemed nice and sharp at 8x10)

40mm

M40/2.8 is the famous "pancake" from Pentax. It was first introduced circa 1975 and became a "cult" lens. It is sharp, though not as sharp as your regular 50/1.7. It's very small, and it's aperture and focusing rings are a pain to use. It's

definitely not a rare lens as many sellers claim it is, but it's very overpriced and in mint condition usually sells for \$200 US dollars or more.

43mm

This excellent lens, FA43/1.9 Limited, has a character of an old-styled standard lens with excellent modern coating. It is a bit soft wide open, becomes good one stop close, and is very excellent at f/4 or closer. Its flare control seems superb, as does its contrast. The cons are its price and some distortion.

50mm

f1.2

Both, K50/1.2 and A50/1.2, share the same optical formula, are optically excellent, have high resolution, good saturation, excellent color rendition, and great bokeh. The difference between K50/1.2 and A50/1.2 is the number of aperture blades; A50/1.2 has 9 blades and K50/1.2 has 8 blades. This results in slightly better bokeh and flare control in the "A" version. It's also been said that 50/1.2 is a little soft wide open especially in the corners. Stopped down, A50/1.2 is an excellent performer at f/8-11 with very high resolution and very good visual sharpness. Its visual sharpness at f/8-11 seems comparable to K55/1.8, (A50/1.2 is better than the K55/1.8 wider than f/8, and similar from f/8 and narrower. However, keep in mind that for high-contrast resolution the "el cheapo" A50/2 virtually matches, stop-by-stop, the A50/1.2 (and beats the K50/1.2), from f/2 to f/22.).

The A and K50/1.2's really are nice to use for their focusing ease, and in dim light they may be the only lenses that can do the job at all, but you certainly don't get much "bang-per-buck" while using them under average light conditions.

f1.4

Very useful, high quality, normal lenses. There are two different optical designs in Pentax 50/1.4 lenses; one is "K" and "M", the other is "A", "F" and "FA". A version is thought to be slightly better than the M(K) version in terms of corner resolution and image uniformity all over the frame.

The A50/1.4 is a great all-around performer. Go for A50/1.4 instead of M50/1.4 if you consider buying a MF lens. Pentax slightly changed its optical design when A50/1.4 was introduced. A50/1.4 is optically superior to M50/1.4. FA 50/1.4 is said to feature good resolution, great color rendition, natural bokeh, and decent MF capability.

f1.7

Both M and A50/1.7 are somewhat legendary in their performance, but it's been suggested that their superiority over f1.4 versions is only marginal.

Comparing f1.4 to f1.7, FA50/1.7 seems visually a bit sharper than FA50/1.4, but FA50/1.4 seems more delicate/refined especially in colors. FA50/1.7 has a slightly better feel over the F version. Its focus ring has more of a rubber feel, while the F has more of a ribbed hard plastic feel to it. The damping and build quality also seems to be slightly better on the FA version. Optically, these lenses are identical

f2.0

There's no K50/2.

M50/2 is not as sharp or as contrasty as the A50/2.

A50/2 is the best bang-for-the-buck K-mount normal lens: sharp, contrasty, and "dirt" cheap. In resolution, the A 50/2 seems to be only very slightly behind the A50/1.7

50mm Macro

M50/4 Macro is good macro lens that can also double as a slow normal one that focuses from macro range all the way to infinity.

A50/2.8 Macro is sharp, light, has a very nice feel to it. It's also very useful as a slow normal lens.

F50/2.8 Macro is sharper than the A version and the M50/4 Macro, but the focusing ring feels awful in manual focus mode. FA version has the same optical formula as the F version

77mm

FA77/1.8 Limited makes a great matching pair with the FA43/1.9 Limited. It has the same cold metal feel, same metallic, whirring focusing sounds, as well as the slide-out lens hood. It features FREE (Fixed Rear Element Extension) focusing system just like A* 85/1.4, the A 100/2.8 Macro, the A* 135/1.8, and (apparently) the A* 200/4 ED Macro. It is said that FREE is good at close-focus ability but is not good at AF because of its increased extension at small focusing distance.

"It is really an excellent performer with great sharpness, excellent contrast, and remarkable color rendition. The only drawback I noticed is its relatively poor, but still good, flare control for a modern Pentax lens." [Yoshihiko Takinami, yoshihiko@takanami.com] It's also reported to be easier to focus than the M85/2 or K105/2.8

85mm

A*85/1.4 is heavy, but a great performer. It's said to add the "warmth" quality to portraits (not to mention its shallow DOF, and great bokeh).

85/1.8 is also a superb performer, comparable to A* version. It puts the subject squarely in the middle of the zone of focus.

FA* 85/1.4 is said to be comparable to 85/1.8 in sharpness (starting at ~f4 and up) and overall performance. In terms of bokeh, it's clearly superior to 85/1.8 and 85/2. It is believed that it was "optimized" for portraiture photography by featuring:

- better apparent sharpness at "close" focus distances than at far distances,

- plane of sharpest focus is located near the rear of the DOF, yielding a more out of focus background than one might expect, regardless of the shooting aperture

- highly regarded bokeh

M 85/2 is considered to be the worst among 84mm lenses, which does not mean that it's a bad performer. It's just that other 85's are "oh , so good".

85/2.8 (soft) is mechanically superb, and very sharp from ~f6.7 on. The difference between using this lens and the regular 85mm with the soft filter was explained by JoMac as follows:

A Softar filter softens the light before it enters the lens, so that in the image everything is softened, even the edges of things. A "Soft" lens like the Pentax creates a sharp image, at all apertures, but scatters the light that is allowed in wide open (at the outside periphery of the outer element or group), and even a stop or two down. Stop down all the way and you have almost eliminated the softening effect. A filter with a clear center and a frosted outer 10mm band would behave similarly. But you'd need a set of filters with 5mm bands, 10mm bands and 15 and 20mm bands to have the control approaching the variable fogginess of the Pentax 85mm 2.x Soft lenses.

M85/1.4 does not exist.

100mm Macro

f2.8

M100/2.8: a lovely lens for portraits in terms of weight, size, and price.

A100/2.8 is superb. The lens is an "absolute gem", it is tack sharp at any aperture, and at any focusing distance.

Note: all film resolution tests on this site were done using this lens. "This lens is WAY beyond outstanding", said William R.

FA100/2.8 macro is also a "fantastic lens". It has a wonderful bokeh. It also has a focus limiter switch that changes the dampening so that it feels much more like a MF lens. The focus movement slows down.

Comparison of A, F, and FA versions by the "certain" magazine (quality/price/love factor)

SMC A 100/2.8 macro VG / VG / EX

SMC F 100/2.8 macro VG / G / G

SMC FA 100/2.8 macro VG / VG / VG

f4

100/4 bellows macro (no focus helicoid) is very sharp, flat field lens. (All Bellows- and SMC Takumar- or Pentax-M/A

100/4 have been optically equal, except for the coatings and, in the case of the Bellows lenses, the internal focusing helicoid. All these lenses feature very fine optics.)

M100/4 Dental Macro lens goes to 1:2, and differs from the non-dental version in the yellow and red marks that show the magnification ratio when used with the yellow and red closeup lenses (filters). Both dental and non-dental 100/4 Macro lenses are reputed to be of high quality The differences can be seen here: www.phred.org/pentax/k.

The new 100/3.5 macro is a Cosina design, sold by Pentax under their name. This lens is very good (said to be almost equal to the original Takumar / Pentax 100/4 as far as the optical qualities are concerned). From the mechanical point of view, the new macro lens is a typical AF lens with a helicoid that runs a bit too loosely for critical manual focusing. Cheaper construction and slower speed result in lower price when compared to FA100/2.8

If you are thinking whether to purchase a 50mm Macro or a 100mm one, think about the extra working distance that the longer lens will provide you with. Another thing to consider is the fact that autofocus is less than necessary for macro work, the subjects tend to be fairly static, and thus you might save by finding an older MF Macro. Also look at some of the excellent lenses by Kiron and Vivitar .

105mm

The K105/2.8 is a great lens. K105/2.8 was mentioned to be "gloriously sharp and contrasty" and superior to any other lens in 100-120 mm range made by PENTAX.

120mm

There were two 120mm K-mount Pentax lenses: the original Pentax 120/2.8; and the later M120/2.8. The later M version was smaller and not as sharp as K120/2.8. Both lenses feature good performance, but not good enough to use them instead of some of the 135mm Pentax gems.

135mm

M135/3.5 is generally regarded as very good; it is plentiful it should be inexpensive.

A135/1.8 is a great lens on all apertures except wide open where its quite soft, but still better wide open than most other Pentax lenses. The lens is highly recommended and beautifully made is much sharper than the FA 85/1.4 at wide apertures. Comparing the M135/3.5, K135/2.5, and A*135/1.8, the old K135/2.5 is clearly a much sharper lens than the M135/3.5 (not to bash it). The A*135/1.8 seems to be a lot better than the K135/2.5.

A 135mm f2.8 is a dog (comparing it to other 135's)

The FA135/2.8 IF is a superb lens. Lightning fast focusing and tack sharp center to edges. The FA135 is also built like a tank. Has metal barrel, built in hood, and takes 52 mm filters.

150mm

M150/3.5 is rare, very sharp and contrasty. The bokeh of the lens is quite pleasing also.

200mm

f2.8

K200/2.5 is a great lens, extremely sharp. Not as compact as the A* 200/2.8, but it has a tripod mount, though its quite hand-holdable. Very nice bokeh (important for such a long, fast lens) and performs well even wide open, but is said to have a little loss of image contrast at full aperture. Its focusing is somewhat "stiff" and feels like that of many other M* and A* lenses

M*200/2.8 is equal to K200/2.5 in terms of sharpness and construction

A* 200/2.8 ED is a GREAT lens. It does not have a tripod socket, but can easily be supported by a tripod mounted body. It is said to be one of the sharpest lenses ever made. This lens shows some light falloff at maximum apertures, but it is essentially gone at f/4. Fred has compared this lens to the K200/2.5 and reported essentially identical image quality in terms of sharpness and light fall off at maximum apertures. He also reported that "it is quite 'easy' (as in 'not stiff') to focus, more so than any other A* lenses" he have ever tried.

The FA200/2.8 is another beautiful chunk of glass, it's very sharp & focuses close for a 200 (closer than A* version). It also features internal focusing.

f4

K200/4: it's an amazingly good lens for the price capable of some fine photos. The K200/4 seems to be pretty similar to M200/4 in terms of bokeh.

M200/4 is sharp even wide open, has built-in hood, great build, quite compact in size, and is more common than K200/4. It does well in flare and has a pleasant bokeh

A200/4, seemed to have lower resolution and contrast comparing it to K200/2.5 and A*200/2.8. Although the A200/4 is not a bad lens overall, it is simply not a particularly strong performer. I should point out that the A 200/4 is a different lens from both the K and M 200/4's

200/4 ED Macro is one hell of a lens. It beat both the Canon 180/3.5 Macro and the Nikon 200/4 Macro in a recent German test.

300mm

A*300/2.8: at wide open, the definition in the corner of the frame is very impressive. This lens also features very heavy construction.

K300/4 is heavy but very good.

M*300/4 and A*300/4 lenses are much smaller, but still heavy. Both are missing tripod mounts. According to Fred, "the M* 300/4 was the first and only M* lens that 'anyone' has ever seen. As far as I can tell, it is the twin of the A* 300/4, both mechanically and optically. The only apparent variances are in minor M vs. A trim differences, the presence of the A

electrical contacts on the A* version, and an apparent (but not surprising) difference in SMC treatment (judging from a somewhat different set of coating colors in each model).”

A* 300/4: the quality is staggeringly good. It's easily handheldable, smaller but heavier than A70-210/4. It doesn't have a tripod shoe.

Pentax F* 300/4.5 are excellent. F300/4.5 has tripod shoe. Wolfgang's comparison of F*300/4.5 to A*300/4 showed F* to be noticeably sharper at open aperture.

The FA300/4.5 is very impressive, but Pentax removed the tripod shoe from this lens. It has the same optical design as the F version. Also, FA* version will allow you to switch to manual focus by just pulling the auto-manual focus switch/clutch on the lens whereas the F* requires that you set both the switch on the lens and on the camera body. (This feature was a difference between all, or most, FA* lenses and F* Pentax lenses.) Also, the only original converter that fits the FA*300 is the A 2x-S.

400mm

400/5.6 is said to be quite nice.

The A lens (latest MF 400mm) is a very fine lens. A received a 3/4/5 C. d'I. mark. It is said to be one of the best non APO lenses, the results are very good at f8 and above. Wide open the resolution was less and there was a bit vignetting.

FA 400 seems to be way over priced, and though I haven't seen too many comments on it, it's thought of as a good performer.

Pentax A*400/2.8 ED IF seems like a good lens to own, if you can afford one.

500mm

K500/4.5 feature very good optical design as well as a preset aperture. It's quite heavy and, unless you want to strain your back and get a fuzzy shot, it should be tripod mounted most of the time. This lens has the same design as the previous Takumar version of 500mm. K500/4.5 lens has a 52mm rear filter.

600mm

According to Fred A* 600/5.6 lens' features include:

Size. The 600/5.6 is wider than the A* 300/2.8 and is as wide as the FA* 250-600/5.6, and it uses the same 112mm front filters as these two lenses. The A*600/5.6 is longer in physical size than the 300mm and 400mm lenses. It weighs less than half the weight or mass of the FA*600/4 (about 7.22 pounds or 3.28 Kg, compared to 15 pounds or 6.8 Kg).

The A* 600/5.6 has the same maximum aperture as the considerably heavier FA* 250-600/5.6 zoom.

And, finally, the A*600/5.6 costs new (B+H prices) about \$1,000 less than the FA*600/4 or the A*400/2.8, and almost \$1,500 less than the FA* 250-600/5.6, so it's: "cheap".

BTW, The A*600/5.6 has the same maximum aperture as the FA*300/2.8 when used with the 2X-L teleconverter to reach 600/5.6.

SMC-F 50/2.8 Macro	Perfect
SMC-F 50/1.4	Perfect
SMC-A 85/1.4	Perfect
SMC-F 50/1.7	Great
SMC-F 100/2.8 Macro	Great
SMC-A 135/1.8	Great
SMC-A Macro 200/4 ED	Great
SMC-FA 50/1.4	Great
SMC-A□ 50/2	Great
SMC-FA 300/4.5 ED IF	Great
SMC-F 300/4.5 IF ED	Excellent
SMC-FA Macro 100/2.8	Excellent
SMC-FA 28/2.8 AL	Excellent
SMC-A 200/2.8 ED	Excellent
SMC-FA 20/2.8	Excellent
SMC-FA 24/2 AL (IF)	Excellent
SMC-F 135/2.8 IF	Excellent
SMC-F 70-210/4-5.6	Very good
SMC-F 28-80/3.5-4.5	Very good
SMC-FA 28-70/4 AL	Very good
SMC-F 28/2.8	Very good
SMC-FA 28-105/4-5.6	Very good
SMC-F 35-70/3.5-4.5	Very good
SMC-A Pentax 400/5.6	Very good
SMC-FA 400/5.6 ED IF	Very good
SMC-F 70-200/4-5.6	Good
SMC-FA 70-200/4-5.6	Good
SMC-F 35-105/4-5.6	Good
SMC-A 24-50/4	Good
SMC-F Fisheye 17-28/3.5-4.5	Good
SMC-F 24-50/4	Good
SMC-F 35-135/3.5-4.5	Good
SMC-FA 80-320/4.5-5.6	Good
SMC-F 100-300/4.5-5.6	Satisfactory
SMC-FA 28-80/3.5-4.7	Satisfactory
SMC-A 70-200/4	Satisfactory
SMC-A 28-80/3.5-4.5	Satisfactory
SMC-FA 28-200/3.8-5.6 AL IF	Poor