

# SPLOSdb: SMC PENTAX Lenses and Other Stuff Database

J.L. Colwell

Canada

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## **Acknowledgements**

I am grateful to the many people who share photography information online. I want to say a special thanks to Bojidar Dimitrov for his excellent KMP web site, <http://kmp.BDimitrov.de/>, and thanks also to those who are cited later. I attempt to acknowledge all sources I have used, except not eBay auctions. I apologize to any sources I have missed.

I also want to thank Bojidar Dimitrov and Harold Merklinger ([www.trenholm.org/hmmerk/](http://www.trenholm.org/hmmerk/)) for reviewing the SPLOSdb draft documentation - their corrections, comments and suggestions were much appreciated.

## **Disclaimers**

The assessment of SPLOSdb reliability discussed in this paper suggests that the accuracy is high, but there certainly are errors and omissions - use this information at your own risk.

Many of the prices in SPLOSdb are from "Other Suppliers" which are camera shops with online inventories of used gear. These prices may not be the lowest available, and the items may not be still available. I can't guarantee that these Other Suppliers are reliable, but I've personally had consistently good results.

I am not affiliated in any way with eBay nor with any Other Suppliers cited in SPLOSdb.

I am not affiliated in any way with Pentax. If anybody from Pentax reads this, then please do your best to ensure that Pentax continues to develop new and exciting 35mm SLR products, especially digital cameras with full format, 35mm image size (24 x 36mm), and with full support for AE, Av, Tv, and manual exposure modes when using manual aperture settings on FA and earlier K-mount lenses. In my opinion, the \*istD is a step in the right direction - don't stop now.

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## ABSTRACT

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The SMC Pentax lenses and other stuff database, SPLOSdb, includes contemporary prices and information on SMC Pentax and selected “third party” lenses for Pentax K-mount bodies, and *other stuff* including: teleconverters; flash; macro accessories; special adapters; Pentax LX and accessories; and, the \*istD. The prices are mostly for used equipment in excellent to mint condition, based on over 2000 eBay sales during a three month period from 1 December 2003 to 29 February 2004, and on list prices at about 70 camera stores with online inventories. A total of 470 lenses and 100 other stuff are itemized in SPLOSdb. Each item has specific information on prices, dates the prices were observed, and the number of sales on eBay over the three months. The database also includes a lens quality rating system and a variety of physical properties such as minimum focus distance, weight, size and other relevant properties. The database is distributed in .pdf format for printing and viewing, and in ‘comma-delimited’ data files. This paper provides an overview of the database, documents the categories and procedures used to define the database, and discusses lens availability (i.e. common vs. rare), including “Top-10” lists.

## 1 Introduction

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I’ve been a keen amateur photographer since the early nineteen-seventies. For most of the past twenty or so years, I have been quite content with a Pentax SuperProgram camera and a single SMC PENTAX-A 1:1.7 50mm lens. Good quality, reliable; I was happy. That changed about four years ago when I decided to get a zoom lens for a family trip to the UK. I figured it was about time that I had better control over angle of view for framing my pictures, and I wanted a way to get closer to things without having to move towards them. I bought a 28-200mm zoom that turned out to be very unsatisfactory. Very few of the many pictures that I took were in sharp focus. The few pictures in sharp focus were probably those that I took with the SMCP-A 50/1.7. I did a little online research and soon found a number of things, including: (i) the zoom lens I bought is generally regarded as having poor optical quality; (ii) there are many reasonable alternatives which have much better optical quality; (iii) there is an incredible wealth of online information about photography and photo gear; (iv) you can save a lot of money on really good gear if you buy it used; and, (v) I got hooked.

I started keeping track of Pentax prices, especially lenses, a couple of years ago. Over time, the database grew as I added “other stuff”, both from Pentax and “third-party” brands, and I sampled the used marketplace - with great results. During this time, I also purchased two new Pentax bodies (MZ-7 and MZ-5N), a used LX (!) and a used (mint) SMC Pentax 500mm 1:4.5 (!! ) - I’m hooked, and the rod and reel are made by Asahi Pentax.

Anyway, late last year, I decided to do it right. Between 1 December 2003 and 29 February 2004, I attempted to track all sales of SMC Pentax lenses and selected *other stuff* on eBay, and to keep track of list prices at about 70 camera shops with online inventories of used stuff. I couldn’t keep this up for very long, so I decided to document the results and move on (by the way, what is a field camera...?). So, here is the SMC Pentax lenses and other stuff database, SPLOSdb.

## 2 Overview

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SPLOSdb contains three types of information on lenses and ‘other stuff’.

- (i) lens quality ratings (described in Section 4)
- (ii) lens specifications (mount, minimum focus distance, weight, dimensions, filter diameter)
- (iii) prices and number of sales on eBay, and (separately) list prices from Other Suppliers

SPLOSdb includes SMC PENTAX, SMC TAKUMAR, a few older Takumars, a large number of “third party” lenses; and, other stuff described later. The non-Pentax lenses in SPLOSdb are generally high quality, wide, long, fast and/or interesting for some reason - maybe I own one, or maybe it just looks really cool. All non-Pentax lenses either have a K-mount, or it’s easy to get a K-mount adapter for it (e.g. M42, Adaptall, YS, TX, etc.).

Based on vendor descriptions, all SPLOSdb items are fully functional and optics are clean and clear. There are no lenses with optics that are damaged, diseased, marked, chipped, or scratched (marks, brassing & wear on lens bodies are OK). Every price has a date, so you’ll know when I lose interest and stop tracking the market. If you strongly disagree with a lens quality rating, then please let me know why ([SPLOS@jcolwell.ca](mailto:SPLOS@jcolwell.ca)). Better yet, send me the lens and I’ll try it.

### 2.1 Size of the database

Table 1 shows the number of items, number of prices and number of eBay sales in SPLOSdb.

**Table 1:** size of SPLOSdb database.

<b>Lenses</b>	Number of Items	Number of Prices [1]	Number with No Price	Number sold on eBay [2]
SMC Pentax Prime	120	359	4	750
SMC Pentax Zoom	61	209	0	352
SMC Takumar [3]	37	114	2	257
Big Four [4]	139	296	10	277
other lenses	113	168	11	221
totals	470	1146	27	1857
<b>Other Stuff</b>				
Pentax LX stuff	45	126	1	106
other stuff [5]	47	127	1	104
*istD stuff	8	15	0	0
totals	100	268	2	210

- Notes [1] the four price categories are described later in Section 6.1  
[2] the number of eBay sales between 1 Dec 2003 and 29 Feb 2004.  
[3] includes a few wide & macro non-SMC M42 screw mount Pentax Takumars.  
[4] Sigma, Tamron, Tokina, and Vivitar (see *cult classics*, [medfmt.8k.com/third](http://medfmt.8k.com/third))  
[5] MZ-S, SMC teleconverters, AF flashes, macro stuff, special adapters, etc.

Figure 1 shows the growth of SPLOSdb over three months from “day 0” on 1 December 2003 to “day 90” on 29 February 2004. The solid line with white symbols is the number of lens sales on eBay and the dashed line with black symbols is the number of lens prices in the database, including prices from both eBay and Other Suppliers.

SPLOSdb started with about 700 lens prices on 1 December 2003, and the number of eBay sales started at zero. SPLOSdb has four price categories for each item: [E to E++] for eBay; [M- to N] for eBay; [E to E++] for Other Suppliers; and, [M to N] for Other Suppliers (see Section 6.1). For SMC Pentax lenses, SPLOSdb has an average of about three prices per lens (see Table 1), but many lenses have four prices and some have no prices at all. Section 3 shows the most common lenses in “Top-10 Lists”, and Section 7 considers how to identify the most rare ones.

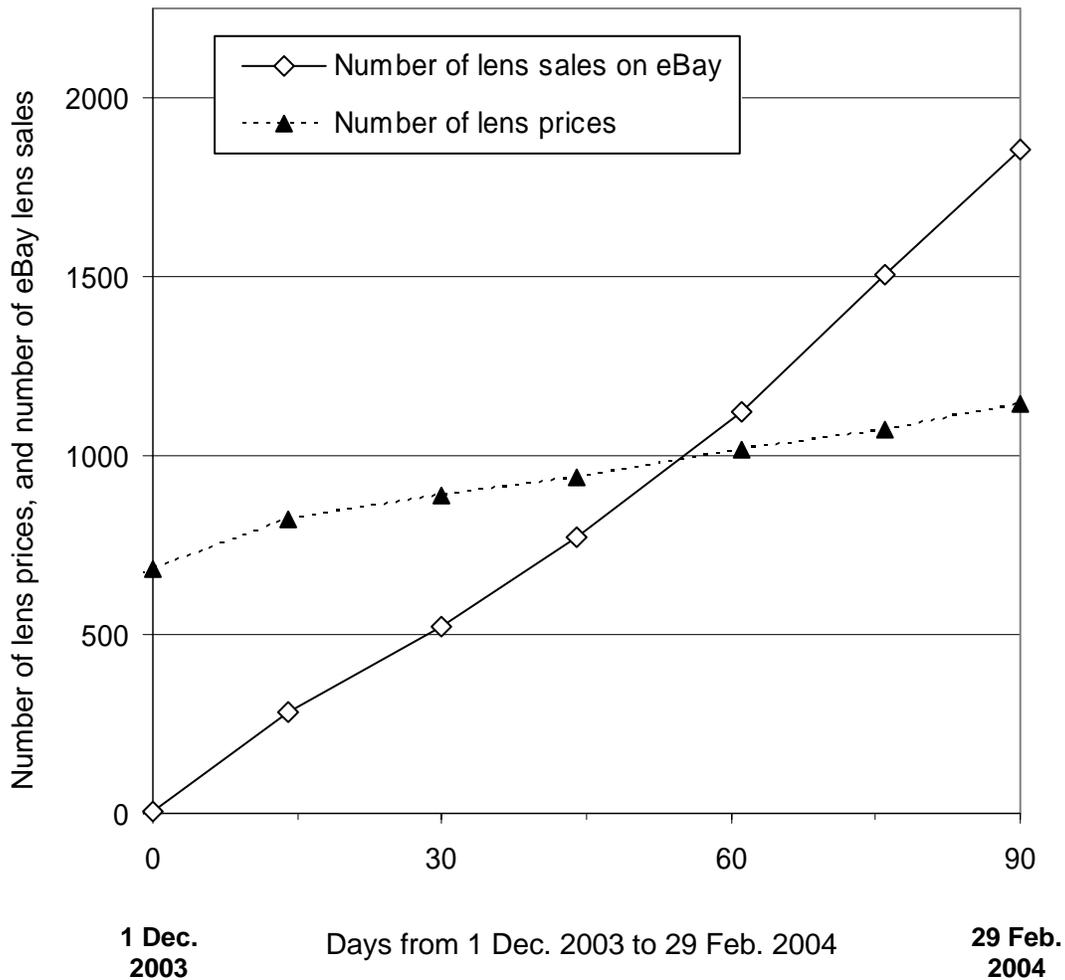


Figure 1: Growth of SPLOSdb over time.

## 2.2 Lens names and abbreviations

Abbreviations and acronyms are defined in Annex A.

### SMC K-mount Lenses

The SPLOSdb database pages and this document's Annex tables use abbreviated lens names, based on the letter(s) used to identify the different lens series, as defined below.

K	SMC PENTAX lens series, MF <sup>1</sup>	note: the letter K is not part of the official lens name
M	SMC PENTAX-M lens series, MF	
A	SMC PENTAX-A lens series, MF, introduces 'A' lens aperture setting for AE <sup>1</sup>	
F	SMC PENTAX-F lens series, AF <sup>1</sup> , first autofocus series	
FA	SMC PENTAX-FA lens series, AF, more AF, zoom and flash support features	
FAJ	SMC PENTAX-FAJ lens series, AF, no manual aperture control ring (boo, hiss...)	
DA	SMC PENTAX-DA lens series, AF, for the smaller image size on *istD digital cameras, not for 35mm film cameras with <i>full format</i> 24 x 36 mm image size.	

The names used in this document for specific SMC Pentax lenses begin with "SMCP", followed by the lens series letter(s), focal length, f (mm), and maximum aperture,  $a_{MAX}$ . For example,

SMCP 28/3.5 is a "SMC PENTAX 1:3.5/28" (i.e. a 'K' lens)

SMCP-FA 24-90/3.5-4.5 AL IF GC is a "SMC PENTAX-FA 1:3.5-4.5 24-90mm IF & AL"

"AL", "IF" and "GC" are defined in Annex A. For more information on Pentax K-mount lenses, cameras and other stuff, see Bojidar Dimitrov's K-mount site, <http://kmp.BDimitrov.de/>.

### SMC Takumar and older Takumar M42 screw-mount lenses

The SPLOSdb names for SMC Takumar and non-SMC Takumar M42 lenses follow a similar pattern to SMCP K-mount lenses. For example, a "Super-Multi-Coated TAKUMAR 1:4/300" is "SMCT 300/4". The convention breaks down a bit for older lenses, but the names should be clear. For example, a "Super-Macro-Takumar 1:4/50" is a "Super-Mac-Tak 50/4" in SPLOSdb.

The M42 screw-mount is also known as the universal and Pentax screw mount. For more information on Pentax M42 lenses, see the Asahi Optical Historical Club site, [www.aohc.it](http://www.aohc.it)

### Third party lenses and other stuff

The names used for third party lenses and other stuff such as teleconverters, flashes and LX accessories, should be easy to understand and unique. Look for "third party" on Monaghan's Megasite for more information on third party lenses [medfmt.8k.com/mf/index.html](http://medfmt.8k.com/mf/index.html).

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<sup>1</sup> MF = manual focus, AF = auto-focus, AE = auto-exposure, see Annex A.

## 2.3 Lenses and other stuff in the database

A *prime* lens has one, fixed focal length. A *zoom* lens has variable focal length, ranging from a shorter focal length with a wider angle of view, to a longer focal length with a narrower angle of view. Zooms are generally either (i) *two-touch*, with one control ring for changing focal length and another for focus, or (ii) one-touch *push-pull* lenses, where the lens is focused by rotating the control ring and zoomed by pushing and pulling the same control ring. See Monaghan's Megasite discussion of primes vs. zooms at [medfmt.8k.com/third/primes.html](http://medfmt.8k.com/third/primes.html).

### SMC Pentax prime lenses

All SMC Pentax prime lenses from SMCP, -M, -A, -F and -FA series are included for both prices and number of eBay sales, except not the four prototype primes identified later in this section.

### SMC Pentax zoom lenses

All SMC Pentax zoom lenses from SMCP, -M, -A, -F, -FA, and -FAJ series are included for prices; all zooms except not the -FAJ series are included for number of eBay sales; and, the three prototype zooms identified later in this section are not included for price or count. The -FAJ lenses are available new at many places, and the new -DA series (one lens, so far) is included in the \*istD digital gear category.

### Takumar M42 screw-mount lenses

All SMC Takumars and a few non-SMC M42 screw-mount Takumars are included for both prices and number of eBay sales. The non-SMC M42 Taks are: 17/4 and 18/11 Fish-Eye; 20/4.5, 24/3.5, and 35/2 Super-Taks; 50/4 Mac-Tak and Super-Mac-Tak; and, 100/4 bellows Tak (some SMC Taks are labeled Honeywell Pentax).

### Big Four lenses

The "Big Four" brands are Sigma, Tamron, Tokina and Vivitar. SPLOSdb includes "cult classics" ([www.medfmt.8k.com/third](http://www.medfmt.8k.com/third)) and newer models, with many but not all of the following: Sigma EX and XQ, Tamron SP, Tokina AT-X, and Vivitar Series 1 (from the '70s & '80s). The presence or absence of any particular lens does have any special meaning. All of the listed lenses are included for prices, but some are not included in the eBay count, as indicated by an 'x' in the eBay count column.

### Other lenses

SPLOSdb includes many but not all lenses from: Carl Zeiss Jena, Kiron, Spiratone/Sun/Sigma; and also a sampling of Enna, Meyer, Schneider, and etc... The presence or absence of any particular lens does have any special meaning. All of the listed lenses are included for prices, but some are not included in the eBay count, as indicated by an 'x' in the eBay count column.

## Other Stuff

The Other Stuff category includes: SMC Pentax teleconverters, Pentax AF 'F' and 'T' series flashes, macro gear, special adapters and meters; and also the MZ-S body and Winder ME II. The teleconverters and "F" series flash are included for price and number of eBay sales, but most of the rest are included for price only.

## LX Stuff

A variety of LX stuff is included for both prices and number of sales. LX body prices and number of eBay sales are grouped in a number of categories, defined by body version (v1 and v2 for early and late), finder (included or not), lens (included or not), and in some cases, relative value of lens included with the LX. The twelve separate rows of LX camera data are counted as one item for the SPLOSdb size information in Table 1. The LX Stuff category also includes; finders, focus screens, winder, motor, power packs, backs and misc. covers & connectors.

The key differences between 'early' and 'late' versions of the LX are the maximum ISO setting (1600 for early, vs. 3200 for later) and the shutter lock (an integral tab for early, vs. a semi-circular metal shield for later). There are other, more scarce versions of the LX; one of which has my SMCP-A 20/1.4 mounted on it (more on this later). For more information on the LX, see:

- Bojidar Dimitrov, <http://kmp.BDimitrov.de/>
- Rob Studdert, <http://members.ozemail.com.au/~distudio/thepentaxlx.html>.
- Leonard Foo, <http://www.mir.com.my/rb/photography/hardwares/classics/pentaxlx/>

## \*istD Stuff

The new \*istD camera, new -DA lens series (so far, one lens) and a few digital accessories are included in this category. This category will grow as new Pentax digital gear hits the market. Table 1 shows zero eBay sales for the \*istD, as it is not tracked for number of sales, but there are current prices for the \*istD, from both eBay and Other Suppliers.

## Pentax K-mount lenses not in SPLOSdb

### A. Not in SPLOSdb: SMCP prototype lenses

These SMC Pentax prototype lenses described at <http://kmp.BDimitrov.de/> are not in SPLOSdb.

SMCP Birds-Eye 8.4/2.8

SMCP 20/1.4

SMCP-M 35/1.4

SMCP 300/2

SMCP-M 32-39/2.8,

SMCP 37-70/2.8

SMCP 35-70/2.8 Autofocus

I have not observed even one eBay sale nor even one price at Other Suppliers for any of these prototypes, since starting to watch this stuff in 2002. I'd love to get one, I'd even consider trading the SMCP 18/3.5 which I haven't yet acquired for a 20/1.4 or 300/2.

## B. Not in SPLOSdb: non-SMC Pentax K-mount lenses

SPLOSdb does not contain any non-SMC Pentax K-mount lenses. In order to avoid confusion with SMC lenses, the non-SMC Pentax lenses with "Pentax" or "Takumar" in their names are listed in Annex C. See <http://kmp.BDimitrov.de/> for more details on all Pentax K-mount products, including the non-SMC lenses.

## 2.4 Documents and database files

You are now reading the documentation file **SPLOS.pdf**. The entire SPLOSdb distribution contains the following eleven files.

<b>SPLOS.pdf</b> .....	documentation (you are reading it now) [251,331 bytes]
<b>SPLOSdb.pdf</b> .....	database for printing and viewing (24 pages from 9 worksheets) [388,099 bytes]
<b>SPLOSdb1-Kp.csv</b> .....	SMC Pentax prime lenses, extracted worksheet [11,295 bytes]
<b>SPLOSdb2-Kz.csv</b> .....	SMC Pentax zoom lenses, extracted worksheet [6,668 bytes]
<b>SPLOSdb3-Tak.csv</b> .....	SMC Takumar lenses, extracted worksheet [4,213 bytes]
<b>SPLOSdb4-big4.csv</b> .....	Big Four: Sigma, Tokina, Tamron and Vivitar, extracted worksheet [13,333 bytes]
<b>SPLOSdb5-oLens.csv</b> .....	other lenses, extracted worksheet [9,486 bytes]
<b>SPLOSdb6-oStuff.csv</b> .....	other stuff, extracted worksheet [4,045 bytes]
<b>SPLOSdb7-LX.csv</b> .....	LX and accessories, extracted worksheet [4,067 bytes]
<b>SPLOSdb8-istD.csv</b> .....	*istD and a few accessories, extracted worksheet [1,677 bytes]
<b>SPLOSdb9-notes.csv</b> .....	notes cited in the previous files by [n], extracted worksheet [1,415 bytes]

### 3 Most Common Lenses: Top-10 Lists

Ever wonder how rare that SMCP-M 40/2.8 *pancake* lens really is ? Well, it's currently number seven on the Top-10 list of most common SMC prime lenses. More *pancake* lenses were sold on eBay over three months than *any* single type of SMC Pentax zoom lens.

This section shows "Top-10 Lists" for the five SPLOSdb lens categories, based on the number of eBay sales between 1 December 2003 and 29 February 2004: "f" is focal length in millimeters (mm), "a<sub>MAX</sub>" is the maximum aperture, and "n" is the number of sales on eBay.

**Table 3.1:** Top-10 List for SMC Pentax prime lenses,  
 Top-10 eBay sales = 469, total eBay sales = 750.

	Lens	f (mm)	a <sub>MAX</sub>	n
1	SMCP -M	50	2	107
2	SMCP -M ver.1	28	2.8	68
3	SMCP -M	50	1.7	63
4	SMCP -M	50	1.4	47
5	SMCP -A	50	2	46
6	SMCP -M	135	3.5	38
7	SMCP -M	40	2.8	28
8	SMCP -M	200	4	25
9	SMCP -A	28	2.8	24
10	SMCP -A	50	1.4	23

**Table 3.2:** Top-10 List for SMC Pentax zoom lenses (not incl.-FAJ,-DA),  
 Top-10 eBay sales = 171, total eBay sales = 352.

	Lens	f (mm)	a <sub>MAX</sub>	n
1	SMCP -F rfe	35-80	4-5.6	25
2	SMCP -M ver.1	80-200	4.5	23
3	SMCP -FA PZ rfe bk	28-80	3.5-4.7	22
4	SMCP -A pp rfe	70-210	4	21
5	SMCP -M	40-80	2.8-4	19
6	SMCP -M	75-150	4	14
7	SMCP -F rfe	28-80	3.5-4.5	13
8	SMCP -A rfe	35-70	4	12
9	SMCP -A rfe	35-80	4-5.6	11
10	SMCP -A rfe tt	35-105	3.5	11

**Table 3.3:** Top-10 List for SMC Takumar lenses, Top-10 eBay sales = 177, total sales = 257.

	Lens	f (mm)	$a_{MAX}$	n
1	SMCT	28	3.5-16	32
2	SMCT	50	1.4-16	32
3	SMCT	135	3.5-22	28
4	SMCT Macro	50	4-22	18
5	SMCT	55	1.8-16	15
6	SMCT	135	2.5-22	13
7	SMCT	200	4-22	12
8	SMCT	35	2-16	9
9	SMCT 2 mods	55	2-16	9
10	SMCT Macro [1]	100	4-22	9

**Table 3.4:** Top-10 List for Big Four lenses, Top-10 eBay sales = 108, total eBay sales = 277.

	Lens	f (mm)	$a_{MAX}$	n
1	Tamron SP Macro [10.9.9]	90	2.5	32
2	Vivitar S.1 Macro [Kino] vf	70-210	3.5	17
3	Vivitar Series 1	28-90	2.8-3.5	14
4	Tamron SP (52A) tt	70-210	3.5	13
5	Sigma Mini-Wide II	28	2.8	12
6	Tamron SP	17	3.5	10
7	Tamron BBAR MF	28	2.5	10
8	Vivitar	28	2.5	10
9	Tamron SP CF Macro MF	28-80	3.5-4.3	9
10	Tamron SP MF LD IF	300	2.8	8

**Table 3.5:** Top-10 List for Other Lenses, Top-10 eBay sales = 100, total eBay sales = 221.

	Lens	f (mm)	$a_{MAX}$	n
1	C Zeiss J Flektogon [6.6]	35	2.4	31
2	C Zeiss J Flektogon [9.8]	20	2.8	19
3	Kenko [1] 0.15x FE aux	x0.15	x	18
4	Helios Helios 40-2 bk	85	1.5	13
5	Kiron Macro 1:4 MC	80-200	4.5	11
6	C Zeiss J Sonnar MC [6.4]	200	2.8	8
7	Kiron	28	2	8
8	C Zeiss J Flektogon [10.6]	20	4	7
9	MIR MC MIR-47K	20	2.5	7
10	Meyer Domiplan [3.3]	50	2.8	6

## 4 Lens Quality Rating System

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Table 4.1 defines the SPLOSdb lens quality rating system which is shown in the first column of the lens database pages.

**Table 4.1:** SPLOSdb lens quality rating system

Symbol	Description
	no symbol (blank) = not rated
-	OK, but not particularly notable performance
*	good
**	very good
(!)	excellent
(!!)	great, exceptional, best of the (!)
x	poor, and/or low resolution (relative to similar f, $a_{MAX}$ )
?	not sure - conflicting information

This lens quality rating system was developed to indicate how well a particular lens is expected to perform optically, if it is in *Excellent* or better condition. Section 6.1 defines *Excellent* and other conditions, which are used to define the SPLOSdb price categories.

This lens quality rating system has a strong emphasis on optical quality. A lens which is OK mechanically and has excellent optics gets **(!)**, such as the SMCP-FA 28-70/4 (see the first two refs below). On the other hand, if a lens has “beautiful all-metal construction, great balance, silky smooth focus and aperture, slight problem with flare, good enough for 5x7 prints”, then it would be a ‘-’ (at the most). The quality rating for a lens with excellent optical resolution test results is not necessarily a **(!)**, but poor results for an optical resolution test will be “**x**”.

### Information Sources

The SPLOSdb lens quality rating system is based on the author’s interpretation of information in the following primary sources:

- Alex Nemerovsky, collated comments (BOA’s Gallery)  
[home.att.net/~alnem/html/pentax\\_primes.html](http://home.att.net/~alnem/html/pentax_primes.html)
- Stan Halpin, collated comments  
[www.concentric.net/~smhalpin.html](http://www.concentric.net/~smhalpin.html)
- Robert Monaghan, 3rd party ‘cult classics’ and other info (Megasite)  
[medfmt.8k.com/third/cult.html](http://medfmt.8k.com/third/cult.html)
- Lars Kjellberg, Photodo optical resolution ‘MTF’ tests  
[www.photodo.com](http://www.photodo.com)
- Yoshihiko Takinami, PDML optical resolution tests  
[www.takinami.com/yoshihiko/photo](http://www.takinami.com/yoshihiko/photo)
- Frederick Wasti, PDML optical resolution tests  
[www.tfkp.physik.uni-erlangen.de/yp/personal/ralf/photo/procedure.html](http://www.tfkp.physik.uni-erlangen.de/yp/personal/ralf/photo/procedure.html)

These primary sources are supplemented by a number of other sources, including:

Arnold Stark, <http://www.arnoldstark.de/pentax.htm>

Choo Mun Fai <http://www.republika.pl/mparvi/fotomag.txt>

Dario Bonazza *et al*, AOHC [www.aohc.it](http://www.aohc.it)

James Prichard, [http://www.republika.pl/mparvi/other\\_5.txt](http://www.republika.pl/mparvi/other_5.txt)

Klaus Schroiff, PhotoZone <http://photozone.de/>

Olle Bjernulf, [http://www.republika.pl/mparvi/olle\\_ii.htm](http://www.republika.pl/mparvi/olle_ii.htm)

Peter Spiro, <http://ca.geocities.com/spirope/pentlens.html>

Ralf Stubner, <http://www.tfkp.physik.uni-erlangen.de/~ralf/photo/>

Rob Studdert, Digital Image Studio, <http://members.ozemail.com.au/~distudio/publications/>

Valentin Donisa and Fred, the Pentax Lens Gallery <http://plg.komkon.org/>

and, personal experience.

## 5 Lens Specifications

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SPLOSdb lens specification data includes (where available): minimum focus distance; weight (with K-mount adapter, if required, but no caps); maximum diameter; minimum length at infinity focus; filter diameter; and, for third party lenses, the type of lens mount (i.e. M42, TX, etc.).

The data on SMC Pentax lenses should be very reliable (see the sources listed below). Most data on new third party lenses for Sigma EX, Tamron SP and Tokina AT-X are from the manufacturers. Data on older Big Four and other lenses are from a wide variety of sources, including eBay descriptions. Please let me know if you find any errors, or if you have data to fill in some of the blank spaces.

### Information Sources

Most SMC Pentax equipment data are from Bojidar Dimitrov's Pentax K-mount site <http://kmp.BDimitrov.de/>. Also, Pentax herself is a good source of information, including manuals for both new and old gear, see [www.pentaxcanada.com](http://www.pentaxcanada.com), [www.pentax.com](http://www.pentax.com), and others.

Most information on SMC Takumar and Takumar lenses is from the Asahi Optical Historical Club, AOHC, ([www.aohc.it](http://www.aohc.it)) and Peter Jonkman's Spotmatic site ([spotmatic.web-page.net](http://spotmatic.web-page.net)) - which has been silent for recent months.

Information for other lenses is from manufacturers, eBay descriptions and specialty sites, including: [www.photodo.com](http://www.photodo.com) [www.captjack.exaktaphile.com/LENSPAGE.htm](http://www.captjack.exaktaphile.com/LENSPAGE.htm) [www.praktica-users.com](http://www.praktica-users.com) and [www.praktina.com](http://www.praktina.com).

## 6 Lens Prices

All prices are in US dollars.

Prices do not include shipping, import duty, handling fees and/or taxes.

eBay prices are for items actually sold.

Prices from Other Suppliers are the posted list prices of items for sale.

Typical exchange rates used in SPLOSdb are \$1 US = \$1.4 CA, and 1 GBP = \$1.7 US.

Prices are generally rounded-up to the nearest \$5.

Prices in **bold font** indicate the item was described as 'new' - this does not include 'like new'.

### 6.1 Price Categories: Lens Condition Rating System

There are four price categories:

1. E to E++ for eBay
2. M- to N for eBay
3. E to E++ for Other Suppliers
4. M- to N for Other Suppliers

#### Price Category Descriptions

E to E++ abbreviation [E], E = excellent

includes: E, E+, E++, 9, and 9+, also some E- and 8+, depending on the supplier.

description: the lens has clean & clear optics and is fully functional; there may be external wear on the body and control rings, and maybe a *little* dust inside, but nothing to reduce image quality. A small ding/dent in the filter ring is OK, if you can still mount a filter.

M- to N abbreviation [M], M = mint, N = new, LN = like new, NIB = new in box.

includes: M-, M, LN, N, NIB, 10-, 10, also some E+, E++ and 9+, depending on the supplier.

description: the lens is really clean, it looks barely used (if at all), and it functions perfectly.

#### Not included

A wide variety of conditions are excluded from SPLOSdb, such as:

bargain, user, good, very good, 7, 8, 8+.

Section 8.3 discusses buying lenses in "less than [E]" condition.

## Price spread

When a lens has prices for both [E to E++] and [M- to N] from the same source (e.g. eBay), the price spread should provide a good idea of the range of prices for that lens, but it is often far from exact for any particular sale. For example, consider a lens with SPLOSdb eBay prices of \$70 [E] and \$180 [M]. If another of the same lens sells for about \$80 and it looks like a 'solid' E, then I might raise the [E] price to \$75. If another lens sells for \$120 and it looks like a really nice E++, then I probably won't change either price - it's in between the E and M, where it should be. The general idea is to provide a reasonable estimate of the current market value.

## Import duty, fees and taxes for Canada

As far as I can tell, all lenses (new and used) are imported duty-free into Canada (see relevant parts of the *Customs Tariff* cited below). I haven't found any definitive information for other types of used photo gear (e.g. cameras, flash, etc.), but I have not yet been charged duty on any imported used photo stuff (remember this if you're asked to take a "blended rate" at the border).

Canada Border Services Agency (CBSA) <http://www.cbsa-asfc.gc.ca/menu-e.html>

Customs Tariff - Schedule XVIII

90.02	Objective lenses for
9002.11	For cameras...
9002.11.10	For photographic cameras... => tariff free (i.e. no import duty)

The Custom Tariff does change over time, so be sure to check with CBSA if you plan to buy photo gear while out of the country.

Some shipping companies charge extra handling and/or brokerage fees for imported stuff. Canadian Federal and Provincial sales taxes are usually collected when the item is delivered or when you pick it up.

## 6.2 eBay prices and Information

All eBay prices are for items which actually sold. A few relatively rare lenses have "x123" prices, where the 'x' indicates that the lens did not sell for '\$123'; either there were no bids made for a starting bid of \$123, or bids were made up to \$123, but this was below the reserve price.

The approximate running-average price is shown for recent sales. For example, SPLOSdb would show \$80 for a lens which was sold for \$70 and for \$90 within a few months (it would also show \$80 for sales of \$70 and \$85). Prices older than 6 months are usually replaced by new data.

Very high and very low prices are usually not included in the running average; sometimes a very high price is paid by a collector who *really needs* it, and sometimes it just seems stupid. On the other hand, sometimes a really nice (and usually expensive) lens is sold for a really low price - congratulations to the buyer.

### 6.3 Other Suppliers Prices and Information

SPLOSdb prices from Other Suppliers are the list prices of items for sale. Most Other Suppliers are camera shops with online inventories from Canada, the US and the UK. Annex B shows the abbreviation, name, location, and url for the Other Suppliers in SPLOSdb. Some of these sites are not always available online, and at least a few have gone 'offline' in recent months.

SPLOSdb usually shows the lowest price for any particular item, but not always. In some cases, a more expensive item is shown, if it is in better condition. For example, if one shop has a SMCP-FA 50/1.4 rated [E] for \$130 and another has one rated [E++] for \$155, then SPLOSdb would probably list the price and supplier for the [E++] lens. Also, if there is no listing for this lens in the [M] category, then SPLOSdb would list both; the first in [E] and the second in [M].

## 7 Lens Sales & Availability

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For most items, SPLOSdb includes the following information on sales and availability:

1. number of sales on eBay, “n”, between 1 December 2003 and 29 February 2004;
2. number of prices on eBay before counting sales started on 1 December 2003; and,
3. number of prices from Other Suppliers.

The most direct indicator of availability for any particular item is the number of eBay sales. This parameter was well-suited for making the Top-10 Lists in Section 3, as there were plenty of eBay sales for those lenses. The task of identifying the least common, or most rare, lenses is more subtle. This section first defines the procedure used to count the number of eBay sales, and then considers how to identify the most rare lenses.

### 7.1 Number of sales on eBay

The number of sales on eBay between 1 December 2003 and 29 February 2004 includes all sales on [www.eBay.com](http://www.eBay.com), plus all sales on [www.eBay.au](http://www.eBay.au) and [www.eBay.uk](http://www.eBay.uk) which say in the “Shipping and payment details” section that they will ship to Canada, the US, North America, or worldwide. As far as I can tell, all photo listings on eBay Canada ([www.eBay.ca](http://www.eBay.ca)) are also listed on theBay ([www.eBay.com](http://www.eBay.com)).

Many eBay sellers state they will only ship to one country or area (e.g. US, UK, or Europe). In most cases, these sellers will ship to Canada (or wherever you live) if you ask politely, but I did not have time to ask this question while gathering data for SPLOSdb. I certainly don't hesitate to ask if I have interest in bidding; unless both the item description and the shipping section say “will only ship to ...X...”. In this case, they mean it - don't bother to ask. Instead, consider if you have a relative, friend or acquaintance in country X who could receive it and then send it on to you (you'll have to pay twice for shipping).

The number of eBay sales does not include eBay sites: **.de .nl .fr .nz .be .it .ch .es**. Of these sites, Germany [www.eBay.de](http://www.eBay.de) consistently has a very large inventory of Pentax gear. All of these sites are worth checking if you're looking for something special.

An “x” in the “n” column for number of eBay sales indicates this item is not included in the counting; usually it's available new or it's common on the used market. It is possible that some of the uncounted lenses are more common than some in the top-10 lists, but I doubt it.

## 7.2 Number of prices

SPLOSdb has the four following price counters.

n = number of eBay sales between 1 December 2003 and 29 February 2004  
n\$e = number of prices in eBay category [n\$e = 0, 1 or 2]  
n\$o = number of prices in Other Supplier category [n\$o = 0, 1 or 2]  
n\$p = total number of prices

All four counters are included in the comma-delimited **.csv** database files, but the last three are not shown in the **.pdf** file, which is formatted for viewing and printing.

The total number of prices, n\$p, is calculated from the other three counters, as follows.

- (i) for  $n \geq n\$e$ ,  $n\$p = n + n\$o$       note:  $(n\$e)_{MAX} = 2$ , so this is for all lenses with  $n \geq 2$   
(ii) for  $n < n\$e$ ,  $n\$p = n\$e - n + n\$o$       note: only for lenses with  $n = 0$  or  $1$

Most lenses in SPLOSdb have more than two eBay sales, so the first equation covers the majority of cases; however, for lenses with no eBay sales and with one eBay sale, the second equation is used to include the number of prices from eBay sales before 1 December 2003.

The total number of prices counter, n\$p, represents the *minimum* number of prices, because every eBay price before 1 December 2003 and every Other Supplier price may represent more than one lens (with a corresponding price). For example, there may be a dozen Other Suppliers with a particular lens for sale in the [E] price category, but only one is recorded in SPLOSdb.

## 7.3 Lens availability lists

The total number of prices, n\$p, is used to make the *Lens availability lists* shown in Annex D for the SMC Pentax prime, SMC Pentax zoom, and SMC Takumar lenses. These lists are sorted in order of n\$p, so the lenses at the bottom of each list are the least common, or most rare. The first ten lenses on each availability list are the same lenses and in the same order as the “Top-10 Lists” in Section 3.

Availability lists are not shown for the Big Four and Other lens categories, as they do not include all of the lenses available in those categories. One of the main reasons for compiling these lists is to determine which lenses are the most rare - it does not make sense to do this for incomplete categories, as the most rare lenses may not be included.

The Annex D availability lists are sorted as follows.

1. first sort by <n\$p> in descending order,
2. then sort by <n> in descending order,
3. then sort by <n\$o> in ascending order,
4. then sort by lens name, focal length and aperture (same order as the database pages)

This sorting process is based on the logic that lenses which are only available from Other Suppliers are probably less common than those which have appeared on eBay during the relatively brief time that I was observing eBay lens sales. I am quite certain that more lenses are currently being bought and sold on eBay than at all of the Other Suppliers combined, but the Other Suppliers have been accumulating inventory for a relatively long time. On the other hand, it really doesn't matter - lenses near the bottom of the availability lists are the most rare.

## 8 Discussion

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This discussion section is an opportunity to examine the reliability of SPLOSdb, to explore some interesting trends, and to consider a number of miscellaneous topics which came to mind while compiling and documenting SPLOSdb.

### 8.1 SPLOSdb Reliability

#### eBay search strategy

The SPLOSdb strategy for searching eBay used a number of separate search strings, and multiple browser windows - usually two. In this way, a new search can be loading in one window while the results of a previous search are displayed in another window. The search strings are defined in Annex E. One problem with this approach is that items which are not explicit matches for the search criteria may be missed. All eBay searches were usually performed daily, using eBay lists sorted with the most recent listings on top. In this way, newly-listed items were identified for "tracking" from (usually) three to ten days before the end of the auction. The eBay item number of each item was copied and pasted into a simple text file, organized in sections according to the date of one day after the end of the auction. On each day, the items with auctions which ended on the previous day were checked, and SPLOSdb was updated. In general, the step of identifying newly-listed items to track is the most time-sensitive, as desirable items with a "Buy It Now" option can sell quickly. My location on the East coast of North America, one hour ahead of Eastern Standard Time is an advantage, as I can get online before most of the continent is out of bed. On average, between one-quarter and one-third of the lenses listed on eBay did not sell.

In order to assess the reliability of this approach, the entire eBay category for 35mm SLR Pentax lenses was twice reviewed to identify any items that were missed. The first review was done in mid-January 2004, and the second in mid-February, 2004. Each review included about one week of current listings. The two reviews included a combined total of about 1300 items in the 35mm SLR Pentax lenses category. Overall, 15 items were missed, which represents approximately 1.2 % of listed items (they are now in SPLOSdb). Only two of the missed lenses did not match search

criteria (e.g. “50mmF2” did not match “50” nor “50mm”). The remainder were items that either (i) I didn’t notice, or (ii) the item did not match search criteria because of a poor description (e.g. a “Super-Takumar 50/1.4” was really a “SMC Takumar 50/1.4”).

## **Other Supplier data**

Items from Other Suppliers with recent dates are the most likely to be still available. Some items have dates which are quite old, but their prices are retained to provide guidance for identifying the really rare lenses (i.e. those with no prices at all).

Sixty-one Other Supplier sites which are relatively good for Pentax stuff were visited on 29 Feb 2004 for the final update of Other Supplier prices in SPLOSdb. Some price data may be from sites that were not updated for a long time; this can be avoided on sites which show the date of most recent changes, but many sites do not.

Lenses which do not have a condition rating are usually not included in SPLOSdb, unless there are no other data for that particular lens, in which case they are assumed to be in [E] condition.

Most new lens prices are from either B&H [www.bhphoto.com](http://www.bhphoto.com) or Adorama [www.adorama.com](http://www.adorama.com). In general, prices were first checked at B&H and then Adorama, and so the ‘ado’ new prices are those lower than B&H - in most cases, their prices are the same to within \$5.

## **Lens classification: SPLOSdb is probably correct (most of the time)**

All lens listings in SPLOSdb should be well-defined and unique. In nearly all cases, the data for a particular listing are for that specific lens, but there are a few cases where this is not strictly true. For example, there are thirteen “Tamron SP 70-210/3.5-4 Model 52A tt” lenses, but I’m pretty sure that two or three “Model 19AH pp” versions of this lens are included - there is no obvious price difference between the two models (and they are probably both fine lenses; I have one of the tt’s). A similar situation exists for the Super-Tak 35/2, SMCT 50/1.4, SMCT 55/1.8 and SMCT 135/2.5, which each have two versions listed as one item. There are probably a few other cases, such as the Carl Zeiss Jena 35/2.4, which includes data for the two most recent versions of this lens, but not many.

Another type of classification inaccuracy can occur when the description for a relatively rare lens is ambiguous. This happens most often in Other Supplier listings, as eBay items usually have pictures that help to resolve ambiguities (see “lens detective”, later). For example, the following lens is listed in SPLOSdb as SMCP 28/2; it could also be -M or -A.

PENTAX 28/2.0 SMC K-MOUNT EXC+ \$349.95

When the description for a relatively common lens is ambiguous (i.e. no reasonable matches are rare), then it is simply ignored and not put in SPLOSdb.

## 8.2 Trends in number of sales and prices

### Number of sales - primes vs. zooms

In his discussion of primes vs. zooms, Robert Monaghan writes (concerning new equipment) "Zoom lenses are out-selling prime lenses by five to one!" [medfmt.8k.com/third/primes.html] .

SPLOSdb shows a different picture for used SMC Pentax lenses, with primes outselling zooms by about two to one overall (750:352), and by nearly three to one (469:171) for lenses in the top-ten lists, which account for over half of the sales of both primes and zooms. I suspect this reflects two trends: (i) many photographers have jumped from the good ship MV Pentax to go digital with other brands, and so there are lots of good SMC Pentax lenses on the used market; and, (ii) many of the people who buy on the used market actually do a little research first - many of the inexpensive primes are high quality lenses, especially when compared to the inexpensive zooms.

Don't get me wrong, I use zooms a lot, and I highly value the sharp ones with low distortion (stay tuned for my PDML lens test results...), but I generally want convenience when I use a zoom - I want open-aperture metering (i.e. excludes M42 on a K-mount body), and I wouldn't mind AF as well (with MF as an option, of course). On the other hand, I don't mind using a prime lens with pre-set or manual aperture when it provides high quality, low distortion, and/or really wide aperture for an affordable price. On the other-other hand, one on my favourite zooms is a manual aperture Vivitar Series 1 35-85/2.8 which I converted from M42 to K-mount (did the same to a Series 1 200/3 and a Tokina SL 17/3.5), so don't listen to me...

The Big Four and Other lenses should not be used to compare sales of primes vs. zooms, as they do not contain all of the lenses available in these categories.

### Price trends

Prices for eBay sales of the more common and moderate-quality lenses were 20% to 30% lower in Feb 2004, than in Dec 2003 and Jan 2004 (and this trend continued through March 2004, while I was writing this documentation). Prices for less common and high quality lenses showed no apparent difference. I anticipated that prices would drop in early January 2004, after the "Christmas rush", but they did not.

Prices at many online used camera stores have been dropping since the summer of 2003. This is probably a direct response to competition from eBay. In 1992 and early 1993, eBay used lens prices were generally about one-half of camera store used lens prices. On many occasions, camera-store eBay members would drop out of lens auctions when the bidding reached about half of the expected 'retail' price. Over the past few months, some of the better Canadian camera stores have gone out of business (sorry to see you go, cex), and others have reduced used gear prices and become more active on eBay (good luck, cm).

### New prices

New prices for many desirable, high quality lenses have gone up by about 5% since 1 Dec., 2003.

### 8.3 Identification: be a lens detective

What is it ? Sometimes a lens description is inconsistent. For example, consider:

Pentax-M 50 2.8 Macro

There is no SMCP-M 50/2.8 lens, macro or not. If we assume that only one part of this description is wrong, and we consider only manual focus SMCP lenses, then it could be a SMCP-M 50/4 1:2 macro or a SMCP-A 50/2.8 1:2 macro. In my experience, an incorrect lens series "letter" is more common than an incorrect aperture value (based on resolving eBay inconsistencies between written descriptions and pictures), and so this lens would be entered in SPLOSdb as SMCP-A 50/2.8 1:2 macro.

Now, consider:

Pentax-M 50 2.8 1:1 Macro df = 49mm                      note: "df" is filter diameter, see Annex A

At least two parts of this description must be wrong. If we consider all SMCP lenses, the only 50mm 1:1 macros are the autofocus -F and -FA 50/2.8, with df = 52 mm. So, if it is 1:1, then both the lens series "-M" and "df" must be wrong. On the other hand, if the 1:1 is wrong and we consider 1:2 macros, then it could be a SMCP-M 50/4 1:2 macro or a SMCP-A 50/2.8 1:2 macro (same as above), but at least two parts are wrong (the "2.8" and "1:1", or the "-M" and "1:1"): this lens would not be listed in SPLOSdb.

Suggestion: save pictures of known and well-described lenses for comparison with future listings that are poorly described (you can get a bargain if you are sharp). You can use simple image processing techniques to improve the quality of eBay pictures, which are often very dark. I'm a registered user of an old version of the shareware app LView Pro (1.C5 1993-95), and it does a fine job. An effective way to read faint text is to use the 'negative' retouch function: dark text on a 'white' lens is much easier to read than white text on a black lens. Also, sineh (hyperbolic sine) image enhancement does a good job of brightening an image while retaining details.

### Ask questions

#### Basic

Please describe the optical, mechanical and cosmetic condition of the lens. Thanks, Jim.

#### More detail

Please describe the lens in a bit more detail.

Is there anything that would interfere with the proper optical or mechanical operation of the lens ?

Are there any marks on the front, rear or internal glass ?

Is there any haze or fungus in the lens ?

Is there any oil on the aperture blades ?

Do the focus and aperture work well ?

Thanks, Jim

### What type of camera mount ?

I want to know what make or brand of camera the lens fits on. It may have a "screw mount" with a threaded screw at the bottom of the lens or a 'bayonet' mount with (probably) three tabs that stick out a bit around the outer edge of the end of the mounting collar. If you send pictures of the camera mount end, I might be able to tell - I'm looking for Pentax, but I'll let you know either way.

Question 1: is it a screw mount ?

Question 2: are there any words or letters engraved on the bottom of the mounting plate or side of the lens near the mounting plate ?

Thanks, Jim.

### Detective... (only the facts, ma'am...iya).

Please tell me the make, model and maximum aperture. Thanks, Jim.

### in English, please...

Please provide an English translation of the description. Thanks, Jim.

### Shipping cost (especially if you're not in the US)

Please tell me the cost for shipping to:

S. Claus  
1 North Pole  
Canada H0H 0H0

Thanks, S.

**Hint:** read and understand the description (corollary - don't sound like an idiot).

**Quiz:** what are the obvious visual differences between versions 1 and 2 of the SMCP-M 28/2.8 ?

### LX bodies

If the body version is not defined (which is common), then ask the seller to tell you the maximum film ISO setting (1600 for older, version 1; 3200 for newer, version 2), and check pictures for the type of shutter lock (see the discussion and sites cited for LX Stuff in Section 2.3).

## 8.4 Buying lenses in less than [E] condition

SPLOSdb only includes lenses which are in condition ‘excellent’ [E] or better, but this does not mean that lenses rated less than [E] are not worth buying - it depends on what you want, and what you are willing and able to do. Most of the lenses I have purchased are [E] or better, but here are examples of a few others.

- Kiron 28/2 for \$20: aperture was stuck open; otherwise mint (oil on blades - I fixed it).
- SMCP-A 35-105/3.5 for \$40 (still in the mail): it was “dropped nose down on the grass” and now “the zoom ring is stiff”, but “the optics are fine”. I’ll either do a ‘reverse drop’ on it, or take it to Dave at Camera Repair Centres (what would you do?)<sup>2</sup>.
- Vivitar Series 1 24-48/3.8 (I did not win this auction): lens was “optically perfect without fungus, unmarked, focusing, zooming but not stopping down correctly...” (consistently good descriptions from eBay member44xx85); I suspect oil on the blades.

The most important thing is *caveat emptor* - buyer beware. Know what an item is before you bid on it, and don’t hesitate to ask questions to find out what you need to know - it’s up to you to learn enough to ask the right questions.

## 8.5 Future updates & improvements

It is definitely easier to keep current on prices than to track the number of eBay sales. I plan to keep more-or-less up to date with lens prices, and will probably release occasional price updates in the future. I will probably not make another run at tracking all eBay sales; unless it is a **distributed count**, where the watching/counting task is shared amongst a group of people, so that each person has a predetermined and unique range of focal lengths and/or brands to cover.

### Database improvements

SPLOSdb could be improved by increasing the number of price categories from four to six: [E], [M] and [N] for eBay; and, [E], [M] and [N] for Other Suppliers. There should be a separate data field for each of “price”, “number of sales” and “date”, for each of the six price categories.

The database could be further improved (and made more complex) by using array variables for the price/date/number-of fields. This would enable the automatic calculation of descriptive statistics for prices (i.e. average, minimum, maximum, and standard deviation), and permit an assessment of price distributions, including possible price cycles within the calendar year.

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<sup>2</sup> it turned out to be a write-off, infinity focus was way out of kilter - so far that we suspect some elements were taken out and put back incorrectly - it would probably cost more to attempt to fix it than to get another in [E++] condition; oh well, the front element group makes a great loupe; where is that field camera that I was looking for...

## Annex A: Abbreviations and Acronyms

Upper case acronyms are usually part of an item's name (e.g. AL for aspherical elements), or an abbreviation for a common descriptive phrase (e.g. MF for manual focus); lower case acronyms and symbols are usually my annotations.

Symbol	Description
	in first column (blank): SPLOSdb quality rating system = not rated
-	in first column: SPLOSdb quality rating system = OK, but not particularly notable
*	in first column: SPLOSdb quality rating system = very good
**	in first column: SPLOSdb quality rating system = excellent
(!)	in first column: SPLOSdb quality rating system = great, exceptional
(!!)	in first column: SPLOSdb quality rating system = best of the (!)
?	in first column: SPLOSdb quality rating system = not sure - conflicting information
[n]	see note 'n', used in database pages, notes shown on 'notes' page
[name...]	lens manufacturer (as opposed to brand name on the label)
[n1.n2.n3]	in description for other lenses: n1 = Nelements, n2 = Ngroups, n3=Nblades (if present)
1:n	macro magnification 1 to 'n'; 1:1 is life-size image on film, 1:2 is half of life size, ...
A, -A	SMC PENTAX-A lens series
A2	Adaptall 2 Tamron mount
$a_{MAX}$	maximum aperture (i.e. lens is wide-open), $a_{MAX} = (N_F)_{MIN}$
aa	auto-aperture: wide-open aperture for metering and finder view; when shutter is pushed, camera stops down lens to manually-selected $N_F$ for exposure: note that the (aa) pin on a M42 lens is not engaged when using a M42-K adapter on a K-mount body, and so it is desirable to have a manual/auto aperture switch on the lens to enable (ma)
AE	auto-exposure mode: camera body selects $A_v$ and/or $T_v$ for 'automatic' exposure
AF	auto-focus
aka	also known as (or labeled as)
AL	aspherical lens elements (same as ASP)
AoV	angle of view
APO	apochromatic lens, special coatings and/or special glass to reduce colour aberration
ASP	aspherical lens elements (same as AL)
aux	auxiliary lens, usually screws on to filter threads of 'real' lens
$A_v$	aperture value; camera setting " $A_v$ " indicates Aperture-Priority AE mode <i>math</i> : $A_v = \log(N_F)/\log(\sqrt{2})$
BBAR	broad band anti-reflection (Tamron coating)
bi	lens filters are "built-in" lens (usually more than one filter is bi)
bk	black finish on lens body
Cat	Catadioptric lens (mirror)
CF	close focus
chr	chrome finish on lens body (could be aluminum on some 'other' lenses)
cla	recent CLA (clean, lube, adjust)
(continued...)	

## Annex A (continued): Abbreviations and Acronyms

Symbol	Description
d	column in database, d = maximum diameter of lens barrel (mm)
DA, -DA	SMC PENTAX-DA lens series, for smaller image size of *istD, not for 35mm film cameras.
df	column in database, df = filter thread diameter (mm)
Dmin	column in database, Dmin = minimum focus distance (m), from film plane to object
E	excellent lens condition (see Section 6.1)
E++	excellent ++ lens condition (see Section 6.1)
ED	extra-low dispersion elements in lens (see APO)
EV	exposure value, $EV = Tv + Av$
F, -F	SMCP PENTAX-F lens series
f	focal length
FA, -FA	SMCP PENTAX-FA lens series
FAJ, -FAJ	SMCP PENTAX-FAJ lens series ("crippled" KAF2 mount)
FE (x/y)	fish eye; x = diagonal AoV, y = image diameter on film
FF	flat field, macro design to focus on single plane, good for pics of flat things
FREE	fixed rear-element extension (focusing mechanism)
GC	"ghostless coating" recent Pentax improvement to SMC
glass	column in database, glass = N;M, N is number of elements, and M is number of groups
IF	internal focus: barrel length does not change; front element does not rotate
K, -K	SMC PENTAX lens series (the original K-mount lenses)
K KA KAF KAF2	types of Pentax "K" bayonet mounts A = ae, AF = ae+AF, AF2 = AF + more see Section 2.3 for more info, or see <a href="http://kmp.BDimitrov.de/">http://kmp.BDimitrov.de/</a> for full description
l	column in database, l = length of lens (mm), front of lens to mount plate, at infinity focus.
LD	low dispersion glass (see ED, APO)
M, -M	SMC PENTAX-M lens series
[M]	mint lens condition, see Section 6.1
[M-]	mint - (minus) lens condition, see Section 6.1
M42	42mm screw mount (42mm diameter), also called 'Pentax screw', 'universal screw', etc., used on SMC and older Takumar lenses, plus many other lenses (not all old).
ma	manual aperture, not aa; view at selected $N_F$ , aperture closes and opens as ring is rotated
M, -M	SMC PENTAX-M lens series
MF	manual focus (could also mean 'medium format')
n	column in database, n = number of eBay sales from 1 Dec. 2003 to 29 Feb. 2004
N	new lens condition, see Section 6.1
$N_F$	f-number, or f-stop; the smallest f-number is the maximum aperture, $N_{F(MIN)} = a_{MAX}$ for example, the SMCP-A 50/1.7, has $N_{F(MIN)} = a_{MAX} = 1.7$ ; <i>math</i> : $N_F = (\sqrt{2})^{AV}$
n\$e	column in database, n\$e = number of prices in eBay category (n\$e = 0, 1 or 2), the n\$e column is not shown in the database .pdf file
n\$o	column in database, n\$o = number of prices in Other Suppliers category (n\$o = 0, 1 or 2), the n\$o column is not shown in the database .pdf file
n\$p	column in database, for $n \geq n\$e$ , $n\$p = n + n\$o$ , and for $n < n\$e$ , $n\$p = n\$e - n + n\$o$ (see Section 7.2), the n\$p column is not shown in the database .pdf file
(continued...)	

## Annex A (continued): Abbreviations and Acronyms

Symbol	Description
pp	push-pull zoom (one touch)
ps	pre-set aperture, two aperture control rings: one to 'set' $N_F$ , other to open for viewing and then to close to the 'pre-set' $N_F$ for exposure (acts as a 'stop' at selected $N_F$ )
PZ	power zoom
Q	SPLOSdb lens quality rating system, see Section 4
rf	rear filter
rfe	rotating front element (filter ring rotates as lens is focused)
rl	rectilinear: straight lines appear straight (as opposed to FE circular distortion)
S.1	abbreviation in database, Vivitar Series 1 (pro-series from mid-70's to early-90's)
SMC	Super Multi-Coated (c), Pentax
SMCP	SMC PENTAX lens series, MF (often called SMC K lenses)
SMCP-A	SMC PENTAX-A lens series, MF, introduce 'A' aperture ring setting for AE mode
SMCP-DA	SMC PENTAX-DA lens series, AF, for smaller image size on new *istD digital bodies, not for use on film cameras with full format 35mm image (24 x 36 mm)
SMCP-F	SMC PENTAX-F lens series, AF, first autofocus (except the hybrid SMCP-AF 35-70/2.8)
SMCP-FA	SMC PENTAX-FA lens series, AF, more AF & zoom features, see GC
SMCP-FAJ	SMC PENTAX-FAJ lens series, AF, no manual aperture control ring (boo, hiss)
SMCP-M	SMC PENTAX-M lens series, MF
SMCT	SMC TAKUMAR lens series, MF
sv	silver colour lens body, often has black colour focus/zoom rings
sv;bk	two models, one mostly silver other mostly black
t	inverse of shutter speed; for example, $t = 500$ for shutter speed of 1/500 sec, <i>math</i> : $t = 2^{TV}$
Tv	time value, camera setting "Tv" indicates Shutter-Priority AE mode, <i>math</i> : $Tv = \log(t)/\log(2)$
T,T2,T4,TX	3rd party lens mount (mostly Vivitar, some old Tamron...): K-mount adapters available
tt	two-touch zoom (separate zoom & focus rings)
v1	version 1: earlier, or older model
v2	version 2: later, or newer model
vf	varifocal: focus changes while zooming
wt	column in database, wt = weight of lens (kg), incl. K-mount adapter, if used, no caps.
x	in first column: SPLOSdb quality rating system = poor
x	in eBay 'n' column: means that eBay count is not made for this item
x123	in eBay price column: item did not sell, either no bids were made at starting bid of \$123, or highest bid of \$123 was below reserve bid.
xw	not compatible with
YS	3rd party lens mount, mostly Sun/Sigma/Spiratone: K-mount adapters available

## Annex B: List of Other Suppliers

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Abbrev	Name	Place	url
ado	Adorama	NYC	<a href="http://www.adorama.com">www.adorama.com</a>
aps	Atlantic Photo Supply	Halifax NS	<a href="http://www.atlanticphotosupply.com">www.atlanticphotosupply.com</a>
bcc	Bergen County Camera	Westwood NJ	<a href="http://www.bergencountycamera.com">www.bergencountycamera.com</a>
bd	B. Dimitrov (Pentax K-mount site)	Germany	<a href="http://kmp.BDimitrov.de/">http://kmp.BDimitrov.de/</a>
b&h	B&H	NYC	<a href="http://www.bhphotovideo.com">www.bhphotovideo.com</a>
bkyn	Brooklyn	NYC	<a href="http://www.brooklyncam.com">www.brooklyncam.com</a>
boca	Precision Photo Boca	Boca Ratan FL	<a href="http://www.bocaphoto.com">www.bocaphoto.com</a>
bpv	Beach Photo & Video	Daytona Beach FL	<a href="http://www.beachphoto.com">www.beachphoto.com</a>
brd	Brads Camera	San Antonio TX	<a href="http://www.usedphoto.com">www.usedphoto.com</a>
bui	BUI Camera	Temecula CA	<a href="http://www.buicamera.com">www.buicamera.com</a>
camW	Camera West	Monterey CA	<a href="http://www.camerawest.com">www.camerawest.com</a>
cc	Central Camera	Chicago IL	<a href="http://www.central-camera.com">www.central-camera.com</a>
cd	Camera Depot	Thousand Oaks CA	<a href="http://www.camera-depot.com">www.camera-depot.com</a>
cex	Camera Exchange II	Ottawa ON	<a href="http://www.camera-exchange.com">www.camera-exchange.com</a>
chUK	Camera House	Oakworth UK	<a href="http://www.the-camera-house.co.uk">www.the-camera-house.co.uk</a>
chc	Charlotte Camera	Charlotte NC	<a href="http://www.charlottecamera.com">www.charlottecamera.com</a>
class	Classic-Cameras	Catawba VA	<a href="http://www.classic-cameras.com">www.classic-cameras.com</a>
cm	Carsand Mosher	Halifax & Truro NS	<a href="http://www.carsand.com">www.carsand.com</a>
cmc	Cameta Camera	Amityville NY	<a href="http://www.cameta.com">www.cameta.com</a>
cole	Cole's Cameras	Fergus Falls MN	<a href="http://www.colesc cameras.com">www.colesc cameras.com</a>
cris	Chris's Camera	Aiken SC	<a href="http://www.chriscamera.com">www.chriscamera.com</a>
crs	Camera Repair Service	Pittsburgh PA	<a href="http://www.camerarepairservice.com">www.camerarepairservice.com</a>
ct	Camera Tech	Las Vegas NV	<a href="http://www.cameratech.net">www.cameratech.net</a>
cts	Camera Techs Inc	Seattle WA	<a href="http://www.cameratechs.com">www.cameratechs.com</a>
ctc	Camera Traders	Victoria BC	<a href="http://www.camera-traders.com">www.camera-traders.com</a>
ctl	Camera Traders Ltd	NYC	<a href="http://www.cameratradersltd.com">www.cameratradersltd.com</a>
ctzn	Citizens Photo	Porttand OR	<a href="http://www.citizensphoto.com">www.citizensphoto.com</a>
cwNW	Camera Works, NW	Beaverton OR	<a href="http://www.cameraworksnw.com">www.cameraworksnw.com</a>
cz	Camerazine (Penticton Camera)	Penticton BC	<a href="http://www.camerazine.com">www.camerazine.com</a>
dc	Discount Camera	San Fran CA	<a href="http://www.discountcamera.com">www.discountcamera.com</a>
fmt	Format	Rockville Center NY	<a href="http://www.formatcamera.com">www.formatcamera.com</a>
foto	fotografica	NYC	<a href="http://www.fotografica.com/">www.fotografica.com/</a>
gas	Adolph Gasser	San Francisco CA	<a href="http://www.adolphgasser.com">www.adolphgasser.com</a>
(continued...)			

## Annex B (continued): List of Other Suppliers

Abbrev	Name	Place	url
gdw	Goodwin	San Diego CA	<a href="http://www.goodwinphotoinc.com">www.goodwinphotoinc.com</a>
gz	Glazer's Cameras	Seattle WA	<a href="http://www.glazerscamera.com">www.glazerscamera.com</a>
henry	Henry's	Toronto ON	<a href="http://www.henrys.com">www.henrys.com</a>
igor	Igor's Camera Exchange	Cleveland OH	<a href="http://www.igorcamera.com">www.igorcamera.com</a>
jack	Jack's Camera Shop	Muncie IN	<a href="http://www.jackscamera.com">www.jackscamera.com</a>
keh	KEH	Atlanta GA	<a href="http://www.keh.com">www.keh.com</a>
ken	Kenmore Camera	Kenmore WA	<a href="http://www.kcamera.com">www.kcamera.com</a>
kex	Kamera Express (NL)	Amsterdam NL	<a href="http://www.kamera-express.nl">www.kamera-express.nl</a>
k-mar	Ken-Mar Camera	Albertson NY	<a href="http://www.kenmarcamera.com">www.kenmarcamera.com</a>
lev	Levine's	Boston MA	<a href="http://www.cameras.com">www.cameras.com</a>
mcb	MacBains	Calgary AB	<a href="http://www.mcbaincamera.com/">www.mcbaincamera.com/</a>
mcr	McRill's Cameras	Eugene OR	<a href="http://www.cameraguy.com">www.cameraguy.com</a>
mw	Midwest Photo Exchange	Columbus OH	<a href="http://www.mpex.com">www.mpex.com</a>
mwcc	MW Classic Camera	London UK	<a href="http://www.mwclassic.com">www.mwclassic.com</a>
mxv	MXV Photographic	Hempstead Rise UK	<a href="http://www.mxv.co.uk">www.mxv.co.uk</a>
nat	National Camera & Video	Minneapolis MN	<a href="http://www.natcam.com/">www.natcam.com/</a>
nwcam	NW Camera		<a href="http://nwcamera.com">nwcamera.com</a>
nwcc	Northwest Collector Camera	Seattle WA	<a href="http://nwcollectorcamera.com">nwcollectorcamera.com</a>
pac	Pacific Rim Camera	Salem OR	<a href="http://www.pacificrimcamera.com">www.pacificrimcamera.com</a>
pc	Precision Camera .Com	Austin TX	<a href="http://www.precision-camera.com">www.precision-camera.com</a>
pgo	PhotogoN, online classified		<a href="http://www.photogon.com">www.photogon.com</a>
pitt	Pittsburgh Camera Exchange	Pittsburgh PA	<a href="http://www.pghcamex.com/">http://www.pghcamex.com/</a>
pq	Presto	Quebec QU	<a href="http://www.presto.qc.ca">www.presto.qc.ca</a>
ps	Photo Stop	Westwood NJ	<a href="http://www.photostop.net">www.photostop.net</a>
ritz	Ritz Camera	Phoenix AZ	<a href="http://www.ritzcam.com">www.ritzcam.com</a>
russ	Russ' Camera and Video	Santa Barbara CA	<a href="http://www.russcamera.com">www.russcamera.com</a>
thom	Thompson Photo Products	Knoxville TN	<a href="http://www.thompsonphoto.com/">www.thompsonphoto.com/</a>
tj	Trader Jim's	Culver City CA	<a href="http://www.traderjims.com">www.traderjims.com</a>
tl	Technilab (Camera Repair.com)	West Nyak NY	<a href="http://db.technilab.com:8001/">http://db.technilab.com:8001/</a>
tod	Todco Camera Brokers	Mariette GA	<a href="http://www.mindspring.com/~todcam/">www.mindspring.com/~todcam/</a>
trv	Cliff Travis - All Seasons	Hastings-on-Hudson NY	<a href="http://www.allcamera.com">www.allcamera.com</a>
uc	University Camera	Iowa City IO	<a href="http://www.ucam.com">www.ucam.com</a>
v.v	Vintage Visuals	Calgary AB	<a href="http://www.vintagevisuals.com/">www.vintagevisuals.com/</a>
vis	Vistek	Toronto ON	<a href="http://www.vistek.ca/used">www.vistek.ca/used</a>
vUK	Vintage UK	London UK	<a href="http://www.vintagecameras.co.uk">www.vintagecameras.co.uk</a>
wood	Woodmere Camera	Merrick NY	<a href="http://www.woodcam.com">www.woodcam.com</a>
wh	Warehouse Photographic	Carrollton TX	<a href="http://www.warehousephoto.com">www.warehousephoto.com</a>

## Annex C: Non-SMC Pentax K-mount Lenses

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SPLOSdb does not contain data on non-SMC Pentax K-mount lenses. Some of the non-SMC Pentax K-mount lenses have names which are very similar to SMC lenses. In order to avoid confusion, non-SMC Pentax K-mount lenses with 'Pentax' or 'Takumar' in their names are identified below [1], For more information, see <http://kmp.BDimitrov.de/>.

<b>non-SMC Pentax K</b>	<b>f (mm)</b>	<b><math>a_{MAX}</math></b>	<b>df (mm)</b>	
Takumar Bayonet	28	2.8	49	
Takumar-A	28	2.8	49	
Takumar (Bayonet)	135	2.5	52	common, 'sounds like' SMCP 135/2.5 [2]
Takumar Bayonet	135	2.8	52	
Pentax-A	28-80	3.5-4.5	58	
Pentax-F	28-80	3.5-4.5	58	
Pentax-A	70-200	4-5.6	49	common, 'sounds like' SMCP-A 70-210/4 [2]
Pentax-F ED	70-200	4-5.6	49	common, 'sounds like' SMCP-F 70-210/4-5.6 [2]
Takumar-A	28-80	3.5-4.5	58	
Takumar-F	28-80	3.5-4.5	58	
Takumar-A Macro	70-200	4	58	common, 'sounds like' SMCP-A 70-210/4 [2]
Takumar-F ED	70-200	4-5.6	49	common, 'sounds like' SMCP-F 70-210/4-5.6 [2]
Takumar-F ED	70-210	4-5.6	49	common, 'sounds like' SMCP-F 70-210/4-5.6 [2]
Takumar-A	70-210	4.5-5.6	52	
Takumar Bayonet	80-200	4.5	52	

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[1] other Pentax non-SMC brands are; CPC Phase 2, MC Cosmicar, MC Finex, and Toyo-A.

[2] many eBay and Other Supplier lens descriptions are incomplete or inconsistent, for example:

- (i) incomplete name: Pentax F 70-210/4-5.6  
 is it SMC PENTAX-F 70-210/4-5.6, or TAKUMAR-F ED 70-210 4-5.6 ?  
 (both have df = 49mm, df is filter diameter)
- (ii) inconsistent name: Pentax-A 70-200/4  
 is it SMC PENTAX-A 70-210/4, or PENTAX-A 70-200/4-5.6 ?  
 (both have df = 58mm)

## Annex D: Lens Availability Lists

This annex shows availability lists for SMC Pentax and SMC Takumar lenses, in the following three tables:

- Table D.1: SMC Pentax prime lenses;
- Table D.2: SMC Pentax zoom lenses; and,
- Table D.3: SMC Takumar lenses (plus a few more...).

The integer number at start of each row shows the lens position in the list, followed by: SPLOSdb quality rating, Q; lens name; focal length, f (mm); maximum aperture,  $a_{MAX}$ ; and, the four following counters.

1. n number of sales on eBay between 1 Dec. 2003 and 29 Feb. 2004
2. n\$e number of prices in the eBay category [0, 1 or 2]
3. n\$o number of prices in the Other Supplier category [0, 1 or 2]
4. n\$p total number of prices, defined as follows:

$$\text{for } n \geq n\$e, n\$p = n + n\$o, \text{ and for } n < n\$e, n\$p = n\$e - n + n\$o$$

Section 7.2 provides more information on these counters, and Section 7.3 defines the sorting procedure used to make these availability lists.

**Table D.1:** Availability list for SMC Pentax prime lenses

	Q	Lens	f (mm)	$a_{MAX}$	n	n\$e	n\$o	n\$p
1	*	M	50	2	107	2	2	109
2	-	M ver.1	28	2.8	68	2	2	70
3	**	M	50	1.7	63	2	2	65
4	**	M	50	1.4	47	2	2	49
5	**	A	50	2	46	2	2	48
6	**	M	135	3.5	38	2	2	40
7	*	M	40	2.8	28	2	2	30
8	**	M	200	4	25	2	2	27
9	-	A	28	2.8	24	2	2	26
10	(!)	A	50	1.4	23	2	2	25
11	(!)	A	50	1.7	18	2	2	20
12	*	M	28	3.5	16	2	2	18
13	(!)	F	50	1.7	16	2	2	18
14	*	K	55	1.8	12	2	2	14
15	*	M Macro 1:2	100	4	12	2	2	14
16	-	M	35	2.8	9	2	2	11
17	*	M Macro 1:2	50	4	9	2	2	11
18	**	K	24	2.8	8	2	2	10
19	(!)	K	35	3.5	8	2	2	10
20	**	A	24	2.8	7	2	2	9
21	*	M	100	2.8	7	2	2	9
22	(!)	K Shift	28	3.5	6	2	2	8
23	-	M	35	2	6	2	2	8
24	**	K	50	1.4	6	2	2	8
	(continued...)							

**Table D.1 (cont.):** Availability list for SMC Pentax prime lenses

	Q	Lens	f (mm)	a <sub>MAX</sub>	n	n\$e	n\$o	n\$p
25	(!)	FA	50	1.4	6	2	2	8
26		K	55	2	6	2	2	8
27	*	K	135	3.5	6	2	2	8
28	(!)	FA FREE Macro 1:1	100	2.8	6	2	1	7
29	(!)	F Macro 1:1	100	2.8	5	2	2	7
30	*	K	200	4	5	2	2	7
31	**	K	300	4	5	2	2	7
32	-	M	85	2	5	2	1	6
33	(!)	K	135	2.5	5	2	1	6
34	*	FA AL	28	2.8	4	2	2	6
35	(!)	K	28	3.5	4	2	2	6
36	(!)	FA	50	1.7	4	2	2	6
37	x	A	135	2.8	4	2	2	6
38	**	M	150	3.5	4	2	2	6
39	(!)	A* ED	200	2.8	4	2	2	6
40	-	A	35	2.8	4	2	1	5
41	(!)	K	200	2.5	4	2	1	5
42	(!)	A*	300	4	4	2	1	5
43	**	A	15	3.5	3	2	2	5
44	**	A Macro 1:2	50	2.8	3	2	2	5
45	*	K Macro 1:2	50	4	3	2	2	5
46	**	A	20	2.8	2	2	2	4
47	-	M	20	4	2	2	2	4
48	(!!)	FA* AL IF	24	2	2	2	2	4
49	(!)	FA Ltd GC chr;bk	43	1.9	2	2	2	4
50	*	FA Macro 1:2	100	3.5	2	2	2	4
51	-	A	200	4	2	2	2	4
52	(!)	M*	300	4	2	2	2	4
53	**	K	24	3.5	1	2	2	4
54	**	FA AL ED Ltd GC chr;bk	31	1.8	1	2	2	4
55	(!!)	FA Macro 1:1	50	2.8	1	2	2	4
56	**	F Soft	85	2.8	1	2	2	4
57	**	M	400	5.6	1	2	2	4
58		K Reflex	1000	11	1	2	2	4
59	*	A FE (180/44)	16	2.8	0	2	2	4
60	(!)	M	28	2	0	2	2	4
61	-	F	28	2.8	0	2	2	4
62	**	K (ps)	500	4.5	0	2	2	4
63	*	A	28	2	2	2	1	3
64	*	A	35	2	1	2	1	3
65	(!)	F	50	1.4	1	2	1	3
66	(!)	K	85	1.8	1	2	1	3
67	**	A Macro 1:1	100	2.8	1	2	1	3
68	*	K Macro 1:2	100	4	1	2	1	3
69		K FE (180/44)	17	4	1	1	2	3
70	**	K	30	2.8	1	1	2	3
		(continued...)						

**Table D.1 (cont.):** Availability list for SMC Pentax prime lenses

	Q	Lens	f (mm)	a <sub>MAX</sub>	n	n\$e	n\$o	n\$p
71	**	K	50	1.2	1	1	2	3
72	**	FA Ltd GC chr;bk	77	1.8	1	1	2	3
73	(!)	FA* IF svbk	85	1.4	1	1	2	3
74	*	K Bellows 1:2	100	4	1	1	2	3
75	*	A Macro 1:2	100	4	1	1	2	3
76	**	K (ps)	400	5.6	1	1	2	3
77	**	K	35	2	0	2	1	3
78	**	K	28	2	0	1	2	3
79	(!)	FA AL GC	35	2	0	1	2	3
80	(!)	F Macro 1:1	50	2.8	0	1	2	3
81	*	K Soft	85	2.2	0	1	2	3
82	**	FA Soft	85	2.8	0	1	2	3
83	**	F IF	135	2.8	0	1	2	3
84	**	A	400	5.6	0	1	2	3
85	**	K AL "3.5/15"	15	3.5	2	2	0	2
86	-	M ver.2	28	2.8	2	2	0	2
87	(!!)	A*	135	1.8	2	2	0	2
88	**	K	105	2.8	1	2	0	2
89	**	FA IF	135	2.8	1	1	1	2
90	**	FA	20	2.8	0	1	1	2
91	*	K	20	4	0	1	1	2
92		FA Soft	28	2.8	0	1	1	2
93	**	A	50	1.2	0	1	1	2
94	(!)	FA* ED IF	200	2.8	0	1	1	2
95	(!)	FA* Macro ED IF GC 1:1	200	4	0	1	1	2
96	(!)	F* ED IF	300	4.5	0	1	1	2
97	(!)	FA* ED IF	300	4.5	0	1	1	2
98	(!)	A* ED IF	400	2.8	0	1	1	2
99	*	K	150	4	0	0	2	2
100	(!)	A* ED IF	300	2.8	0	0	2	2
101	(!)	FA* ED IF	300	2.8	0	0	2	2
102	**	FA* ED IF	400	5.6	0	0	2	2
103	(!)	FA*	600	4	0	0	2	2
104	*	A	100	2.8	1	1	0	1
105	*	M Dent.Mac.1:2	100	4	1	1	0	1
106	*	A Dent.Mac.1:2	100	4	1	1	0	1
107	*	M	120	2.8	1	1	0	1
108	**	K	18	3.5	0	1	0	1
109	**	K gold	50	1.2	0	1	0	1
110	(!!)	A*	85	1.4	0	1	0	1
111	*	K	120	2.8	0	1	0	1
112	(!!)	A* Macro ED 1:1	200	4	0	1	0	1
113	**	K "3.5 15mm"	15	3.5	0	0	1	1
114	**	A* ED IF	600	5.6	0	0	1	1
115	(!)	A* ED IF	1200	8	0	0	1	1
116		K Reflex	2000	13.5	0	0	1	1
117	**	A Special chr	50	1.2	0	0	0	0
118	(!)	F* ED IF	600	4	0	0	0	0
119	**	K	1000	8	0	0	0	0
120		M Reflex	2000	13.5	0	0	0	0

**Table D.2:** Availability list for SMC Pentax zoom lenses

	Q	Lens	f (mm)	a <sub>MAX</sub>	n	n\$e	n\$o	n\$p
1	-	F rfe	35-80	4-5.6	25	2	2	27
2	**	M ver.1	80-200	4.5	23	2	2	25
3	x	FA PZ rfe bk	28-80	3.5-4.7	22	2	2	24
4	**	A pp rfe	70-210	4	21	2	2	23
5	-	M	40-80	2.8-4	19	2	2	21
6	**	M	75-150	4	14	2	2	16
7	**	F rfe	28-80	3.5-4.5	13	2	2	15
8	**	A rfe	35-70	4	12	2	2	14
9	-	A rfe	35-80	4-5.6	11	2	2	13
10	**	A rfe tt	35-105	3.5	11	2	2	13
11	-	F rfe bk	80-200	4.7-5.6	10	2	2	12
12	x	F rfe bk	100-300	4.5-5.6	10	2	2	12
13	**	FA AF PZ rfe bk	28-105	4-5.6	9	2	2	11
14	*	F rfe	35-70	3.5-4.5	9	2	2	11
15	-	FA rfe	35-80	4-5.6	9	2	2	11
16	-	FA rfe sv bk	80-320	4.5-5.6	9	2	2	11
17	-	A rfe	28-80	3.5-4.5	8	2	2	10
18	*	A	35-70	3.5-4.5	8	2	2	10
19	*	F ED rfe	70-210	4-5.6	8	2	2	10
20	x	FA PZ rfe bk	100-300	4.5-5.6	8	2	2	10
21	(!)	FA AL rfe	28-70	4	7	2	2	9
22		FA rfe sv	100-300	4.7-5.8	6	2	2	8
23	x	FA PZ rfe bk	70-200	4-5.6	6	2	1	7
24	x	FA rfe sv bk	28-80	3.5-5.6	5	2	2	7
25	-	F	35-135	3.5-4.5	5	2	2	7
26	-	A rfe	80-200	4.7-5.6	5	2	2	7
27	-	A	24-50	4	5	2	1	6
28	x	FA AL rfe svbk	28-80	3.5-5.6	5	2	1	6
29		M	28-50	3.5-4.5	4	2	2	6
30	x	FA AL IF sv bk	28-200	3.8-5.6	4	2	2	6
31	*	F	35-105	4-5.6	4	2	2	6
32	-	AF	35-70	2.8	3	2	2	5
33	-	FA rfe sv	80-200	4.7-5.6	3	2	2	5
34		K	85-210	4.5	3	2	2	5
35		K Reflex	400-600	8-12	3	2	1	4
36	-	A	35-135	3.5-4.5	2	1	2	4
37	**	FA AL IF GC	24-90	3.5-4.5	2	2	2	4
38		FA rfe	28-90	3.5-5.6	2	2	2	4
39	*	M	35-70	2.8-3.5	2	2	2	4
40	*	K ver.1; ver.2	45-125	4	2	2	2	4
		(continued...)						

**Table D.2 (cont.):** Availability list for SMC Pentax zoom lenses

	Q	Lens	f (mm)	$a_{MAX}$	n	n\$e	n\$o	n\$p
41	**	K	80-200	4.5	2	2	2	4
42	**	FA AL GC	20-35	4	1	2	2	4
43	(!!)	FA* ED IF PZ	80-200	2.8	1	2	2	4
44	(!)	FA* AL PZ rfe	28-70	2.8	0	2	2	4
45	-	M ver.2	80-200	4.5	3	2	0	3
46	*	F FE	17-28	3.5-4.5	1	2	1	3
47	**	A rfe	28-135	4	1	1	2	3
48		K	85-210	3.5	1	1	2	3
49	**	M	24-35	3.5	0	1	2	3
50	-	M	24-50	4	0	1	2	3
51	**	FA AL IF GC sv bk	28-105	3.2-4.5	0	1	2	3
52	**	FA AF IF sv bk	28-105	4-5.6	0	1	2	3
53		F	24-50	4	1	2	0	2
54		K	28-50	3.5-4.5	1	1	1	2
55	**	K	135-600	6.7	1	1	1	2
56	(!)	FA* ED IF PZ	250-600	5.6	0	0	2	2
57	-	A	35-210	3.5-4.5	1	1	0	1
58	(!)	F* ED IF	250-600	5.6	1	1	0	1
59		FAJ AL GC	18-35	4-5.6	x	0	1	x
60		FAJ AL rfe	28-80	3.5-5.6	x	1	1	x
61		FAJ rfe	75-300	4.5-5.6	x	1	1	x

**Table D.3a:** Availability list for SMC Takumar lenses.

	Q	Lens	f (mm)	a <sub>MAX</sub>	n	n\$e	n\$o	n\$p
1		SMCT	28	3.5-16	32	2	2	34
2	**K	SMCT	50	1.4-16	32	2	2	34
3	*K	SMCT	135	3.5-22	28	2	2	30
4	*K	SMCT Macro	50	4-22	18	2	2	20
5	*K	SMCT	55	1.8-16	15	2	2	17
6		SMCT	135	2.5-22	13	2	2	15
7	*K	SMCT	200	4-22	12	2	2	14
8	**K	SMCT	35	2-16	9	2	2	11
9	K	SMCT 2 mods	55	2-16	9	2	2	11
10	*K	SMCT Macro	100	4-22	9	2	2	11
11	K	SMCT Zoom	85-210	4.5-22	8	2	2	10
12	**K	SMCT	105	2.8-22	8	2	1	9
13	**K	SMCT	24	3.5-16	7	2	2	9
14		SMCT	35	3.5-16	6	2	2	8
15	(!) K	SMCT	85	1.8-16	6	2	1	7
16	**K	SMCT ps [2]	500	4.5-45	5	2	1	6
17		SMCT	300	4-22	4	2	2	6
18		SMCT Bellows	100	4-22	3	2	2	5
19		SMCT	20	4.5-16	2	2	2	4
20		SMCT	85	1.9-16	1	1	2	3
21	K	SMCT FE (160/44)	17	4-22	0	2	1	3
22	*K	SMCT	150	4-22	2	2	0	2
23	**K	SMCT ps	400	5.6-45	1	2	0	2
24	**K	SMCT	15	3.5-22	0	1	1	2
25	*K	SMCT	120	2.8-22	0	0	2	2
26	**K	SMCT	1000	8-45	0	1	0	1
27	K	SMCT Zoom	45-125	4-22	0	0	0	0
28	**K	SMCT Zoom	135-600	6.7-45	0	0	0	0

**Table D.3b:** and a few others...

	Q	Lens	f (mm)	a <sub>MAX</sub>	n	n\$e	n\$o	n\$p
1		Pentax Super-Mac-Tak	50	4	7	2	2	9
2		Pentax Mac-Tak [4.3]	50	4	6	1	2	8
3	K	Pentax Super-Tak FE	17	4	6	2	2	8
4		Pentax Tak FE (160/44)	18	11	6	2	2	8
5		Pentax Super-Tak	20	5	1	2	2	4
6	?	Pentax Super-Tak	35	2	1	1	2	3
7	**K	Pentax Super-Tak	24	4	0	0	2	2
8		Pentax Bellow Tak	100	4	0	0	1	1
9		Pentax Super-Tak	70-150	5	0	0	1	1

## Annex E: eBay Search Strings

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### Notation:

- n = name of shortcut (e.g. flash)
- e = eBay site (e.g. www.ebay.com)
- c = eBay category (e.g. Home > All Categories > Computers & Electronics > Cameras & Photo)
- s = search string, e.g. (pentax) +(flash) -(vivitar) ! brackets included in search string
- ! = my comments

The eBay.com category “Computers & Electronics” recently changed to “Consumer Electronics”.

```
-----
n: flash
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo
s: (pentax) +(flash) -(vivitar)
-----
n: screen,finder
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo
s: (screen,finder,viewfinder,eyepiece) +(pentax,lx) -(67,645)
-----
n: LX
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo
s: (lx) -(meade,lowepro,minox)
-----
n: pentax cameras
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Film Cameras >
  35mm SLR > Pentax
s: * ! no string
-----
n: pentax misc
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo >
  Film Camera Accessories > Camera Body Accessories > For 35mm SLR >
  Other 35mm SLR Items
s: pentax
-----
n: pentax vintage
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Vintage > Cameras
s: pentax
-----
n: teleconverter
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: ("rear converter","rear-converter",converter,teleconverter,tele-converter)
-----
! <continued...>
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-----
n: fish
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo
s: (fisheye,fish) -(panasonic,sony,canon,nikon,olympus,minolta,eos,maxxum,mamiya,jvc)
-----
n: wide
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (wide,14,15,16,17,18,19,20,21,24,25,28,14mm,15mm,16mm,17mm,18mm,19mm,20mm,
  21mm,24mm,25mm,28mm)
-----
n: 30,80
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (30,31,35,40,43,50,55,60,65,70,75,77,80,30mm,31mm,35mm,40mm,43mm,50mm,55mm,
  60mm,65mm,70mm,75mm,77mm,80mm)
-----
n: 85,150
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (85,90,100,105,110,120,135,150,85mm,90mm,100mm,105mm,110mm,120mm,135mm,
  150mm)
-----
n: 200
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (180,200,210,240,250,180mm,200mm,210mm,240mm,250mm)
-----
n: 300,400
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (300,280,350,400,280mm,300mm,350mm,400mm)
-----
n: 500,600
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (450,500,600,650,450mm,500mm,600mm,650mm)
-----
n: 800, 1000
e: www.ebay.com
c: Home > All Categories > Computers & Electronics > Cameras & Photo > Lenses >
  For 35mm SLR > To fit Pentax
s: (800,1000,1200,800mm,1000mm,1200mm)
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! <continued...>

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-----
n: sigma
e: www.ebay.com
c: Home > All Categories > Consumer Electronics > Cameras & Photo
s: (xq,ex,wq,z) +sigma -(canon,nikon,minolta,olympus,eos)
-----
n: tamron
e: www.ebay.com
c: Home > All Categories > Consumer Electronics > Cameras & Photo
s: (sp,ed) +tamron
-----
n: tokina
e: www.ebay.com
c: Home > All Categories > Consumer Electronics > Cameras & Photo
s: (atx,at-x) +tokina -(canon,nikon,minolta,olympus)
-----
n: vivitar
e: www.ebay.com
c: Home > All Categories > Consumer Electronics > Cameras & Photo
s: (series 1,series one) +vivitar -(canon,nikon,minolta,olympus)
-----
n: M42
e: www.ebay.com
c: Home > All Categories > Consumer Electronics > Cameras & Photo > Lenses
s: (m42,m-42,"pentax screw")
-----
n: other
e: www.ebay.com
c: Home > All Categories > Consumer Electronics > Cameras & Photo
s: (zoomar,komura,kyvyx,vytron,polaris,lentar,sun,rokunar,accura,upsilon,mitake,kiron,meyer,
angenieux,mto,sekor,feinmess,jena,spiratone)-(canon,nikon,minolta,olympus,eos,645,67,c,bino*)
-----
n: Australia
e: www.eBay.au
c: Home > All Categories > Cameras & Accessories
s: (pentax,lx,m42,adaptall,"vivitar series 1","vivitar series one","tamron sp","tamron ld",
"sigma ex","sigma xq","sigma z","tokina at-x","tokina atx")
-----
n: UK
e: www.eBay.uk
c: Home > All Categories > Photography
s: (pentax,lx,m42,adaptall,"vivitar series 1","vivitar series one","tamron sp","tamron ld",
"sigma ex","sigma xq","sigma z","tokina at-x","tokina atx")
-----
! <end>

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## Annex F: Some Funny Stuff

[from eBay and elsewhere...]

Pentax Takumar 85-210mm F4.5 zoom lens in goo

I takes great pictures

Bidding has ended for this item (handywarhol is the winner)

PENTAX SCREW MOUTH 55mm 1:1.7 LENS GOOD

Camera Looks Much Better In Person As Photo Was Taken With A Scanner

...clear and clean with the exception of a couple of microscopic spots under the front element.

...ADD 4.50 FOR 4 FLUID OUNCES OF CALIBRATION SOLUTION(NaCL). PLENTY OF SOLUTION. SHIPPING IS 5.00.

4 bad russian lenses for Zenit M42

Worst ever Pentax PK Lens 72-162 mm in World! Made by Hanimex ... Immaculate condition.

Like New 30 Foot Zoom Lense

...glass is spotless all around, it has a deep blue coating and will provide superfluous pictures!

Seller (rating) worldtradecamera(205) .... Will ship to United States only.

PENTAX FC-38LH COLONOSCOPE Description: Only one black spot ...

US Shipping is \$2.00, Canada Shipping is \$4.00, International Shipping is \$10.00

You are bidding on a very nice Pentax camera. Makes really glossy photos, 35mm.