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Beginners

- [Making Photographs:](#)
 - [Light](#)
 - [Lens](#)
 - [Film](#)
 - [Exposure](#)
 - [Camera](#)
- [Good photography with a point and shoot camera](#)

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- [the photo.net discussion forums](#)
- [chat](#)

Technique

- [Book Reviews](#)
- [Workshops](#), esp.
- [Film Recommendations](#)
- [Using Filters](#)
- [Using Tilt-Shift Lenses](#)

Caring for Equipment

- [Cleaning Cameras and Lenses](#)
- [Camera Repair](#)
- [Insurance](#)

Buying Equipment and Camera Reviews

- Separate section: [Equipment](#)

Interviews

- [Portrait photographer Elsa Dorfman](#)
- [Professional photographer David Julian](#)

Background

- [History of Photography \(timeline\)](#)
- [Optics](#)

Taking Pictures

- [Portraits](#)
- [Gardens](#)
- [Architecture](#)
- [Interiors](#)
- [Ruins](#)
- [Macro](#)
- [Studio](#)
- [Nudes](#)
- [Underwater](#)
- [Sports and Action](#)
- [Concerts](#)
- [Astrophotography](#)
- [Star trails](#)
- [Infrared and Ultraviolet](#)
- [Pinhole Photography](#)
- [Street Photography](#)
- Subsection: [Nature](#)

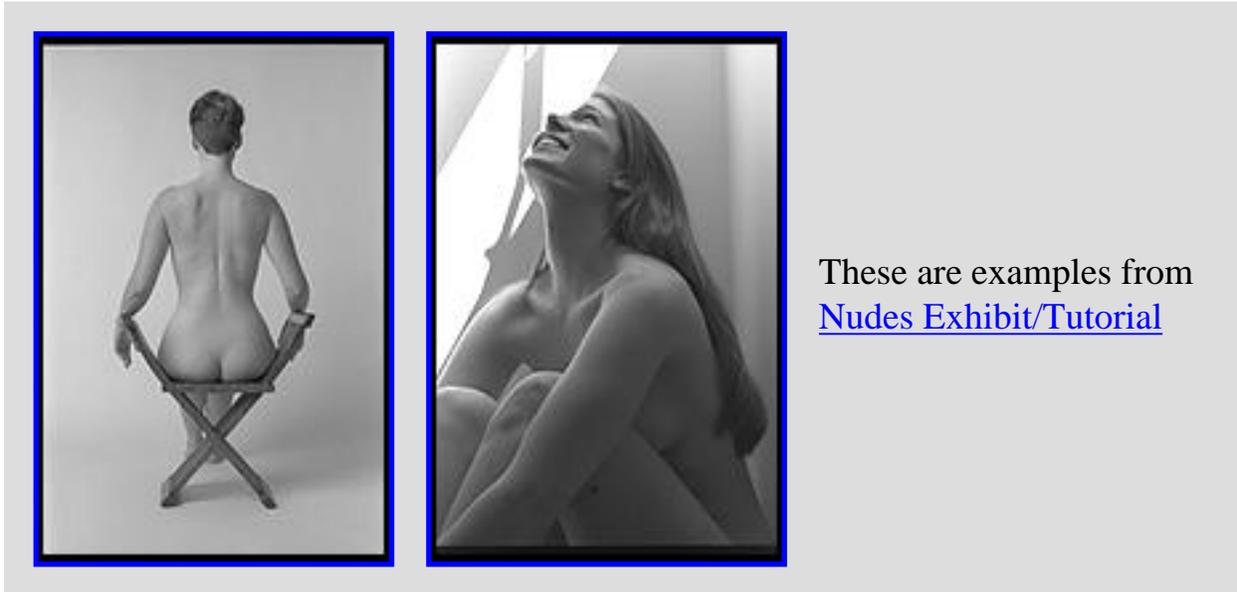
Post-Exposure

- **New!** [Choosing a Computer System for Digital Imaging](#)
- [Darkroom](#)
- [Labs: where to get film developed, printed, or scanned to PhotoCD](#)
- [Evaluating photographs: using a lightbox and loupe to find the winners](#)
- [Storing slides, negs, photos](#)
- [Notes on framing](#)
- [Slide Projectors](#)
- Subsection: [Digital Editing \(PhotoShop\)](#)

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Tips for Using a Point & Shoot Camera

By [Philip Greenspun](#)

[Home](#) : [Learn](#) : One Article



Contents:

1. [Yes, it can be done](#)
2. [Think about Light](#)
3. [Just say no](#)
4. [Just say yes](#)
5. [Prefocus](#)
6. [Burn Film](#)
7. [Try to Buy a Decent P&S Camera](#)

[Reader's Comments](#)

Yes, it can be done

Do you feel inadequate because you have a puny [Yashica T4](#) in your pocket but your no-dick friend is lugging around a Canon EOS-1 SLR, Tamron 28-200 zoom lens, and moby flash?

Don't.

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You can get a better picture than he can, for the following reasons:

- Your camera weighs 8 oz. and is weatherproof so you have it with you at all times.
- You have a decent lens in front of the film; like most first-time SLR owners these days, he has a cheap low-contrast zoom lens.
- He is using that moby on-camera flash as his primary light. You would never be that uncreative (at least not after reading the rest of this article).
- Your camera has a better system for combining light from the flash with ambient light ("fill-flash").

A professional photographer with a pile of \$1500 lenses and a tripod is going to be able to do many things that you aren't. But rest assured that he carries a P&S camera in his pocket as well.

The photo at right shows Bill Clinton handing out a diploma at [MIT's 1998 graduation ceremony](#). I was in the press box with a Canon EOS-5, 70-200/2.8L lens, and 1.4X teleconverter (\$2500 total). In the upper right of the frame is a woman with a point and shoot camera. I would venture to guess that her pictures of Clinton are better than mine.



Think about Light

"He spoke with the wisdom that can only come from experience, like a guy who went blind because he looked at a solar eclipse without one of those boxes with a pinhole in it and now goes around the country speaking at high schools about the dangers of looking at a solar eclipse without one of those boxes with a pinhole in it."

-- Joseph Romm

My personal definition of *photography* is "the recording of light rays." It is therefore difficult to take a decent picture if you have not chosen the lighting carefully. (I've written [an entire tutorial on light](#).)

Just say no

Just say "no" to on-camera flash. Your eye needs shadows to make out shapes. When the light is coming from the same position as the lens, there are no shadows to "model" faces. Light from a point source like the on-camera flash falls off as the square of the distance from the source. That means things close to the camera will be washed-out, the subject on which you focussed will be properly



exposed, and the background will be nearly black. We're at a theater. Can't you tell from the background? That's me in the middle. The guy with the flat face and big washed-out white areas of skin. Part of the problem here is that the camera was loaded with [Fujichrome Velvia](#), which is only ISO 50 and therefore doesn't capture much ambient light (i.e., the theater background). [Despite this picture's myriad faults, I'm glad that I have it because it spruces up [Travels with Samantha, Chapter III.](#)]

Virtually all point and shoot cameras allow you to control the on-camera flash. What you want to do most of the time is press the leetle tiny buttons until the "no flash" symbol is displayed. The "no flash" symbol is usually a lightning bolt with a circle around it and line through it. Now the camera will never strobe the flash and will leave the shutter open long enough to capture enough ambient light to make an exposure.

A good point and shoot camera will have a longest shutter speed of at least 1 second. You can probably only hold the camera steady for 1/30th of a second. Your subjects may not hold still for a full second either. So you must start looking for ways to keep the camera still and to complete the exposure in less time. You can:

- look for some light. Move your subjects underneath whatever light sources are handy and see how they look with your eyes.
- load higher-speed film. ISO 400 and ISO 800 color print films are the correct emulsions for P&S photography. ISO 400 film can get the same picture in one quarter the amount of time as ISO 100 film.
- steady the camera against a tree/rock/chair/whatever as you press the shutter release
- leave the camera on a tree/rock/chair/whatever and use the self-timer so that the jostling of pressing the shutter release isn't reflected on film. I often use this technique for photographing decorated ceilings in Europe. I just leave the camera on the floor, self-timer on, flash off.
- use a little plastic tripod, monopod, or some other purpose-built camera support



Yes it was dark in [Bar 89](#). But I steadied the camera against a stair railing and captured the scene with my [Minolta Freedom Zoom 28-70](#). Note that not using flash preserves the lighting of the bar.

Just say yes

Just say "yes" to on-camera flash. Hey, "consistency is the hobgoblin of little minds" (Emerson; slightly out of context).

The on-camera flash on a P&S camera *is* useful. It just isn't useful for what you'd think. As I note above, it is *not* useful for lighting up a dark room. However, it is useful outdoors when you have both shaded and sunlit objects in the same scene. Photographic film and paper cannot handle the same range of contrast as your eyes. A picture that is correctly exposed for the sunlight object will render the shaded portrait subject as solid black. A picture that is correctly exposed for the shaded portrait subject will render the sunlit background object as solid white.



Here the chess players are being shaded by some overhead screens while the background foliage is not. The on-camera flash makes sure that the foreground players are bright. In fact they are a bit brighter than they probably should be and note the washed-out highlight on the leading edge of the table, which is close to the camera. This picture was taken by prefocusing on the shirtless player on the right, then moving the camera with the shutter release half-depressed to the final composition. Without the prefocusing the camera would have latched onto one of the chess tables in the center of the picture, quite far away. The foreground men would have been out of focus and also tremendously overexposed since an amount of flash adequate to illuminate a far away subject would have been used. [Note that most \$1000 SLR cameras would not have been capable of making this picture except in a completely manual mode. Their flash metering systems are too stupid to couple to the focus distance. An exception is the series of Nikon SLRs from 1994 on with "D" flash metering.]

Pressing the little buttons on a P&S camera until a single solid lightning bolt appears in the LCD display will keep the flash on at all times. Note that a side-effect of the "flash on" mode is that you also

get the same long shutter speeds for capturing ambient light that you would with "flash off" mode. The standard illustrative picture for this has an illuminated building at night as the background with a group of people in the foreground who've been correctly exposed by the flash.



Sometimes it all comes together, as it did here in [Coney Island](#). Without fill-flash, the ride operator would have been a silhouette. Prefocused on the human subject's face. "Flash on" mode.

Prefocus

The best-composed photographs don't usually have their subject dead center. However, that's where the focusing sensor on a P&S camera is. Since the best photographs usually *do* have their subject in sharp focus, what you want to do is point the center sensor at your main subject, hold the shutter release halfway down, then move the camera until you like the composition.

Virtually all P&S cameras work this way but not everyone knows it because not everyone is willing to RTFM.



A side effect of pre-focusing is that most P&S cameras will preset exposure as well. Ideal exposure with a reflected light meter is obtained when the subject reflectance is 18% gray (a medium gray). Exposure isn't very critical with color negative film, but you still might want to attempt to prefocus on something that is the correct distance from the camera and a reasonable mid-tone. I.e., avoid focusing on something that is pure white or black. This becomes much more important if you are using [slide film](#).

Burn Film

If a roll of film is lasting three months, then something is wrong. You aren't experimenting enough. An ideal roll of film for me has 35 pictures of the same subject, all of them bad. These prove that I'm not afraid to experiment. And then one good picture. This proves that I'm not completely incompetent.

It takes at least 10 frames to get one good picture of one person. To have everyone in a group photo looking good requires miles of film. You should have pictures from different angles, different heights, flash on, flash off, etc.

My personal standard film for P&S photography is Fuji ISO 400 negative film. It enlarges very nicely to 8x10 and is great for [Web presentation](#).



Try to Buy a Decent P&S Camera

You can read my [buyer's guide](#). Basically what you want is a reasonably wide angle lens to capture your subject and the background context. Focal lengths beyond 70mm in P&S cameras are not useful. My personal ideal camera would have a 24-50 or a 24-70 zoom though actually in many ways I prefer a camera with only a single focal length because it is one fewer decision to make at exposure time. Zooms are more useful with full-sized SLR cameras because the user interface is better/quicker (i.e., you can turn the ring on the lens instead of pushing little buttons to drive a motor).

Whatever you may choose to buy, you can help defray the cost of running photo.net by buying from [Adorama](#), [Photoalley](#), or [ritzcamera.com](#).

[[top](#)]

Reader's Comments

I seem to be leaving comments all over this site. My T-4 comment has to do with the use of flash. I am constantly taking pictures indoors and lighting them with my Vivitar 283. I've had one of these units since 1976 and they remain a workhorse (my first one croaked after 6 years and my disassembly of it with a Swiss Army Knife). Anyway, every P&S camera suffers from weenie flash syndrome, including the Nikon 35Ti and Yashica T4. I've owned both. I finally went out and got a slave for the 283 and now happily bounce-flash my indoor pictures. It works really well, lighting the whole room up, looking natural and soft, and the small camera flash even fills in the eye sockets a bit.

As for the T-4, I took back my Nikon 35Ti and traded it in for 2 T-4s (one for wife, one for mother in law) about 3 years ago. They are so nice I just got a T-4 Super for my Dad when his old Nikon P&S packed up on him. I bought this last one from Camera World of Oregon with no delays, hassles or problems.

Have fun with the T-4/283 combo. I wish they'd make it with a hot shoe, like the old Minox scale-focusing mini-35mm camera.

M Cole

-- [Matthew Cole](#), January 19, 1997

The new Ricoh GR-1 gives back complete control of exposure, focus, and flash to the photographer. The lens is a 28mm/2.8 symmar formula. It weighs 6 oz, has metal everywhere it needs to have it: top, bottom, back, film channel + more. Ricoh has so understated this camera that it will take most people years to figure out -- finally, there is a tool to have at all times, and take superb photos. I use it to take available light shots of musicians and dancers. Oh yes, its full frame 35mm, one inch thick, all black, costs \$454. There's more. Center weighted metering down to EV 6. Then it switches to averaging plus the finder internally illuminates so you can see the shutter speed, exposure compensation (2 stops) and distance (ikons) in the finder window. Its a lot of fun!

-- [myron wolf](#), March 5, 1997

I've had a Ricoh GR-1 for about a month and I've shot a dozen rolls of negative and slide (Velvia, E100S) film with it. I find that the 28 mm f 2.8 lens is very sharp and contrasty and yields nice colors. On the down side, it appears to be somewhat more prone to flare than my SLR's lenses, and there is no provision for attaching a lens hood. Exposure metering is accurate enough for Velvia; exposure compensation is through an intuitive (for me anyway) analogue knob. The camera is extremely compact and light, and the all-metal skin rugged. I found the camera control layout easy to understand, and the camera fits nicely in my hands. It cost \$450; I think it's a superb camera.

Some complaints I have are (1) the viewfinder is rather small for eye-glass wearers; (2) there is no cable release; (3) external flashes cannot be used; (4) on/off button is easy to activate inadvertently; (5) there's no weatherproofing; (6) no manual ISO setting; (7) no depth-of field information (even in the manual); (8) somewhat cryptic manual.

-- [Adrian Ferre-D'Amare](#), May 1, 1997

I agree with Philip on his choice of the yashica t4 camera. I personally own 3 cameras... A canon elan iie w/ a couple of decent lenses, a yashica t4 and a canon elph APS camera... While each of these have their own merits and limitations... I have to say the flash metering system specifically fill-flash on the Canon Elph APS camera is the best I have ever used...

-- [Ravi Nagpal](#), August 28, 1997

One thing about point and shoot cameras: they work best if you understand a little bit about exposure. Exposure meters in cameras try to make everything a medium tone (think green leaves---that's medium tone). If you're trying to take a photo that's bright, the camera will still try to render it medium tone. The solution in those cases is to get a lock on something medium tone but in the same distance, press the shutter release halfway down, and then recompose and shoot.

Example: you're trying to take a picture of a sunset with the sun in it. Point at the horizon with no sun in it, press shutter halfway, point at the sun, and then shoot.

This explains why all sunset photos taken with point and shoot cameras look too dark. Wish I'd known this a year ago.

-- [Piaw Na](#), December 10, 1997

Here's another idea for a backup/travel camera. I recently found a 1950's German made Voightlander Vitamatic in the local camera store for \$40! The lens is a 50mm/2.8 Skopar all-metal thing that looks like a miniature Hasselblad lens. It's completely manual and has a built in light meter (no batteries required). It even has a flash shoe and will sync up to 1/300th. Yeah... it's a little heavier than the modern P&S cameras... but if you need a backup camera... consider an old classic.

-- [Albert E. Anderson](#), May 12, 1998

One of the nice things about returning to P&S photography with a fixed lens is that it sends u back to thinking about the basics of image making again.

I've just spent the better part of the last 3 weeks trying out a few models of all the famous P&S single focal length cult cameras mainly to try and make a decision on which one is the most suitable for me. The experiences have been recorded elsewhere in the site, but with regards to technique, it just brought me back to remembering how to think about light, composition, perspective, support and basic camera handling. With these pillars of photography set straight, it is indeed possible to get shots on a P&S as good as any top notch SLR.

It's true, u don't really need stacks of equipment to ensure u can take good photos. With the above fundamentals set out, u already have enuff to be an A student. With all the other bells and whistles, u may probably get to A+. But IMHO, since the 80/20 rule is applicable to most things in life, the last 20% may not be worth the extra cost or effort. Unless u r a perfectionist, or a professional, or both.

-- [T C Khoo](#), September 26, 1998

This will be no revelation, but I think more and more who read this section have come to expect more and more capabilities out of the Point and Shoot category. And most aren't going to be happy with a Rollei 35 or a Canonet I think. Those who will admit to this no compromise will want to look seriously again at the Silver Hexar. Not a big camera by any means, grippable and well layed out- see Caruana's wonderful review elsewhere.(No offense to the GR-1 people, I havent tried it at all) On Program mode Hexar behaves like my Leica Mini III only better,-tack sharp lens. (I have the option of setting it up so that the Hexar knows that outdoors I like a lot of DOF, but if forget and I set it at 2.8, at least it will give me some kind of photo.)OTH, when I shot at night from a hotel window last month I put it on manual mode, used the camera meter to find a gray tone and let the spot metering get the exposure. Then I pushed MF to get bam to infinity focus through a window and I was good to go.(But if you think I didn't ALSO carry a T-90 with three lenses in my kit on the trip, you arent a member in good standing of the schlep- what-you-just- may need club.-)either.

-- [Gerry Siegel](#), November 1, 1998

I am a public school teacher, but have been doing serious photography, pro and hobby, since 1959. I have used everything from 4x5 through 6x6, 645, 35, etc. About a year ago I obtained a Leica CL from my repairman for a song, and loved what I could do with it. I totally hate photo mags that advertise "stepping-up" to bigger and bigger film sizes. I want to "step-down" to greater freedom, speed, and spontaneous artistry. Be that as it may, I bought a Leica Minilux last week (before I even knew that T-4's existed!!!), but enjoy this camera greatly. Here's the bottom line: I live in the San Jose California area and would like to gather serious P&S users for regular P&S only field excursions (a few times a year) with some sharing of results later on...and lots of fun, food, etc. If anyone in the S.F. Bay area is interested, feel free to send an e-mail with a phone number...mine is (408) 686-1441, so call if you like, but,please, no solicitors! Thanks, Todd

-- [Todd Fredrick](#), November 4, 1998

good pages! just bought a yashica T5 and look forward using it, you set away my doubts over leaing my dear nikon behind for a while (wait till i get my first pictures, though) sure oone thing: ps is fast.

-- [jules l](#), January 30, 1999

I don't know how many people have tried this old camera, but I've just gotten it from my mother: Ricoh 500 G. It must be a predecessor to the newer G's, but I hadn't heard of it

before. It's a real rangefinder, having full manual control (as well as offering automatic exposure...which has proven to be reasonably accurate from some of my trials). I'm totally blown away by the quality of the lens in this camera. It's every bit as sharp as my SLR...although I haven't put it to the test with slide film yet. And it's tiny! Although heavier than my Olympus P & S. For those times when I have more than a moment to fiddle, but don't want to bother with my SLR, this camera is awesome.

-- [Heidi Weaver](#), January 30, 1999

Just a short note to let you know about Fuji's Ga645 medium format P'n'shooters. After overdosing on gearomania, I've decided to get myself a one lens, one camera combo and work on fundamentals and lighting. The GA 645 was perfect for me and the 645 neg enlarges quite gracefully to 11 X 14. It's exactly the same in operations as a 35mm point and shoot save for a few goodies such as vertical framing, cable release, tripod socket, etc.

It won't fit in your pocket though...

-- [Benoit Doloreux](#), February 2, 1999

I've recently started taking pictures with a P&S after having had some experience taking pictures with an SLR. I've had good results with my Yashica T5 (T4 Super in the US). I've experimented with its different flash modes and I found that the Fill-In flash works better than the Automatic Flash or Red-Eye Reduction mode. Even in taking pictures indoors with even lighting, I use the Fill-In flash mode. The camera does a good job with the exposure as it balances the light reflected by the subject and the background light. There's less overexposure on the subject, and less shadows on the background. One trick to reduce red-eye effect, I just tell the subject to look at a light source for a moment and then pose. Also, I use the Super Scope (waist level viewfinder) frequently since I'm a tall person living in Asia. This eliminates the barreling on some pictures caused by the wide angle lens if you take them from a high viewpoint. It's also neat to take pictures without people knowing it. They all think that I'm just checking how many shots I have left, while I'm actually looking through the Super Scope and snapping away (without flash of course). Another point, if you're ever in Vietnam, check out the cheap prices of cameras in Ho Chi Minh City (former Saigon) and Hanoi. Their prices are competitive to those in the States and cheaper than in other countries in this region (i.e. Ricoh GR1 = 400USD; Olympus mjuII = 130USD).

-- [Ronald Gregorio](#), February 15, 1999

I just got back from a trip to London and Paris and brought along my brand new Olympus 80 zoom deluxe wide. I am thrilled with the photos it took. I would highly recommend this camera to anyone. The wide angle lens came in very handy in sooo

many instances. Has anyone had a good experience with this camera. This is my first experience with a point and shoot. it was nice having such a small camera and not my OM1 to lug along.

-- [kathy kane](#), February 22, 1999

I have had the Yashica T4 (older model, now: T5/T4 Super) for about 3 years now. It is a nice P&S camera, cheap, with an excellent lens and exposes "correct" in standard situations (also for slides). I take it with me, when I want to leave the heavy stuff at home, or just as a supplement for the SLR equipment. The only problem I've had is that the rewinded to early a few times (at about picture 20). -> Would buy it again with no hesitation.

-- [Philippe Wiget](#), March 2, 1999

A useful hint for people with active autofocus P&S cameras that lack an infinity focus button, like the Infinity ;-), Stylus Epic, I found on <http://www.ans.com.au/~chrisb/photo/equipment/olympus/mjuui.html> There Chris Bitmead says: "The Epic doesn't have an infinity lock (useful to shoot through windows) You can however get the camera to focus at infinity by covering one of the IR focus sensors with a finger or whatever and then press the shutter button half way. Then compose and shoot." That should do it. Though I didn't the results yet, I'm sure it will help. By the way Phil, about your site: the more I use it, the more I admire the great accessibility.

-- [Lex Molenaar](#), March 5, 1999

I use the Yashica T4 for shooting stereo pairs. I originally had two of them mounted six inches apart (lens-to-lens) on a bar, but have abandoned this system because:

- 1) I could never press the shutter buttons at exactly the same moment.
- 2) My dear Catherine "borrowed" one of the cameras eighteen months ago, and uses it so much she has yet to return it.

In any event, excellent stereo pairs can be taken with this camera simply by shooting the first picture with an object on the left side of the center circle, and the second with the object on the right side. If the scene has a concentrated light source such as a fireplace, there might be a problem with the difference in camera position resulting in different metering, but if the light is not near the center of the picture, it generally isn't a problem.

-- [John S. Wojtowicz](#), April 1, 1999

Last year I purchased a Leica CL and then a Minilux (see previous comments for November '98), but sold the CL and bought a Leica M6 through a fine young man I "met" on the internet (minilux club) who asked me if I wanted an M6, bought me a beautiful used model (9606th made) with 2 lenses for 2K, and is accepting payments!!!...we've never met! True trust is a wonderful thing!...and believe that seriously...very rare today! However, after reading widely the Photonet P/S comments, and considering my need for a very pocketable camera (don't take an M6 on a kayak!), lens quality (asph elements), true ergonomics (pocket tapered design), and lens speed, I bought two Olympus Stylus Epic cameras (one for me and one for a friend, in fine used condition: one through e-bay and one from a "WTB" on Phil's Photonet ads today. I haven't run a single roll through, but I expect great things! This is not a rejection of the T-4, or others! The teeny-weeny size got to me and the tapered design was just what I wanted. I will, of course, run many rolls through, and post an evaluation. I am concerned about the comments on AF problems, but the spot meter is a GREAT addition! I do wish there was a reader's photo gallery on this site as there is on the Minilux and Hassie clubs. Phil...think about it...we can show our great stuff and praise each other as we so deserve! I'm still looking for San Francisco/San Jose CA Bay Area people interested in taking photo trips. I once taught adult ed classes in photography and had a great time on field trips, until these darned old P/S cameras came along and no one wanted to know photo basics any more! Look who's talkin' now!

E-Mail if interested in setting up some trips this summer at fredrick@hotmail.com

Todd Frederick

-- [Todd Fredrick](#), April 7, 1999

After having read all of the comments, it makes me wonder why anyone but a professional would use a regular SLR. I just don't think that a P&S gives me enough of what I want. I don't take a lot of pictures but when I do I like lots of closeups and landscapes, plus some sports action. I just can't get that with a P&S. I am thinking of going digital for my P&S needs.

-- [Ron Lawrence](#), May 24, 1999

I've pretty much lost my faith in point and shoot cameras. I may, however, purchase a Ricoh GR-1 because it has spot metering and aperture priority metering with override....the very things that are needed in a point and shoot.

I still use my Minolta FZE, but only for things like signs, casual group portraits and times when I just need a picture but don't have my slr. They're just too unpredictable for anything other than snapshots.

As to Philips paragraph at the top of this article, I'm sure if he had been standing next to the girl with the point and shoot, he would have taken a better framed, better exposed, sharper and more contrasty shot with his slr.

-- [Jim Tardio](#), May 25, 1999

Sorry, Jim -- I disagree w/r/t Philip's example at the graduation. If Philip were sitting next to the woman with the point and shoot, he wouldn't *have* his big cache of gear with him -- a point & shoot is likely all he'd be able to bring to that position.

...he would have taken a better framed, better exposed, sharper and more contrasty shot with his slr

Better framed? No, that's entirely related to the skill of the photographer. Better exposed? With print film (and a little bit of brain power) it wouldn't make a difference. Sharper? Yes. More contrasty? Likely.

But this is all missing Philip's point -- you can bring a point & shoot with you almost anywhere. You can whip it out at a moment's notice and get the shot. Hence the value of a point & shoot. They may not suit you, Jim, but that doesn't mean they're without value.

-- [Russ Arcuri](#), May 27, 1999

Sorry Russ--I never said they were not of any value, and I never said I didn't like them. I said I am losing my faith in them. I also said I am considering buying a Ricoh GR-1, and still use my Minolta FZE.

I really don't know what Phil would have been using had he been closer, but I would have had an slr with 1 or 2 lenses AND a point and shoot.

And I just don't agree that a point and shoot is better than a cheap body with a slow consumer zoom and Moby flash. When Phil first wrote this piece I did, but after having gone through many of these cameras I've come to the conclusion, IN MY OPINION, that they're not much better than a disposable camera.

For example: take the Zeiss lens away from the T4 and what do have left? A little box where the only control you have is turning the flash on and off. If light is indeed the main ingredient of photography...as Phil states...how do you capture it faithfully when you have no idea what the camera is exposing the film at? With practice all you have is an educated guess at best. How do you lock focus if the camera is on a tripod? How do alter film speed?

Now, I know the purpose of this piece is to show the value of carrying a point and shoot, and Phil's anecdote about Clinton is valid. Obviously it's much easier to carry a point and shoot in your pocket than lug around a bag full of gear. A T4, Olympic Stylus, or whatever brand you use are great for this. But as so many folks on photo net are fond of pointing out, " You get what you pay for ". And for \$150.00, or less, you don't get much more than the ability to slip the thing in your pocket. But, I agree, that that's better than nothing, and do that myself many times. With that, all I can do is echo Phil's guidelines for using these cameras in two simple rules.

1. If people are in the photograph use fill flash.
2. If there are no people in the photograph, turn the flash off and hope the camera chooses an appropriate setting.

If you want some control with one of these cameras, it's going to cost you upwards of \$300.00...around the same price as an entry level slr body with a slow consumer zoom.

Just some thoughts.

-- [Jim Tardio](#), May 29, 1999

I love taking pictures. After researching the current market I found the T-4 best fit my needs(I found out it has no problem with being carried around in my pocket). The more I read up on it the more fascinated I became. I shopped around and found that Cambridge Camera Exchange offered it for only \$118.95. I placed my order via mail\phone. That was two weeks ago. After many long distance calls (many of which got me nowhere[they hung up on me five out of ten times I would call]) I have found out that "my T-4,"as I so dearily refer to it, will not cost anything near the first expected price. \$158.95. I have not let it get my hopes down, I am waiting by the mail box in a childish frenzy just imagining the fun I'm going to have with "My T-4." That's Cambridge Camera Exchange in New York. They'll hang up on you.

-- [luis villasana](#), June 2, 1999

I'm using an Olympus Infinity Stylus /Zoom 115 for about a year and extremely pleased with its outstanding performance.It is definately the smallest and lightest point-to-shoot camera in the world. It works perfectly on the panaroma mode.While taking close-up shots,strictly adhere to the close-up correction marks.I'm an ex-pilot and I must add Olympus Infinity Stylus is highly recommended for aerial photography. I have fantastic photos taken at 37.000 ft.Try to avoid buying from Singapore.I've had awful experiences in the past.Prefer the ones manufactured either in US or Japan. I also recommend Samsung Maxima Zoom 145 QD,Cannon Sure Shot Z135 and Pentax IQ Zoom 160 QD.

G|rol Kutlu gkutlu@thy.com 17 June 1999

-- [G|rol Kutlu](#), June 17, 1999

I'm beginning to feel like a collector of cameras!! Once I got serious about photography I got a used Nikon FM2 & 2 lens - 50mm & 28mm. I mostly use the 28mm as it suits my style.

I've moved up to medium format which I love but I can't bring myself to lug my Hasselblad on a trip (I mostly fear I'll throw my back out -- rather than fear losing it).

And there was this thing about being in clubs where all this exciting stuff is going on & I just can't capture it with my blad. So I got a P&S. I got the canon Z135 (a friend who teaches photography & has a couple of books out - Del laGrace, recommended the Canon Z115 and by the time I got mine the Z135 had come out). I read the manual but can't quite remember all the fine details in a club setting (but I'll be sure to try some of the recommendations here!). I still play with the settings & I've gotten some fun photos I just can't get with even my nikon. Tho I bring my nikon with it's 28mm lens & either TriX 400 pushed to 1600 or one of the faster b&w films. I get different kinds of photos.

Now when I travel and I'm wanting my medium format camera I just throw in one of my super light weight plastic cameras!! I prefer the lubitel for more serious work (it's much more flexible with all sorts of cool things like a timer, a hot shoe, shutter speeds & f-stops) but I'm trying to learn my holga. My holga gets me plenty of funny looks because I couldn't find any black electrical tape so it's taped up with red tape. I've gotten some GREAT shots & it probably weighs less than an ounce! BUT I bring my P&S too!! I can't always shoot in daylight.

(now besides all those cameras I also own 2 polaroid cameras!!)

-- [erin o'neill](#), June 20, 1999

Well, I own one of the cameras that is often disparaged in this group. Its a 400si with (horror of horrors) a Sigma 28-80 lens, a second-hand Minolta 50mm f/1.7 and another second-hand Minolta 70-210mm lens. I also have a cheap Sunflash external flash.

I like what I own because it gives me the flexibility to try out new things. I can try manual metering, aperture or shutter priority metering and manual focusing. While I have not attained genius-hood with my setup, I have taken quite a few photographs which make me a lot happy.

I dare say that except for the bulk, my camera is no worse off than a decent point and

shoot. And considering the price I paid for it I think it is worth more to me than a P&S camera would have been.

-- [Jagadeesh Venugopal](#), June 26, 1999

All this arguing over p&s cameras is getting a little redundant. Correct me if I'm wrong here, but isn't the idea behind a p&s to either have fun in casual shooting situations, or as an emergency back up when your SLR is down, or unavailable? Sure, it's always great to see useful information about a camera before you purchase it, but lets not forget that the majority of the cameras here are under \$200 ferchrissakes! AND, as we all know: you do get (sometimes less than) what you pay for.

That said, here's a great idea for point and shoot fun: I've got a Yashica, and I love to play 'hot potato' with my friends. Just use the self timer to trigger the shutter, and start tossin' it around. I've gotten some really cool shots this way.

Joe

-- [Joe Toole](#), June 29, 1999

I'm glad to see that Heidi Weaver has discovered the Ricoh 500G. I bought one new in 1977 for a trip to Wyoming and loved it. We took some great pictures, enlarged them to 9.5 x 14 and they're still hanging on our wall. Then came Autofocus cameras and I put my Ricoh aside. Later I passed it on to my niece. I sometimes grow tired of the lack of control and limitations of Autofocus cameras, but still enjoy taking a small light camera with me. Then came E-Bay. For relatively little money I was able to bring a Ricoh 500G back into my house. It still takes great pictures and is an inexpensive and wonderful compromise when you need a little more control without a lot more heft.

Mark Sussman

-- [Mark Sussman](#), July 15, 1999

I have a Ricoh 500 given to me by a friend. It is a beautiful camera, but slow in use and clumsy...and heavy. I have an Olympus XA, also received as a gift. The lens isn't sharp or flare-resistant, and tiny controls are hard to use. I gave my girlfriend an Olympus Stylus Epic (*35/2.8 lens) and, even on a tripod, the lens isn't very sharp. That is why I would stick to light SLRs like Elan with a 50mm lens whenever possible...the compacts seem to give too much in image quality and speed of use.

-- [Oleg Volk](#), July 30, 1999

I bought a Leica Z2X couple months ago and went to New Orleans. The Z2X was such a pleasure to use and I got some of the most wonderful pictures of the old French Quarter. These are some of the best pictures I've ever taken using any P&S.

-- [Clarence Ng](#), August 5, 1999

My perspective may not be especially alternative. I too own a T4 I purchased it almost 3 years ago shortly after having many years worth of Canon equipment stolen. Well, I have been thrilled by the results this camera gave, so much so that I am thinking seriously of trying to stay with Zeiss Contax lenses. I am not sure what the difference is, contrast, colour balance? but I prefer the colour to anything shot on my Canons....go figure. HOWEVER, BEWARE!!! service in Canada is another story!!! Last Christmas I dropped it in a hotel parking lot oops and owww! The lens cover was broken, more than \$100 dollars later, (well we can't expect warranty to cover impact damage can we) I happily gave it a little hug and proceeded to shoot again....problem, vignetting?!?! Telephone Yashica and explain, after sending directly to him with explanatory note, several weeks later it comes back with same problem, this time when I phone the manager had not seen it, techie had fixed by "adjusting" the meter??? After bitterly complaining, I have re-sent my camera and they are forwarding to New York. I hope your US service is better or I will not be able to talk myself into spending the kind of money necessary for some Contax gear. That said, before breaking, the T4 (T5 here) is a beautiful little camera. Highly recommend for hiking, biking etc. Graham North

-- [Graham North](#), September 7, 1999

Good photography is in the eye of the user.

My wife has no concern for obtaining adequate quality photographs. She merely wishes to obtain images which will induce a memory recall of the event. What I consider trash, she values. The P&S is geared toward those of my wife's bent where the object is not to produce art but rather physical records of prior events. By automating the artistic control, the average quality increases but the average art value diminishes.

In contrast, I use photography as an artistic outlet. I shoot 35mm b&w, with a spot meter using the zone system and do my own printing. If I have no darkroom set up, I don't shoot. I haven't shot in years.

Two extremes.

Perhaps if I gave up some control, I would obtain more even if I enjoyed it less.

My compromise is using a GR-1 with negative film. I will use store printing for my

wife's film, and computer printing for my film.

This compromise may better the both of us.

-- [byard edwards](#), September 10, 1999

Monkey!

-- [Troy Hyde](#), January 13, 2000

Ian's comments above are based on some degree of SLR/EOS snobbishness. Pity. It's not difficult to get decent photos with a point/shoot camera; the Stylus Epic's fast f/2.8 lens gets the job done nicely. So does my Yashica T4 super (f/3.5). I carry a mini-tripod with flexible legs to negate camera shake, or wedge my shoulders up against a wall or door jamb. And I usually expose at least two frames per subject, varying stance or lighting as called for. When I know I want something more complicated, I'll haul out my Nikon FM2n and its assorted lenses, but that's infrequent. Using outdated or cheap film for test/technique purposes is a great idea; instead of getting that tree-killing second set of prints, find a lab that will give you a free roll of "House brand" film; it's often made by one of the name manufacturers in Japan or Minnesota.

-- [Dave Baldo](#), January 13, 2000

I know my viewpoint may not be similar to other people here, but it's here. P&S cameras may be great for "consumer" shots (i.e vacations, family gatherings, etc.) but in professional photography, nothing beats an SLR or TLR. I guess the reason manufacturers keep P&S in production is not for photographers to use them, or they would produce a small camera with manual aperture and shutter. I don't really know how a P&S is in the real world (since I do astrophotography), but it's hard to beat a good SLR with a telephoto lens.

Jim

-- [James Jingoian](#), January 28, 2000

After many years using only SLR equipment, I bought a Minolta Freedom Zoom as a take-along-at-all-times camera. Unfortunately, it proved to be extremely unreliable. It made me miss many opportunities when it just switched off (leaving the lens unretracted) at the moment of pressing the shutter. It ruined many pictures by focusing to minimum distance, even for landscapes with no foreground! It frustrated entire mountain trips by simply locking up. It took seven repairs to shoot a total of about 40 rolls of film, of which more than half was ruined because of camera problems.

I have now discarded it, and replaced it by a Ricoh GR-1s. What a difference! This camera is very usable, extremely small and lightweight, rugged, allows a considerable range of manual control (which I missed so much with the Minolta), and so far I have not lost a single frame to camera malfunction. It works very well indeed! I'm very happy with it.

This camera is an improvement over the already good GR-1, and I do highly recommend it (I have no connection to Ricoh other than being a satisfied customer!). Its main drawback is the lack of a zoom lens, but then, its 28mm f/2.8 is really good, and WOULD you expect a zoom in a camera this size?

Recently I was able to photograph some lightning bolts with the Ricoh, something I had been never successful at when using the SLR equipment! Tomorrow I'm off for one month into the mountains, doing some flying and some climbing, and the Ricoh comes with me!

Manfred Mornhinweg.

-- [Manfred Mornhinweg](#), January 31, 2000

Although technically not point-n-shoot cameras, there are many compact 35mm rangefinders from the '70s that are almost as small and nearly as easy to use. Check out www.cameraquest.com/classics.htm for a rundown of the better ones.

Personally, I'm quite happy with the Minolta Hi-Matic 7sII I picked up for \$60 last year. While it can't focus itself, it does have a fairly accurate auto-exposure system (complete with exposure lock) and a fast (f1.7) lens, which means you can shoot ISO 100 film instead of ISO 400 much of the time. Better still, it has a leaf shutter (which means it flash-syncs at all speeds) and a manual film-speed dial so you control the amount of fill-flash more accurately as well as adjust exposure to your particular taste. Another nice touch is the filter ring, which I use fairly often, as well as the fact that the meter cell is located inside the filter ring, just above the lens. This means that it meters through the filter and thus automatically compensates for the filter-factor of whatever filter you use.

On the downside, at 17 ounces, it's about twice as heavy as the typical p-n-s camera but it's still small enough to fit into a jacket pocket, if not a jeans pocket. Another plus is that the body is metal, not plastic, which means it will dent instead of crack when it's accidentally dropped.

Overall, if -- like me -- you prefer your photographic automation in small doses and

metal-bodied cameras to plastic ones, then a compact 35mm rangefinder from the 1970s may be a better choice for you than an auto-everything plastic wonder from the 1990s.

-- [Jeffrey Goggin](#), February 5, 2000

How about a used Contax G1 ? Its great little camera for you pocket, jacket that is. A little on the heavy side but if you want creative controls with interchangeable lenes, this is it. I just wish Contax will make another pancake lens like their 45 f2.8 for it.

-- [William Song](#), February 18, 2000

Always wanted a quality point and shoot camera to take on trips instead of lugging the old Nikon N90 or Canon EOS 1 but wasn't sure which one to buy. I just bought TWO quality point and shoots, a Leica Minilux and Nikon 35TI to compare and get the feel. I can only keep one but since I bought them used, I'm sure I can always sell the one I don't want at auction. My choice after 3 rolls of film? It's the Nikon 35TI. First, I wear glasses and they must have gone all out to make the Leica Minilux viewfinder as small as possible and I like to see shutter speeds in the viewfinder to know what I'm doing. That only gave me one choice, the 35TI. As far as the pics, both were about equal, perhaps the Leica may be a tad sharper but, in my opinion, the "feel" and handling of the Nikon was better and I can see what I'm pointing at. Anybody want to be a nearly new Leica?

-- [Jim Gemmill](#), February 28, 2000

Yashica T4 Super. I have had it for several months, shot about 30 rolls of print film and couple rolls of Fuji Astia 100 (slide film, if you want to know what it is). I have only one word about it; this small camera is GREAT! Most of my pictures taken with T4 were enlarged up to 8x12". Slides were properly exposed and very sharp. Properly used "spot" meter allows me to cope with pretty tricky light conditions (like sunset in the mountains). Just aim camera at something with intermediate brightness (camera set at infinity mode), hold shutter button half pressed, recompose the picture, and shoot. Used with Kodak 400 CN (black & white film for C41 process, you can develop it in any one-hour minilab) camera shines with it's highly detailed contrasty images, even in murky light conditions (overcast winter day, for instance). I heard that people report inconsistent autofocus with T4 resulting in blurry images. It never happened to me. In fact, my second camera Olympus Stylus, which was purchased last year CONSTANTLY blurs two-three frames in each shot roll. Camera was sent back to Olympus and they returned it with verdict "camera is absolutely functional" ... The superscope in T4 is another great feature.

Overall: My hat is off. T4 Super is waterproof, quiet camera with excellent Carl Zeiss optics. Great buy for \$150.

-- [Yuriy Vilin](#), March 22, 2000

Interesting ideas, Ian. But I'd like to see your pictures first.

-- [Yuriy Vilin](#), March 30, 2000

I must say that I respectfully disagree with the preceding diatribe against point and shoots. As has been pointed out elsewhere, a camera is a tool. A wise artisan will learn the strengths and weaknesses of that tool, and adjust accordingly.

My own P&S experience has been most rewarding. First of all, if you view it as simple tool that can be used (with experience, and planning and reading the @\$@(\$* manual) you CAN take great shots. I know that some of my all time favorites were taken with an Olympus Stylus Epic. Framing, composition and having the maturity to realize that you're not going to get every shot, are part of the P&S experience. Also, if you have the camera with you, you can use it. A P&S, especially one with a spotmeter, that's with you beats all the fancy stuff sitting on the shelf at home.

It's equally true that a T4 or a Stylus Epic aren't, and won't be, a good substitute for a good quality SLR under every circumstance. Or even some circumstances. When I really, absolutely, positively have to be certain of getting the picture, (like, say, confirmations, graduations, etc), I do use the old SLR. But the P&S can go in the briefcase, glovebox, etc. I mean, how can you get that picture of Elvis without a camera.

-- [Bob Yates](#), March 30, 2000

Amen, Bob.

If you know how to use a P&S, you can indeed get some gorgeous pictures -- and my experience has been that these little cameras succeed much more than they fail.

And, as others have pointed out, they keep getting better all the time. In the last decade, point and shoot cameras have taken a quantum leap forward in size, design, and optics. (You wouldn't have seen something like the Epic in 1990.) More of us can carry them more easily to more events, and thus get more shots we would have otherwise missed. And that's what puts the POINT in "point and shoot" cameras, isn't it?

These cameras are tools, designed for capturing moments on the fly. But someone with a little patience and persistence can also use them to more creative advantage -- and the results can be rewarding, indeed.

-- [Greg Kandra](#), March 31, 2000

If you believe Ian Cruikshank's comment just above, then you must conclude that the images produced by practitioners like Henri Cartier-Bresson, Robert Frank, etc. etc. -- all produced by cameras with small viewfinders and slow lenses (old Leicas, mostly) -- are by definition uninteresting. That doesn't make sense. For that matter, a Yashica T4 is a better producer of images than a Leica IIIIF! Better lens, w/ better film in it than was available in the old days.

That doesn't mean it has all the advantages, however. The viewfinder is small, and I can't adjust its focus to my (increasingly) bleary eyes. And, I'm never quite sure of the frame I'm seeing. So, I'm looking for a used Hexar (black, please). I also shoot with an old Olympus 35SP and a Canonet GIII -- autoexposure, manual focus, sharp lens, made in the '70s, the Canonet even has moving frame lines for parallax compensation.

Sitting in a big, heavy camera bag are my EOS Elan and EOS 620, my (very sharp) 28-105 USM, my 50 1.8 and a 19-35 zoom which isn't sharp but hey it sees interesting things. Why do they sit in the bag? You know why. They are heavy, intrusive devices. You can do great things with them, but if you shoot in a world full of people who you would prefer to remain unconscious of and undisturbed by your picture-taking, an SLR ain't the ticket.

-- [Tom Mandel](#), April 4, 2000

Does anyone know anything about the Lomo camera? I have heard great things about the portability and creativity of this camera, but wanted to get some more opinions from some more "serious" users. One thing that sounded really interesting about it was that it was not fully automatic, allowing a lot of leeway for creativity.

Thoughts?

-- [RF Briggs](#), April 4, 2000

I loved the article! I just bought a Contax T2. My Nikon and it's 28-200 zoom is flying out the window! Phil Greenspun just answered why my photos lacked 'zing!' I learned a LOT from Phil, certainly enough to improve my photography and my equipment. THANK YOU, Phil!

-- [Hernan Mapua](#), April 7, 2000

Fascinating comments on point and shoot cameras, SLRs etc, and an excellent site by

Phil. As a newcomer to computers and the net but a camera nut since childhood, here are a few comments which may be useful (cf main site feedback): Cruikshank's comments seem elitist and unnecessarily inflammatory. I agree with all viewpoints. Surely the objective is the same: to create the best possible pictures by the simplest means - incidentally, the same philosophy which guided Oskar Barnack to invent the Leica. Thus the search for the ideal P&S seems perfectly valid. Phil is bang on. I agree, turn off the flash. It ruins mood lighting. I would like to see a P&S with an accessory flash and a bigger viewfinder - the bigger the better. How many pix to take? A film of one subject? Just one? Up to the individual. The goal should be to produce really good, memorable pictures. Thoughtfulness, not just firing off pictures as fast as possible, is the key. Comments on pre-focusing are helpful. Watching exposure is also critical. Even tilting the camera up to the sky to decrease exposure or down to the ground to increase exposure, then locking it in by half depressing the shutter (assuming your camera has no compensation) can help. Watch you don't throw the focus out of whack. Yes, a good 1.8 50mm lens on an SLR is an excellent choice for some pictures, but the SLR is still bigger and more fiddly - it is! And the moving mirror makes it very hard to hold the camera still below 1/30th sec. A rangefinder camera is a better choice for low light (no blackout either). I do find heavier cameras are more stable at slow speeds though - perhaps why readers on this site still like the good old classic cameras. Not just Leica, though if you buy one I'm sure you won't be disappointed. Have you tried an Olympus 35RC for example? Not perfect but very capable. This feedback is useful, both to users and hopefully the camera industry. It's up to us photographers to tell them what we want!
David Killick, Christchurch, New Zealand.

-- [David Killick](#), April 21, 2000

Ian, just relax. If you don't use P&S that's your problem. Just leave this discussion alone and let people choose their own path in photography. Your opinion is just one of hundreds and not valid in amateur photo world. I have lots of friends "amateurs" using all kinds of cameras (P&S, SLR, view cameras, rangefinder cameras...) at the same time with a great success and great pleasure. And, if you are a "professional", you do not need to read comments on this site.

-- [Yuriy Vilin](#), April 28, 2000

Good point, Yuriy. Someone who clearly has no respect for point and shoot cameras -- and, in fact, expresses nothing but disdain for them -- has no business posting in a forum designed to help people use them better. What's the point? To make everyone feel bad? Or just to show off?

-- [Greg Kandra](#), April 28, 2000

Does it matter what camera you use or even if you use a camera at all? I certainly don't always use a camera. I do photomontage and photograms and I also create pinhole images and digital work. The fact of the matter is if an image is of any depth at all. Is the image good? Pretty soon we might all be using digital or maybe photography won't be fashionable anymore. Unlikely, but feasible.

Image: [mike - pinhole school.jpg](#)

-- [Mike Rossiter](#), April 30, 2000

The Lomo camera is great, but it really depends on what you are looking for. It does colors very nicely and has a fast f2.8 lens. It tends to vignette a bit and it has many quirks about it. I like it because it's different, not 'technically' better. I already have a Nikon for my 'main' sharp photos, but I carry the Lomo around as a snap camera. I like the unique look it provides, as well as the unique feel of it. But it's certainly not for everyone.

If you are looking for a more everyday snap camera that takes good sharper pictures, I'd recommend you take a look at the Olympus Stylus Epic (under US \$100.!). The non zoom version has a fast f2.8 lens and produces quite nice images. I've used the Yashica T-4 Super as well, and it was very sharp, however not f2.8 as I recall. [I tend to like faster lenses since I don't like using flash on a point and shoot]. I like the build quality and ergonomics of the Yashica better than the Olympus though.

-- [T T](#), May 17, 2000

OK, to Ian and anyone else who doesn't see Point and Shoots as a respectable camera to use, I'm an undergrad photo major at Harvard and Nan Goldin taught here for a semester last year and she was a big advocate of the T4 (she also shoots with a Leica (non-point and shoot)) and under her advice, I bought a T4 and my photography changed for the better immediately. I had been shooting with a Nikon N70 with a 35mm, f2 Nikkor lens and for awhile, I was using both cameras because I didn't trust the T4 so I could compare the two and the \$150 T4 was so much better than the \$700+ Nikon SLR outfit I had.

Technically, the T4 images were pinpoint sharp where the Nikon images weren't as sharp. I've had friends take 35mm slides taken with the T4 enlarged to 30x40 cibachromes and had the sharpness hold extremely well. The fill flash is also amazing and the 1 second exposure without a flash lends to some really great images in lowlight.

With a point and shoot, you begin to think more about the essentials to what make a good photograph, the photographic image itself. Henri Cartier-Bresson's negatives were terribly underexposed because he didn't care about every image being technically perfect

as long as the photograph had a perfect image. Cartier-Bresson is arguably a much better photographer than Ansel Adams (I'm sorry but the amount of people who have your print in their downtown office building does not determine your greatness). When that 'decisive moment' does occur, I'd much rather have my instant point and shoot than fumble with exposure and focus and miss that moment. No, matter how good you are with an SLR, you'll never be faster than a point and shoot.

I've discovered that my subjects react differently to a point and shoot than to an SLR. It's nice to still see the face of the person photographing you and with my T4, I've gotten much more intimate portraits. There's just less of a barrier between you and the person you're photographing. I can carry my T4 everywhere, even to the beach where I wouldn't trust my Nikon. Sand has actually gotten into my T4 and I've been OK. I've run around in the rain in it, waded in pools with water inches below my camera, I've dropped the T4 on the ground once when I was drunk, and it still works like a charm. The unbelievably low price also allows me to not worry about it as much. I carry it around in my backpack or pocket without fear and literally have it everywhere I go. You never know when a perfect photographic moment can come. I actually own two T4s now so I can have two different slides films available at all times, an ASA 50 or 100 Fujichrome or Agfachrome for outdoor stuff, and a 200 ASA Kodachrome for indoor lighting... this way I don't have to run through a roll before switching films (I'll never be forced to use Velvia 50 inside in low light now).

I'll still use my SLR once in awhile but getting good at a point and shoot is what every photographer should learn how to do before they really consider themselves good. It just adds such a different level to their photography skills. I'm sure some of Nan Goldin's photographs that are hanging up in the Whitney right now or selling at Matthew Marks for thousand of dollars were taken with her T4. When you can take a museum-worthy photograph with a \$150 point and shoot, that's when you know you're really good.

My two cents, Jeff

-- [Jeff Sheng](#), May 22, 2000

Pretty heady stuff here, especially considering the subject of "point & shoot." For me, one of the great joys of photography is the ability to "capture and record" the moment. Something you can look back on a few years from now and enjoy.

Currently, I own a Pentax ZX-10, which takes great pictures for me. I recently purchased an Olympus Stylus Epic and have been both pleased and frustrated with the results. (In other words, still learning its capabilities and limitations.) But I learned basic photography on a "gasp" Olympus focus-free Trip MD camera (about 40 bucks in 1987). This was/is a true "point & shoot" camera.

Here's why: Because I didn't have to think about aperture and shutter speed, I learned how to compose a good photograph quickly. I learned how to balance subject with background. (Had to, DOF was 4 feet to infinity and background was ALWAYS a factor.) I learned about lighting and how to make the best use of the on-camera flash and other light sources. Most important, I learned what this basic camera wouldn't do and tried to figure out possible ways around it. Are these photos worthy of publication? Doubtfull, but I do enjoy looking at them immensely. Quality? I have to say, I had a couple blown up to 8X10 and they're quite sharp - even to the edge. But the one edge this camera has over the others, was the ability to pass it around to anyone in the room and get a decent framed (80%), focused (99%) picture. All I ever had to say was "just push the button."

Here's the best argument for a point and shoot I can think of, and it relates to Phil's MIT graduation "being there" theory. I went to a convention in New Orleans a few years back. During an off day, I went around with my Pentax SLR and took some beautiful shots of the city and surroundings. Later that night, I had the point & shoot in my pocket and had pictures taken at dinner with old friends, on Bourbon St. with colleagues I hadn't seen in years, heck - I even ran into my ex-wife and posed with her while someone snapped the moment! That camera was passed around while people were enjoying themselves and the pictures reflect that.

Now when company comes over, I like to show off the photos of the city, but guess which ones I personally enjoy looking at more? Would those taken with the P&S have looked better had I used the SLR with the controls and better lense? - well, the one's I took early in the evening - probably. But the ones taken as the night went on, plus all the ones I'm in? - I really doubt it.

My point is, don't underestimate the uniqueness and allure of the snapshot. They capture great moments. And point and shoots capture great snapshots.

-- [Jack Kratoville](#), July 23, 2000

Hello! My experience with the P&S. Attention!!! I shot with print films.

I tried 6 Big Mini cameras (BM 202. The first camera of the Big Mini series) Metallic body.

First camera: Corners and side edges of the photogram (mainly the left one), completely fuzzy.

Second camera: 50% of the completely fuzzy photogram!!!

Third camera: idem!!!

Fourth camera: A little fuzzy side superior and wild corners of the photogram. More fuzzy to f. 3,5

Fifth and sixth camera: Lens: Very good of f.16 to f.5,6. Nevertheless, to f. 3.5 one slight fall of the sharpness from 15 mm of the photogram is appraised. Vignetting: Very slight. Distortion: Very slight, in cushion. Exposure: Very good, CDS center weighted meter. Features: Very good: Flash Auto, Flash: Fill-in and Slow, (calibrated very well) Exposure compensation +1.5 and -1,5, Speed: 1/500 to 3.6 seconds (Excellent!!!). 25 to 3.600 ASA. I have proven the Kodak Ektar 25 ASA, brutal sharp!!! And also 1.600 Fuji ASA, contrasts very high, but good sharp!!!

Viewfinder: Good and clear. But does show a susceptibility to flare in extreme into-the-light... and the AF symbols cannot be watched... With less light the viewfinder is excellent.

I make extensions of my negatives up to 18 cm by 26 cm. The result is excellent. My friends are surprised. The maximum of extension has been 30 cm by 40 cm. The also very good result. With my Big Mini (BM 202) I have made photos in all the possible conditions and results excellent: in the high mountain, in the snow, in the beach, in the grottos and warehouses very little illuminated. Very good nocturnal photos. (Speed 3.6 seconds)

Big Mini (BM 302): Same problem with the optics that my four first Big Mini!!

I have tried 5 Olympus mju II (Stylus Epic) cameras: Apocalypse Now!!! Total disaster!!!!

The first camera (Made in Japan!!!): excellent lens, but to f.2,8 slight but appreciable loss of sharp in the corners. Accurately AF. Accurately exposure. But him lack EV +1.5 and -1.5, The camera spoiled to the 30 days to use it!!!!

Second camera: Horrible lens!!! (Parts Made in Japan, Assembled in Honk Kong!!!!)

Third camera: More horrible lens!!! Defective AF. (Parts Made in Japan, Assembled in Honk Kong!!!)

Fourth camera: When I extracted it of the box and I put the battery to him, it did not work correctly!!! Impossible to prove it!!!! (Made Parts in Japan, Assembled in Honk

Kong!!!)

Fifth camera!!!!: (Too Parts Made in Japan, Assembled in Honk Kong) Good optics (Not as good as the first Made in Japan) But AF vague. I to sell my Olympus mju II to a person less demanding than I.

Pentax Mini Espio (UC1). Two proven cameras. No found problems. Viewfinder: Extraordinary, the best one of all the A & P!!! Lens: Very good. Nevertheless, to f. 3.5 one slight fall of the sharp in the corners and edges; and also in the central inferior part (!). Versatility: Good, although not as much as the Mini Big (BM 202)

Yashica T4. 20% of the photogram of the straight diffuse side!!!!

Konica A4. (Second-hand, but new) I to buy by 22.5\$. Good optical of f.16 to f.8-5,6 but to 3,5 mediocre: one slight fall of the sharp in all the photogram. Versatility: Normal. The Konica A4 is a "prototype" of the Big Mini(BM 202). The Mini Big, is far better.

Leica Mini III: Impossible to prove it, the AF did not work...

Zeiss Lomo LC1: Three bought cameras. The three spoiled in a year... Made in Est Contry: crap!!!

Olympus, mju -1 (Stylus USA) (first mju series). Serious problems of sharp in the edges of the photogram. 30% to each side of the blurred photogram!!!

Olympus XA with unit of Flash A11. I to buy used to 58\$. Excellent, robust, very good features, in many aspects the best one of all. The very good optics in all the diaphragms. But of f.2,8 to f.5,6, very appreciably vignetting. The cause is the design of the objective: invested retrofocus. Of the best thing of years ' 80.

I have been continuing using my old Big Mini (BM 202) for 8 years!!! No problems. And my brother also has a Big Mini (BM 202) and he is amazed.

I to be crazy if I want to obtain the same optical quality with a A&P that with a good optics SLR. (Nikkor, Canon, Zeiss, Leica, etc.) Only good optics SLR, is worth 2 or 3 times more than a Mini Big, or T4, or a Olympus mju II, It is impossible!!! If your you obtain equal quality with P & S that with a SLR (Nikkor, Canon, etc.), you must to bomb the factory of Nikkor, Canon, etc.!!!

The manufacturers of cameras P & S, design very well their cameras of the high range. With good specifications, but when they make the cameras, they forget to maintain the quality of his products!!! We are deceived by the manufacturers!!! The quality level of

its products is discontinuous. If you have luck when to buy P & S, you can be very happy, but if you do not have luck when buying your P & S, you are very displeased and you have many frustrations.

I have wanted to be brief. I have more information of other simpler cameras: Super Olympus AF 10 Super, Canon AF 7, Rollei Prego 35-70...

Thank you very much and I wait for your answers. Excuse me, my English is very much deficient.

Jose M. A. L. (Spain)

-- [José Manuel Alvarez López](#), August 3, 2000

I've just discovered this site but have owned a T4 since 1996 when my local camera shop recommended it for size & image quality.

I am uncomfortable though with the "buy a T4 or else!" sentiment I infer from this page. A person makes a picture, the camera just follows instructions! The T4 has a great lens....and that's it.

I've come to the following conclusions based on my pictures with the T4:

- 1) The lens produces sharp and detailed images(with exceptions - see 2&3) - better than zoom P&S. Sometimes the images are breathtaking.
- 2) The exposure system is not very smart or directional. For example, Landscape/building shots can appear underexposed due to a bright sky.
- 3) Frequently, say 5 pictures in every 36, the Autofocus system fails to lock onto the foreground images
- 4) The Fill in flash has a limited range - group portraits only work when there are 2 or 3 people close to the camera.
- 5) Film winding mechanism is dodgy in extreme humid conditions - fails to wind on after taking a picture, or catch on when loading new film.

Summary: It's a great camera for image quality but, lens aside, is cheap and cheerful with regards to everything else - and when one element fails (i.e. exposure) so does the picture!

Finally, I feel spoilt by the Zeiss lens and unable to sacrifice this quality for more the creativity that an SLR would give me on my limited budget (£400ish).

-- [Neil Cooke](#), December 20, 2000

As several people have pointed out, P&S cameras have their own advantages that make them a tool that every photographer should possess. I have several cameras ranging from a Mamiya M645-1000s and Canon F-1N, to a Nikon Coolpix 990 and Pentax Zoom 90-WR. Of the five photographs that I've chosen to upload to Photo.net to date (I'm a relatively new user), it turns out that two of them were shot with the Pentax! I simply wouldn't have gotten the shot without it, because there are so many circumstances where I refuse to lug around a big rig.

Photography is so much more than Zeiss lenses and rock-solid tripods supporting 8-by-whatever cameras that cost enough to feed a family in India for three years. It's all about the image, and the vision one utilizes to produce that image.

Just as someone who actually goes out and *rides* a bike a lot can jump on a garage hooty beater-bike and beat the pants off the neighbor down the block with the \$5K titanium wonder bike, anyone can produce an image of worth with practically any camera/film/format. Just take a look at the pinhole camera section...

Cheers!

-- [Jeff Warner](#), March 8, 2001

If you are looking for a great quality P&S at a decent price, I recommend the Minolta Explorer Freedom Zoom. Yes, I have seen a few comments about its reliability but I have experienced none of that. I bought my Minolta 2 years ago and it has given me some great pictures. I have found that using a tripod produces excellent pictures as well as also using the prefocus. I wouldn't trade my little Minolta for any other P&S at this point. Jeffrey from Nashville

-- [Jeffrey B](#), April 19, 2001

On Phil's "a good roll is 35 bad shots of the same subject and 1 good one" idea....

Digital P&S is ideal for this.

With my Fuji Finepix 2400 and a 32 Mb card I can waste 70 something hires shots and not spend a cent.

Where this pays huge dividends is in family shots. You simply cannot compose great shots of kids. You have to take them when and where they happen.

P&S is great for that in that your grab camera, set up and shoot time is minimal. Digital is great because you can point and shoot and not cry over the waste when the kid suddenly runs out of frame between the press and the click.

Besides, do you really want that hugely expensive SLR anywhere near mud coated, sugar encrusted, water flinging, tantrum throwing littles?

Even just for pure experimentation, the digital is fun.

-- [John Carter](#), April 20, 2001

I have mainly taken pictures with point-shoot cameras (whether using 35mm, APS or digital; and whether equipped with a zoom lens or not) and I find that you cannot just "point and shoot" your pictures. When I take pictures with these cameras, I make each shot a four-stage shot. First I make a "rough composition" of what I want to capture. This is when I would operate the zoom control and, if using an APS camera or other "multi-aspect-ratio" camera, decide what aspect ratio suits the image I want to capture. Then I make sure that one of the key features is in the centre of the viewfinder. At this point, I then press the shutter release halfway and make sure that the "ready" lamp glows. Then I revert back to my original composition to finally take the picture.

Some people think that using anything other than an SLR with total manual control offends creativity and "proper technique". But these compact cameras encourage users to concentrate on what they are to photograph, rather than spending time fiddling with the camera.

There was also a time when I attended a wedding and took plenty of pictures with my Canon SureShot Zoom S compact camera. One of the shots that I thought about setting up was one of the bride about to climb into the wedding car (a mid-1970s Jaguar) after the ceremony. The professional photographer who was hired for this job didn't think about this as a possible wedding shot. But I organized the shot and he and I took it on our equipment. Later on, after the big day, I had the negatives from the wedding scanned to Photo CD and showed what I took of the wedding to the bride and I didn't realise that she was totally dissatisfied with the pictures taken by the professional photographer. She realised that I had some of the best pictures and I organised reprints of those pictures. Another good example was the one that I took of the "giving away the bride" procession with her with her father. She preferred my shot over the "official" shot; and I printed this shot off the Photo CD master using my computer and printer.

-- [Simon Mackay](#), June 25, 2001

I agree with Mr. Carter's comment regarding the digital P&S and would like to point out that a digital P&S can also be a wonderful tool for teaching photography. I bought A Fuji 2400 for my 13 year old daughter who has been interested in photography for several years. Digital gives her immediate feedback, approximately the same set of constraints and features as a film-based camera and virtually unlimited resources for experimentation at an amortized price of pennies a shot.

We can do "assignments" together, each using our own camera, and compare results on-the-spot, to see what worked and what didn't and in many cases, reshoot immediately to emphasize the point. This appears to be a very effective method. We both learn a lot.

-- [Lyndon Guy](#), July 18, 2001

Well thats done it! I had to make a choice between taking my 1959 Praktica IV SLR (and limited experience) my Fuji digital or purchase a P&S for my Holiday to the Dominican Rep next week. I felt I had to go with the Yashica T5 after the positive feed back from a considerable knowledge base(you lot!).I'm taking 200 film and I'm looking foward to grabing some great moments in time. I've decided not to take my Fuji digital camera for the simple reason that I seem to edit too many pictures out. I want lots of memories of this trip rather than a few well composed ones.

-- [Dave Hands](#), August 12, 2001

One of the most important concepts to remember with P/S, rangefinder and SLR cameras is that each lens has its own personality. I have a Yashica FX-103 SLR with three lenses, a Yashica MG-1 rangefinder with a fixed 45mm lens, a Canonet QL-19 with a fixed 45mm and an Olympus Accura with a 35-70mm zoom. I also have used several versions of Canon Sureshots and a couple of digitals. The sharpness varies much less than the overall color tone and esoteric "feel" of the images each produces and each lens' personality is consistent over the long haul. To sum it up, I say don't waste any time and energy quibbling over which format is best (a subjective term anyway) and use them all!!! I think most serious amatuers would find a depth and richness to their hobby that would never be there without experimenting with different cameras and most importantly different lenses.

I love the advice in this article. To add my own bit to the piece, I'd have to say, when using a point and shoot, treat it as though you're holding a Leica. Think before you shoot. Overthink until great composition and desired effects become second nature to your technique. Above all, enjoy it and develop a wide array of styles. I'm glad I did.

-- [Tony Samples](#), November 23, 2001

Bit the bullet, bought a yashica T4 super through the classifieds here. \$130 from Toronto, brand new in box with warranty. Dis-satisfied with the puny flash, although I do like all the flash options. Bought a Konica flash bracket with built-in sensor, specifically designed for point and shoot cameras. Best \$30 I have ever spent, also through these classifieds. Went to Washington DC and spent the day at the Air and Space Museum and burned 11 rolls of film between my new point and shoot and my old Canon AE1-Program with a 50mm lens (vs the 35mm on the Yashica). Used the same flash for both cameras. On the point and shoot bracket, the upright hot shoe portion is placed slightly ahead of the front of the camera so that the built in sensor facing the side of the camera can tell when the on camera flash goes off and then fires the main flash. (Vivitar 285). On the Canon set up, I have an old Roberts bracket (also bought here) which places the flash in approximately the same position relative to the lens but I used a sync cord with that. I had to guess on what to set the 285 flash on using 400 ASA film on the Yashica T4 Super. (Yeah, I know, but it's a big space with lots of stuff, and it's not for their magazine, but my trip album) So, I set the flash on Red, which gave me the equivalent f4 and about 30 feet or so, plus whatever the P&S flash added. They don't allow tripods anymore, so I had my improvised monopod which is eyebolts screwed into the tripod sockets of the brackets with nylon rope attached, dangling down about 6 feet, and then I step on the end, marked with a black stripe, pull up to tension it, adjust the height of the viewfinder and get a nice, steady picture. Albeit some very strange looks and an occasional inquiry as to why. I think you will see more of these around, maybe... (God, he do go on don't he?) Bottom line, I shot several pictures with and without main flash on the point and shoot. These were not bounced, but direct! The difference was astonishing. I shot a panoply of large aircraft that hang in the main hall, using only the on-camera flash and with the automatic backlight compensation working perfectly (I was shooting against a 50'x200' window in sunlight), I got some crystal clear, dark outlines with some detail from the closest plane, a Ford Tri-Motor. You could see the propeller, but not much detail on the fuselage. Then I used the big flash on the bracket with the point and shoot. You could see every detail of the fuselage, the front engine, the landing gear, also the nose of the plane 30 feet behind was perfectly visible and the colors and some of the detail of the others, 50+ feet away were also visible. Then I shot another pair of an X-15 rocket plane with the Wright Brother's Flyer framed under it's wing. The nozzle of the X-15 was approximately 8 feet from the camera. Without add flash, the rocket plane was perfectly exposed, but the Flyer was a little dim. With added flash, the X-15 tail section was over-exposed, the Flyer was perfectly crisp and clear. Some thoughts: My Vivitar is a semi-manual flash, not TTL If you are going to use a manual flash, try to find out what the largest opening would be for your point and shoot when using flash. Since the Yashica has a f3.5 lens, f4 on the flash would match OK, provided you were going to illuminate further than 15-30 feet or more. Point and shoots tend to open their lenses as wide as possible and control the exposure through shutter speed, the print film can handle the added light just fine. The offset of the supplementary flash also tends to eliminate

some of the shadows caused by the on-camera main flash. The entire set up is easy to hold, but looks strange, since my flash is heavier and bigger than the actual camera. I love the T4 Super! Pain in the ass trigger sensitivity, that can be mastered with some training, crystal clear images, edge to edge, I have not noticed any vignetting. Hate the lens racking, focusing and shutter trip delay, but, again, training helps (and my step on monopod. The AE1-Program took superb pictures, as expected, I have used it for 20 years, but considering the weight and the bulk, I will be using my T4 for most of my vacation stuff and light shooting duties. The slave flash bracket, judicious use of the flash, based on your distances and the ease of the T4 focusing has made a believer out of me. If you want to take superb group shots with natural color and none of the startled deer look, try using this type of fill flash to bounce off a white ceiling. My new sister in law preferred my candid pictures to the pro with the high bracket and Mamiya camera, although not in all instances, to be honest. (Why he didn't bounce and fill, I don't know)

-- [Peter Tower](#), December 31, 2001

I use a 5 yr old Olympus Stylus and love the results but I've found that these cameras can take terrible pics if you don't Think. Since P&S cameras are marketed to the simpletons among us I came up with a nice acronym (no Thinking involved) to help my spouse shoot the occasional picture of the primary household photog (ME). I call it the "Three F's". One, set the Flash (usually OFF or Fill). Two, Focus the camera by pointing it EXACTLY where you want it to focus then push halfway. Three, Frame the shot and shoot it. (I could probably add a fourth F, as in FILL UP the FRAME if you're shooting FOLKs) The 3F's seem to work well for my 5 year old son too. Teach your friends the 3F's and they'll take better pics of YOU...

-- [Mark Atwell](#), February 11, 2002

I had a Yashica T4 super for about 4 years. Yes it was compact, weather proof, and fairly accurate with AF and AE. I sold it, and bought a Olympus 35SPn with a Zuiko 7 element 42mm 1.7 lens. Sweet. This is a much slower camera to operate (manual focus). Although it does do AE, I bought it to use it mainly in manual mode, spot meter, and of course MF. It is one tough (metal) camera. Very, very versatile... it slows me down and makes me think more about where I meter and what pinpoint I want to focus on. My Hexar gives me the best of both worlds... P&S and total manual. But I've been toying with the Olympus more lately and it's a gas. The flash system uses incorporates GN and distance automatically therefore really accurate flash exposure (with ISO 100... anything else and don't forget to change the guide no on the lens setting accordingly) Add to the mix a cheap mechanical cable release, no AF focus resetting between pictures, and almost no lag time between shutter release and firing, and flash sync to 1/500 and ability to use hot shoe or PC cord studio flash. I guess I was lucky... the SPn that I have is the last model produced... pristine condition, with everready case also in pristine condition and a new mecury battery and a great flash to boot. I miss the waistlevel finder of the T4

super though...

-- [David Bindle](#), February 14, 2002

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Contents:

1. [Top](#)
2. [Lenses](#)
3. [SLR mirrors](#)
4. [Flash Contacts](#)
5. [The Camera Body Itself](#)
6. [War Stories](#)
7. [Gallery](#)
8. [If all else fails...](#)

[Reader's Comments](#)

Remember that your camera is just a tool. Don't pamper it. You can always buy a new one. If you leave your camera in a closet, it will never get dirty or broken, but you won't have too many great photographs to show for yourself. Many of the best photographs can only be taken under conditions that will render your equipment wet and/or filthy. That's life.

The photo at right was the result of spending six hours at the bottom of a canyon in the Navajo Nation. For the entire six hours, sand blew down from the top of the canyon and into my \$20,000 Rollei 6008 system. Was there a sickening grinding sound when I focussed my \$3000 50mm lens for the next few months? Yes. Did I have to send the camera back to Marflex (Rollei's US service) to be cleaned? Yes. Did the camera get [stolen in Filthadelphia](#) a couple of years later? Yes. So it really



didn't make sense to obsess over the camera, did it? I can still enjoy this picture even if I can't use my 6008 anymore. If I'd pampered the camera, it would just be in that much better shape for the crook who is using it now.

Lenses

Basic lens cleaning tools are a blower, a microfiber cloth, and lens cleaning fluid. Try to blast dust off the lens with the blower or canned air. Finger prints can be removed with a circular wipe of the new miracle micro fiber cloth (my favorite brand is Pentax because it is nice and thick; about \$6). Persistent dirt should be removed with lens cleaning fluid, of which the safest is probably Kodak. **Always drip the fluid onto the cloth and then wipe the lens; never put fluid directly onto a lens.** My personal favorite is Residual Oil Remover, available in many camera shops for about \$4.



Even if your lenses don't look dirty, every few months you should give exposed surfaces a cleaning with Residual Oil Remover (ROR). Even if you were able to protect your optics from all environmental sources of filth, there would still be crud condensing on your optics as camera bag plastics outgas. ROR has a bunch of advertising hype about how you can get a full 1/2 stop of extra brightness from your lenses after a treatment. I haven't experimentally verified this nor do I believe it, but the optics do look visibly clearer after an ROR treatment.

I don't like to obsess over my equipment, so I keep a B+W UV filter on almost all of my lenses. I count on replacing the filters every few years rather than being paranoid all the time.

SLR mirrors

Don't even think about cleaning the mirror in your SLR. Maybe, just maybe, you could consider using a handheld blower to move a few dust specs off, but canned air is too powerful. Technicians clean mirrors with some kind of special viscous fluid and will often do it for free at camera clinics run by shops or conventions. Mirrors have very fragile surfaces and I wouldn't dream of getting near them with a standard lens cleaning solution or cloth.



Remember: the dirt in your viewing system isn't going to show up on film.

Flash Contacts

Modern TTL flash systems have numerous contacts and if you don't clean them every now and then with a pencil eraser or something, you can be fairly sure of getting intermittent failures.

The Camera Body Itself

Camera and lens bodies are fairly well sealed against dust and moisture. So you don't really ever have to clean the exteriors of your equipment. On the other hand, if you don't want the dirt and crud that is on the camera body to work its way into your camera bag and from there onto an optical surface, it is probably worth wiping off the body with a soft cloth. Slightly dampening the cloth with plain water certainly won't do any harm, though I imagine that this wouldn't be Canon or Nikon's recommendation.



War Stories

I had a very [interesting experience in New Zealand](#) after smashing a UV filter on my Nikon 28AF lens.

Gallery

Here are some photos that I wouldn't have gotten if I'd been prissy about my cameras...



From [Samantha](#) ...



And from [Italy](#) ...



If all else fails...

If you got the picture but lost the camera in the process, you may need to visit one of [the photo.net recommended retailers](#).

[[top](#)]

Reader's Comments

Hi,

When shooting out, I always place some silica gel in my bag to get rid of excess moisture. I don't know how useful it can be but since the camera bag is not 'air-proof' and is light-proof, the potential for fungus growth is high.

I use empty film containers and poke little holes in them, then pour enough silica gel into it. It is an easily refillable container and contains just about the right amount for a medium size bag.

-- [Angst Man](#), July 19, 1998

I'm not disagreeing with anything you've said. I'm reporting on Nikon information. The Manual - yes I do read it. It says, for glass surfaces such as lens; avoid using lens tissue. Use soft cotton moistened with pure alcohol. The Nikon consumer/tech reiterated that I read it right. "Use 100% pure methol alcahol. Con't use lens cleaners." Any comments from anyone? To be honest, I usually use one of the cloths you mentioned or a soft, clean bandana. I do know some filters from certain companies come with warn ings against using certain cleaners, but by the time, I get ready to clean same, I've lost the instruction paper.

-- [M. Huber](#), August 25, 1998

Reading from the Nikon F5 User Manual, page 151, it says: "Clean lens surface with a blower brush. To remove dirt and smudges, use a soft cotton cloth or lens tissue moistened with ethanol or lens cleaner"

-- [Rick --](#), October 25, 1998

On microfiber lens-cleaning cloths, two recommendations. First, Herbert Keppler, who's been doing and writing about photography for more years than most of us have been alive, has some interesting thoughts (in the Dec. 98 Popular Photography, p. 25), in his brief piece entitled "Microdear microfiber cleaning cloths finally available in the U. S." Keppler says, "For years I have been raving about what I think are the best lens- and camera-cleaning cloths anywhere--the Microdears, made in Japan by Etsumi Co. They are generously large and thick" but have been obtainable only in Japan. Now Adorama is importing them, in two sizes: 11"x11" for \$10, and 14"x17" for \$15. Keppler's piece also gives his own directions for their proper use: "Dust and light smudges are easily wiped away. To remove pronounced fingerprints or heavy, mucky stuff, breathe lightly on lens surface and immediately clean lens with light, circular motion of single-layer Microdear. Better yet, slightly moisten the edge of the Microdear cloth with lens-cleaning solution, alcohol, or, in an emergency, vodka. Then do your circular motion bit. Microdears are also great for cleaning outside surfaces of camera bodies and the like." Keppler claims that dirty Microdears "can be washed in soapy water" and when rinsed thoroughly and dried, "they'll be as good as new."

Second, I like and recommend the Contax MicroStar microfiber antistatic lens-cleaning cloth, which is also generously large and thick. This is a top-quality lens-cleaning cloth. I bought mine for \$15 from an Asian selling them at a camera show (mine is light green in color and says "CONTAX/Carl Zeiss T* Lenses" on the cloth; directions are in Japanese only). Sorry I can't tell you where to buy one.

-- [Dave Kemp](#), November 28, 1998

Whenever I buy new shoes for my kids I grab the little silica gel pack from the shoe box and put it in my camera bag. I always have three or four of the little packs floating around in there. They lay flat in the bottom of the bag, so they don't take up space. The cameras stay dry and I have never had one tear or break open. Best of all they are free and easily replaceable.

-- [Dan Fordice](#), February 5, 1999

I have had very dissappointing results with the cleaner that Phil recommends, Residual Oil Remover (ROR). I purchased a bottle recently, along with a pair of Wiko Microstar

cleaning cloths. ROR's website recommends against using regular lens tissue, claiming that it is "not absorbant enough for ROR," so I sprayed this peculiar smelling chemical onto one of the Microstar cloths and wiped off the elements and filters of all of my lenses.

After completing this process, however, I exhaled onto the elements to make sure that they were in fact perfectly clean. (A clean lens will fog uniformly, and any grease or fingerprints will appear quite distinctly.) I was very surprised to see all sorts of swirls and whatnot materialize on the elements. I polished of the fog and then tried again. They did appear somewhat cleaner this time, but nonetheless, the swirls persisted.

Now you must realize that I am quite compulsive about my equipment, and especially the cleanliness of my optics, so, needless to say, I was somewhat perturbed. I acquired a flashlight, and, by the light reflected from the front element of the lens, distinct smears of grease or something could be detected.

So I read the bottle. "Do not use with treated lens cloth." Well, Microstar is not treated (treated lens cloths being primarily of the anti-static type, such as Ilford's AntiStaticum), but perhaps this chemical was somehow breaking down the Microstar's synthetic fibers and leaving the residue on the lens. (I seriously doubted this, but it bore consideration.) Or, perhaps the cloth was simply dirty, and the oil ws being redeposited onto the lens.

I washed out the Microstars and then used lens tissue with the ROR instead, hoping to eradicate my little problem, and guess what; the residue remained. However, a bit of ethanol diluted with water took the mysterious residue right off. Perhaps my bottle of ROR was defective, but I have since discarded it, and never plan to buy another.

My recommendation? When you first acquire a lens, clean it with regular lens cleaner or diluted ethenol (NOT isopropyl, or rubbing, alcohol, but ethyl alcohol only). This is sufficiant to remove much grime that can accumulate on a lens (especially if it is used) and should be repeated periodically every four months or so. Remember, however, that overcleaning will eventually strip off the delicate coating of the elements. To minimize such damage, used canned air to blast dust and other abrasives off of the glass BEFORE rubbing a cloth of tissue over them. For intermediate cleaning, a microfiber cloth and the moist breath treatment are the safest approaches, and canned air is the easiest way to remove dust, especially on longer telephotos in which that rear element sits deep in the recesses of the barrel.

-- [Timothy Breihan](#), May 20, 1999

I second the above negative experience with ROR (Residual Oil Remover) lens cleaner. I found it to work no better for most, and worse for many, types of lens contamination, than Kodak lens cleaning fluid.

On a separate note, as per Keppler's recommendation in Pop Photo, I went to Adorama and bought the Microdear cloth, and found it to work very well.

Alex Karasev

-- [Alexander Karasev](#), June 30, 1999

I also noticed the slight swirls you get when using ROR, but it seemed to work well overall for cleaning. I just used it to clean a Canon 70-200 2.8 and a Sigma 170-500. After a year of taking the Sigma to the racetrack for horse racing photography, the lens' front element was so fouled with sand, dust, oil, etc that I was about to give up on it. Regular cleaning products like canned air and microfiber cloths did nothing to help it. After one ROR treatment, it was good as new! ROR even took off moisture spots that had appeared on the front coating. Sure ROR left a slight swirling pattern (only noticeable when viewed at an angle under fluorescent light), but after some buffing with the microfiber cloth the swirls were pretty much gone.

-- [Derek Dammann](#), July 16, 1999

A further comment on lens cleaners; since my last posting, I discovered a way to eliminate the greasy swirls that mysteriously appeared on my lens elements after a treatment with ROR. I have found that if you saturate a cotton facial pad with ROR, apply the liquid thickly to glass, and then immediately remove it with another dry pad, the swirls are eliminated or at least reduced to a degree at which a light buffing will remove them.

The literature on Residual Oil Remover makes mention that certain tissues are "not absorbant enough for ROR..." My theory is, that since ROR apparently emulsifies oil, too much wiping simply redeposits the oil back on the glass. This is a somewhat half-assed explanation, and I'm not entirely convinced of its merit. What I am convinced of is that ROR seems a bit to fickle to warrant wasting my time with. I use others cleaners that work better. I would also ask if Phil has experinced any of the aforementioned difficulties, and, if so, could he please place a posting illustrating his solution. I would be interested in hearing additional insight.

A final observation on Kodak lens cleaner. Reading the Contents label illustrates that it is simply ammonia diluted with water. I have often heard that ammonia is harsher on lens coatings than ethyl alcohol, and to my experience, does not work as well. (I use an alcohol based cleaner.) Does anyone have any insight here? Phil says that the New Zealander who extracted the glass fragments from his lens cleaned the glass with acetone, something I would never consider. Any comments?

-- [Timothy Breihan](#), August 24, 1999

As far as Kodak Lens Cleaner, I read from the bottle that it is water and ammonium carbonate, which is different than household ammonia (ammonium hydroxide). It seems to work OK, but I think most of the effect is that the water in the solution helps the tissue or cloth hold onto dust particles more effectively. As far as ethanol, Everclear is pure ethanol and is available at liquor stores in some states (Texas, Colorado, other he-man type places). Ethanol seems to dissolve oily spots beautifully, although the jury seems to be out on its effect on coatings.

It would be useful to have some facts about what lenses are coated with and the reactivity of coatings with common cleaner ingredients like the above. I cannot imagine that condensed breath is totally non-reactive (especially if you've been drinking Everclear).

-- [Charles Mackay](#), September 5, 1999

In my lab 100% ethanol and methanol are freely available and I use them to clean my lens all the time. Works great. Not a trace left. Methanol evaporates in seconds but it's toxic so be careful.

-- [Rocky Aaron](#), October 23, 1999

Ethanol and cotton flannel are recommended by Nikon, so I doubt that they would harm lens coatings if used in moderation. If you are using Everclear, though, it might be a good idea to dilute it with distilled water, if for no other reason than to increase its evaporation time. That way, you can be sure to get all of the oil up with your cloth instead of having it remain on the lens as the ethanol evaporates.

-- [Timothy Breihan](#), November 8, 1999

Since the above, having used ethanol denatured with methanol ("solvent alcohol") sold at my hardware store and the absorbent cotton that comes on rolls at local drugstore, I will never use anything else. After using dust-off, use one piece of cotton dampened with ethanol to remove dirt / oil / sludge, then dry with a fresh dry piece. (This technique is also advocated in one of Really Right Stuff's "white papers".) Lenses look absolutely like new, at least with Nikon glass.

If you don't get all the crud off, the ethanol may leave a hazy residue (basically diluted crud that you have redistributed evenly around the lens). This happened to me once but a microfiber cloth removed it -- or you could just repeat the alcohol thing.

-- [Charles Mackay](#), November 17, 1999

A quick note on the previous comment regarding ethanol-- ethanol not explicitly labelled 200 proof has probably been denatured for tax reasons. While some ethanol is denatured

with methanol, other denaturants which may be harmful to lens coatings include camphor, gasoline, benzene, acetone, ether, and kerosene (Merk Index, 11th ed., 1989).

-- [Dave Flanagan](#), February 2, 2000

Don't forget to clean the insides of the lens cap too, and the back end of the lens as well might need cleaning. Also I have found that Zeiss lens cleaner cleaned even my dirtiest lens to a "like new" clean. thanks for all of the tips.

-- [Pat O'Neill](#), March 6, 2000

For those folks who truly believe their "clean" lenses are clean, try this: grab a jewelers 10X eye loupe and take a look at the lens. What appears to the naked eye as the cleanest looking lens will reveal its' true dirt, smudges, swirls, scratches, fungus and damage under a 10X eye loupe. Best to use a jewelers "triplet" eye loupe that's been designed for diamond grading with a black frame. They offer best color and image fidelity. The GIA sells them for about \$70.00.

(In fact, when you go shopping for a lens, bring the jewelers eye loupe with you. You'll be unpleasantly surprised at how many "new" lenses have surface defects, chips etc.)

-- [Marika Buchberger](#), March 19, 2000

Just a note on blowers - don't pay a lot of money at a camera store for one. Instead go to your local pharmacy and purchase a rectal syringe, they do just as good a job for a lot less money.

-- [Ian Johnston](#), July 23, 2000

As an alternative to cleaners and wipes, consider good ole scotch tape. Just use a small piece, touch it to your lens or filter and lift off. It removes oils, fingerprints, and dust without the potential of streaks or scratching or mess. I use it to clean the LCD screens on digital cameras. It works great, gets all the way up to the edge and will not scratch the sensitive (cheap) plastic screens. I have also, on occasion, used it to clean the mirrors on my SLR's. Nothings more annoying than a dust spec in the viewfinder.

-- [S.J. Polecat](#), August 11, 2000

One observation I'd make about cleaning any sort of surface. Having some year of oexperience in cleaning residual contamination from surfaces being prepared for adhesive bonding on aircraft structures (where any trace oils would totally degrade the bond), it is traditional to use two cloths for solvent cleaning. The first one is soaked in the solvent and is used to dissolve the contaminant and put it in solution. The second, clean and dry cloth,

is used to remove the solvent/contaminant solution remaining on the surface. These steps can be repeated if required using fresh cloths.

For lenses, I would think a second step of treatment would suffice. What I can say from personal experience on lenses is that the Cokin lens cleaner seems to do a decent job when used with the two cloth approach. I always use the Kodak lens tissues and get few swirl patterns.

In a pinch in the field, I've resorted to using a standard tissue (yuck) but followed that with a blow off brush to get rid of the inevitable bits of fibre that deposit from the tissue. An imperfect solution, but sometimes an errant finger does actually get in front of my lens.

Dave

-- [dave lawson](#), September 28, 2000

Slide-Loc, OneZip...

If your micro cleaning cloth or lens tissue has abrasives in it you may damage your lens. To protect the integrity of my cleaning materials I always carry them in Ziploc type bags. I especially like the ZipLoc, Slide-Loc and Hefty, OneZip bags.

I find these bags are great for other things, for example quart size Ziploc Freezer bags are just the right size for 4x5 cut film holders. Charged and discharged batteries, exposed and unexposed film, lens hoods, camera manuals, etc.

-- [David H. Hartman](#), November 3, 2000

just about the mirror cleaning i guess there is really no problem to keep it in good conditions cleaning it up with a soft pencil or that pencil ones you can mount in an air pump.

-- [oTTO zUCHIERI](#), November 26, 2000

When you get that gray grunge buildup in the inscribed numbers on your lens' aperture dial or your shutter speed dial, try an old toothbrush dipped in any kind of alcohol. Shake off the excess, then go at it with a circular motion. The original paint will soon be shiny & bright. You can remove any left-over residue with a slighty-moist (H2O) tissue. This will also remove the crud from any other crevices on the camera.

-- [David Krewson](#), December 6, 2000

Zeiss Lens Cleaner and old fashioned baby diapers. Makes the lenses "squeaky clean"!!!

A note about the diapers: Make sure the diapers have been machine washed numerous times with NO fabric softener. Also, rinse them well in DISTILLED water to remove all residue.

-- [Marika Buchberger](#), December 29, 2000

In my experience with cleaning multi-coated filters, optical glass can be cleaned to perfection with the following methods:

1. Simple dust specks or lint: Use a blower bulb or blower bulb/brush. (obtainable at photo stores, chemical stores, pharmacies) Blow off the dust using the bulb. Sometimes a combination of brushing and then blowing works best. Make sure that if you use a brush, that it has never been in contact with anything oily, like your skin. If it has, you'll need to clean it with alcohol first. If you only have a blower and no brush, lightly knocking the dust particles loose with a clean 100% cotton cloth first, and then blowing works. In some cases, lint will be stuck in the rim of your filter. In that case, careful use of tweezers (I recommend swiss army tweezers) to pull out the stuck lint.

2. Dust, filmy residue, or specks: Use pure water (tap water is fine) with a 100% pure soft cotton cloth (a perfectly clean t-shirt is fine, but no cotton balls, they're too linty). In the case of mounted lenses, apply the water to the cloth. Then wipe the glass clean with the damp cloth, and then wipe dry with a dry part of the cloth. Do not let the water dry on it's own!

In the case of filters, remove the filter from the lens, then hold the filter under the tap and rinse it completely with water, both sides, and then immediately begin to wipe the whole filter with cotton cloth until dry. If there is dust or lint left, go to method 1.

3. Fingerprints and oily residue: use ethanol and a 100% pure soft cotton cloth. A 95% ethanol, 5% isopropyl alcohol blend is perfect. This can be obtained from chemical supply stores. (I recommend tri-ess in Burbank, <http://www.tri-esssciences.com>)

Apply the ethanol to the cloth and then wipe the glass with it. Make sure to dry it off completely using a dry part of the cloth. Do not let it evaporate without wiping. If there is residue, proceed to method 2. If there is only dust or lint left, proceed to method 1.

4. If and ONLY IF there is a residue that could not be removed by methods 2 or 3, use a lens cleaner like Residual Oil Remover, ROR', and a 100% cotton cloth. Apply the lens cleaner to the cloth, wipe the glass with it, and then dry as best as possible. There will be a residue, so proceed to method 3. In general, filter manufacturers like Hoya, do not recommend use of lens cleaners. They say in some cases they can ruin the coatings. (That didn't happen though with my Hoya Super HMC UV(0)).

What kind of pressure should you use when using the cotton cloth? The lighter the pressure, the better, but even medium pressure should not scratch your lenses or coatings, because cotton is soft. Don't press hard enough though for the glass to break!

-- [Eitan Adut](#), February 10, 2001

I'm a bit surprised no-one's mentioned OptiClean for glass cleaning. Maybe it's not available outside the UK yet.

Anyway, for those who don't know, it's a liquid polymer that you paint onto the lens and leave until it hardens. You then remove it by attaching a little sticky tab and pulling it off. Away comes the film along with every bit of gunge that was on the glass.

It's quite expensive, but very good. It also doesn't rely on you having the right sort of cloth to remove it.

-- [Steve Rencontre](#), February 22, 2001

I've used Kodak lens cleaning fluid with a Promaster cloth with squeaky clean success. The Promaster cloth is very absorbent, but I don't know what material it's made from (possibly cotton). I've tried the Microstar cloth, but found it to be not very absorbent, and sometimes left streaks. I always begin with gently blowing the lens off with some ReadRight compressed "air", then gently brushing it with a camel hair brush, blowing again, and then soaking the cloth fairly well with fluid, and gently dabbing the lens (and immediately dry it w/ cloth). I then use perhaps a drop of fluid on the cloth and gently wipe the lens down. There aren't usually any streaks due to the absorbency of the Promaster. If there are a few streaks, I just lightly buff the lens with the cloth, and in fact the resulting cleanliness is so thorough there's usually a slight squeaking here and there from the surface being spotless. I've tried Kodak disposable paper, but that just leaves damm streaks all over! Make sure your cloth is absolutely immaculate... PS: I just bought a Leland PowerClean Ultra Cloth which looks promising as well.

-- [James Allen](#), February 24, 2001

Long ago, when I worked as a camera assistant on movie crews, I was taught to clean lenses with the three-tissue method: 1) Roll the first tissue into a fairly tight cylinder and tear it in half, then lay the two pieces side by side--the torn ends become the "bristles" of your lens brush ... point the lens down, and brush the grit off its face (if you don't point it down, you just push the grit around) then discard the tissue; 2) Bunch up the second sheet by grasping its corners and form a little wadded cushion ... put one drop (no more!) of lens fluid on it, and gently clean in a spiral motion from the center out, rotating the cushion so that a clean surface is constantly presented to the glass, then discard the second tissue; 3) Quickly (or you'll get waterspots from the fluid evaporating) bunch up the third tissue as

you did the second, and dry and polish the glass in a spiral motion from the center outwards, then discard the tissue. Always clean your lenses gently--never scrub or rub hard. If you buy some lens tissue and you can hear it crackle when you wad it up, it's too stiff and harsh for your glass, so replace it. Before I start step two (above), I put the third sheet of tissue between my left ring and pinkie finger knuckles, so that it will be at hand immediately and waterspots won't form before I can dry the glass. Finally, keep a UV or 1A filter over your lens all the time for protection (I know that's elementary but I'm a true believer, having replaced the filter four times on a lens I'm still using today)

-- [Donald Gentz](#), March 1, 2001

Great Lens Cleaner! Regarding optics cleaning I have not tried ROR but there seems to be some dissatisfaction with it's use in some of the comments. For forty years I have found using liquid lens cleaners to be a horrendous experience, including alcohol, those from Kodak, etc. Recently I have found a totally satisfactory cleaner that actually makes the glass look clean! No swirls, residues, etc. In fact, the claim is that it removes all previous residual cleaner contamination as well as normal oils and accumulations. This seems to be the case in my experience and it does it without special efforts. It is called Formula MC and it's website is at the bottom of these comments. I hesitate to use microcloths as the danger of reusing their surfaces poses a danger to my \$1000 lenses even though they work remarkably well. With Formula MC they are not needed or recommended. The safe method is to use two pieces of clean, unused lens tissue, a wet and a dry one, and the job is done in a minute or so with no threat to optics. I first blow away any dust from the surface, especially the crevices so I don't dislodge any grit while cleaning, with a can of Dust-Off or similar product and perhaps a light blow at the finish to remove tissue lint. I do a test blow away from the lens and always hold the can upright. Never shake the air can before using it! Because I take care in protecting my lens surfaces and avoid cleaning unless they get a finger smear or really need it, I haven't had a lot of need or experience using MC but can say that when I have used it its been a pleasant experience. I might mention that in using the 2nd tissue there might be what seems as residue but this appears to be part of the cleaning process and is removed by carefully wiping it away. The lens will come out clean and free of cleaning marks.

Formula MC's site is: <http://www.pecaproducts.com/mc.html>

As an alternative there is another cleaner that I remember reading is the official one used by Hasselblad and other optics makers (possibly Leica). It is called Rexton Optyl-7. I have used it but prefer MC. I bought both these cleaners from Get Smart Products at: http://www.pfile.com/cgi/cart.cgi?db=dusters_cleaning.db&category=Dusters,+Cleaning+Supplies

-- [Pepe Alvarez](#), March 4, 2001

I have lenses several years old that have never been cleaned directly. I always buy a new filter with each new lens. Upon receipt of the new lens, I immediately install the new filter.

Smudges and dirt get removed from the outside of the filter with my t-shirt or whatever else seems handy at the moment.

Shine a flashlight through your lens. Anything that is illuminated is effectively scattering light. Think about that. On an ideal lens, you wouldn't even be able to see the glass.

A high powered flashlight will allow you to discover just how much dust actually resides on elements that are inaccessible. Zoom lenses seem to get the most dust internally, probably due to fluctuating air volumes within the lens tube. The amount of internal dust may convince you that cleaning the two exterior surfaces is rather trivial.

With a high powered flashlight, you may also discover the effects of over cleaning a lens. The light will illuminate all those microscopic scratches in the glass left by cleaning procedures.

I have also seen some lenses with oil residues on inner elements. These oil residues will take the form of fogging, spotting or streaking. I suspect that factory-applied lubricants are to blame here.

In one extreme case, using a flashlight I saw a smudge with a small fingerprint on an internal element. This same lens happens to be the sharpest one in my collection (a 50 mm prime). Since this realization, I have devoted much less attention to the cleanliness of my lenses.

A little scattered light seems to be ok.

-- [Alan Wallace Jr](#), March 7, 2001

General advice.

1. Use a bulb blower to dust off your lenses periodically. This is one of the safest ways to clean the glass.
2. Use alcohol and lens tissues or cotton balls to clean persistent grime off the glass. I use ordinary alcohol rather than special lens cleaning solutions, because it evaporates quickly, wipes clean easily, and leaves no streaks.
3. Use a lens hood on every lens, and consider an eyecup for your camera's viewfinder. These accessories help protect the glass from fingers, dust, facial oils, air pollution, impact, etc. They also deliver more contrast to your eye and to the film, by blocking extraneous light.
4. Use your lens caps when you finish taking pictures, and when you change lenses. This

keeps dust and oil off the elements, and prevents scratches and impact damage.

5. Use UV filters to protect your lenses in hostile environments: rain, snow, smoke, extreme heat or cold. But don't think you have to use them all the time. Even the best filters will degrade contrast and resolution, which may or may not be noticeable. Bad filters can turn good lenses into mediocre ones. Always remove filters when shooting into the sun or artificial light, to prevent flare, ghosting, and reflections.

6. Don't clean your lenses too vigorously or obsessively. There's always the chance of causing more harm than good.

-- [Ian Cruikshank](#), May 24, 2001

I am amazed every time I read an article by someone who does NOT recommend a UV filter on every lens for protection. These are people whose work I admire and I feel they should know better. Included in this group is John Shaw who makes the statement "protect it from what?" in regard to a filter protecting the lens.

In my previous incarnation as a working photographer I have witnessed the following: 1)Nikkor 180mm f/2.8 falling from the roof of my car to the pavement below, 2)Same Nikkor 180 snapping off the entire front of a Nikon F2 following my being hit by a football player, 3)Nikkor 24mm f/2.8 being splashed with champagne in the locker room of a Texas League baseball team, 4)Nikkor 80-200mm f/4 lens taking a headlong dive from a bar to the tile floor below, 5)Nikkor 24mm lens attached to a Nikon F2 that slipped through my fingers and crashed to the dining room floor of my apartment, 6)Nikkor 35mm lens being splashed with flood water, etc., etc....

In every case, the front lens element was undamaged. I wore out one 24mm lens, there was no distance markings left on the barrel and it was no longer sharp until you stopped down to f/16, but the front element (and rear as well) were pristine.

If you are working as a photographer or just caught up in the moment, you will many times expose your camera and lenses to rough treatment. You will stuff lenses in bags or lay them down on rocks (or bars) and not use a lens cap. It's called normal use and abuse for a working photographer or an amateur who does a lot of photography. It makes sense to protect the lens elements as best you can. And you can get a decent optical glass UV filter for a lot less than you can replace the front element of the lens. If you are worried about flare, etc., you can always take it off to make a photograph and put it right back on--it's not a permanent lens attachment. You need to protect the lens from the unexpected incidents. It's just common sense.

-- [Lee Shively](#), June 12, 2001

I have noticed that often the humidity of finger soils the lens surface through the thin lens cleaning paper that I use. So I use it loosely wadded. Or I use it, sheet-wise, but I take 2-3 sheet at a time.

-- [Alessandro Mattiacci](#), July 13, 2001

I use double tipped cotton q-tips, and blow (hard) the dust off (and any gritty stuff that might happen to be there) then I use the 100% cotton q tip to clean off my breath from the glass. No scratches or problems. Cotton.

-- [Nathan Wynn](#), November 20, 2001

I know lots of purists are concerned about the optical imperfections of UV filters. Instead of using one to protect the front element, I recomend a rigid lens hood to protect the front element from fingers, bangs, etc.

-- [Mike Barnhart](#), December 13, 2001

Three cheers for ROR. I managed to clean an old lens that I thought would never come clean. It is a great thing to have in the bag.

-- [Roger Shrader](#), February 2, 2002

Using a UV filter as lense protection is a double edged sword. Although a previous poster relates a number of "saves", I had a Nikkor 35-70 hit linoleum after a 30 inch fall - landing on the front end. The UV filter broke, scratching the front element. New front element from Nikon service = \$200. It comes down to a question of luck...

As for lense cleaning - 3M makes an excellent microfiber cloth specifically for optical cleaning. If you can locate a supplier, please post it - I was lucky enough to get a sample from a 3M rep but have been unabale to locate a dealer.

-- [Jason Monfort](#), March 1, 2002

I'm a photographer by hobby only, but professionally I'm an optical engineer and have worked with all sorts of critical (and less critical) optics (infrared, visible, and ultraviolet lenses, mirrors, coated, uncoated, etc), and thought I'd throw in my two cents.

Probably the most important thing to consider when cleaning optics: beware of SAND! I know that everyone recommends using those cleaning cloths in a circular motion, but that it is really an **incredibly** risky thing to do. If there is even one tiny bit of sand or glass or other hard material under that cloth, you just made a whole bunch of pretty **permanent** circles on your lens. This is also the reason why doing what you can to minimize how often

the lens is cleaned is important. Perhaps you did make those circle scratches on your lens. But maybe they're not too deep. Do they scatter light and decrease the contrast on your negative? Sure. A lot? Probably not too much. But if you clean your lens once a week (or day?) and continue adding these scratches, it will become real noticeable in a hurry.

For cleaning an optical surface, straight wipes are much better. And for those of you who are really paranoid, you should switch to a different part of the cloth for **each** wipe. That way, if you did pick up a bit of sand, you won't drag it across again on the next wipe.

Dusting off lenses before using a cloth is important because it (hopefully) removes any abrasive materials.

I would also definitely steer clear of using any cloth that isn't sold as a product specifically for cleaning optics. T-shirts may be nice and soft to the touch, but how sure are you that a spec of sand (or thousands?) isn't stuck in that shirt from the last time you went to the beach or worked in the yard (or there when you bought it)? Sure enough to risk scratching your \$2000 300 mm Nikkor? It really isn't worth it. Paper towels, tissue paper, cotton swabs... I have seen all of these readily scratch glass. But these are not manufactured or packaged to ensure that they do not contain **any** abrasive materials. If you know anyone who has regularly cleaned their eyeglasses with tissues or paper towels for a long time, take a look at their eyeglasses with a really bright flashlight and you'll see what might happen to your lens.

Why am I going on so much about sand? Because the damage is permanent. Once a scratch is there, it's not coming off.

As far as cleaning solutions go... Again, I'd stick with ones that are supposed to be for optics. I am not sure what type of AR coatings are put on camera lenses, but many are quite durable and resistant to many solvents (we use isopropanol, methanol, acetone, toluene, sometimes even dish washing detergent). Since camera lenses are consumer products, I would expect the coatings to be pretty durable. But again, it comes down to quality... Rubbing alcohol has isopropanol in it but only a few percent. The rest is water, detergent and who knows what. I don't expect that the stuff sold as "pure" isopropanol is as good as the stuff I would use at work (reagent-grade, contaminants are measured in parts per million!) but it's far better than rubbing alcohol (and cheaper than reagent-grade too:). That goes for "exhaled water vapor" too... Do you know what's in it? Well I don't either, and I wouldn't risk putting it on my lens. Biological materials tend to be difficult to clean and corrosive if left on coatings for long periods (fingerprints can permanently damage a coating if left long enough).

And here's a tip: If you've just put some cleaning fluid on your cloth and tried wiping off a fingerprint, and there's still some there, wet another spot of the cloth (or a new cloth) and wipe again. Don't continue to reuse the cloth that isn't working. The solvent can only take

up so much dirt before it is saturated (remember chemistry class?), and more wiping just moves the dirt around, instead of dissolving it.

Lastly, someone above mentioned that looking at your lens with a bright light will reveal any dirt and dust. That's just how it's done in the optics world. Just a word of caution though: even a brand new, freshly opened lens may show "a lot" of "imperfections" under a good bright light. I suppose only someone who is trained in inspecting optics can really tell what's normal and what isn't, but anyone can look for grossly wrong things. There should be essentially *no* smudges or other things which cover a large area on the lens. Most acceptable imperfections will be just little point-sized things. If you can count the dust particles on your lens, you're in good shape. If there are so many that you could never count them all, then you probably need a good cleaning.

Hope this helps. Brian

-- [Brian McNeil](#), March 6, 2002

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Related Links

- [Gemological Institute of America](#)- At this site, follow the links to their on-line catalog of products (GEM Instruments). If interested, you can purchase a 10X triplet eye loupe from them. (contributed by [Marika Buchberger](#))
- [Kooter's Geology Tools](#)- Kooter's Geology Tools carries the Bausch and Lomb Hastings Triplet hand lens in 7X to 20X for \$32-39. Stainless steel and black impact plastic. It should last a lifetime. (contributed by [Mark Ingleright](#))

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Where to Get a Camera Fixed

By [Philip Greenspun](#)

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- [Top](#)
- [Reader's Comments](#)

If you have a modern 35mm SLR or point and shoot, the most obvious thing to do is send it back to the manufacturer. So if you have a Canon EOS and live in the US, just send it back to Canon USA. You can usually find repair facility addresses and phone numbers either by surfing the manufacturers' Web sites and/or calling 800-555-1212. If you live in a strange Third World country, you can still FEDEX in a camera body with a credit card number and get your camera fixed by the US importer.



If you have an old 35mm camera with sentimental value and are prepared to spend \$200 to make it work again, you might think that sending it back to Nikon or Pentax or whoever would work. However, invariably the manufacturers don't really want to deal with models that are more than 20 years old and will tell you that "parts aren't available." You need an independent shop that is willing to cannibalize junk bodies, machine parts from scratch, and otherwise exercise creativity. A traditional favorite is Professional Camera Repair in New York City: (212)382-0550.

If you have a Hasselblad, consider sending it to Gil Ghitelman (referenced in [my where to buy a camera article](#)). He employs his own Hasselblad repair guy.

If you have a broken Rollei, Linhof, or Rodenstock, then you want Marflex, (201) 808-9626.

Boston's only camera repair legend is Steve Grimes, (508) 384-7107, skgrimes@aol.com. He solves all kinds of strange large format problems with custom machining. He also does bread-and-butter large format shutter repairs, lens mounting, etc.

We're not experts on camera repair shops in every state. You'll probably get the best advice from [our Neighbor to Neighbor service](#) or the user-contributed comments (below). If all else fails, you may need to buy a new camera from one of [the photo.net recommended retailers](#).

More

- You can also learn more about [camera and equipment insurance](#).

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Reader's Comments

Repair Shop in Tampa:

In my [Nikon N-series Comparison Chart](#), I referred to a little repair shop near the Tampa airport that did a nice job on my Maxxum 2xi after hours at a reasonable price. A search yielded the name and address of the place.

V P Technical Inc.
3434 West Columbus Drive # 104

Tampa, FL 33607
(813) 876-7099

There seemed to be a lot of Kiev equipment on the shelves there so I believe that this is one of the few shops that repairs these cameras. Should you have trouble finding a repair shop that handles Kiev, I'd suggest you give this place a call.

-- [Don Atzberger](#), September 26, 1997

If you live near but not in Boston, consider going to Sanford Camera Repair in Arlington MA. They are a factory authorized Nikon, Canon and Minolta repair shop(probably other brands also including medium format).

They do an excellent job and they have a display case that's worth visting for by itself. It's full of destroyed cameras plus the cause of destruction(things like being driven over and sprayed with salt water).

-- [Paul Wilson](#), October 1, 1997

If you have a Canon T-90 in need of repair don't bother sending it to Canon. They returned mine with a note stating that the "service life of the T-90 has just ended" and they no longer have repair parts. After several phone calls I found an independant repair shop with parts. Good luck.

-- [John English](#), March 1, 1998

If you live in/around Baltimore and need your medium format and lighting equipment serviced, go see Peter Whedbee!!! This guy KNOWS Hasselblads and has a really good reputation amongst the local working photographers. His number is (410) 435-4481.

-- [Ken Eng](#), March 6, 1998

A (the?) source for out-of-print user and repair camera manuals is John Craig,
<http://www.craigcamera.com>

If he doesn't have the original he will sell you a photocopy, in the same size and binding as the original.

As usual no relation other than as a satisfied customer, etc... (found him by recommendation of the folks at KEH).

-- [Cris Pedregal Martin](#), June 8, 1998

In the Boise area:

Photek (3075 N. Cole, Boise, ID 83704, (208) 323- 7568) is a really great place. Their repairs are reasonably priced, and they seem to have a nice supply of used parts. They also have a nice selection of used lenses and bodies in good to excellent condition.

-- [Stephen C. Murphy](#), July 1, 1998

This is a confirmation of the recommendation of Photek in Boise, Idaho. They can be depended on for superior quality and a reasonable price, in my experience. They've also more than once had in stock what I just couldn't find elsewhere.

<http://www.allworld.net/photek/index.html> is their website.

-- [Dave Miller](#), February 5, 1999

Why don't try to repair your stuff yourself? Many camera repairs turn out to be just cleaning, replacing light seals, or replacing broken levers. These jobs can be done by anyone who has reasonably good fine motricity, some patience, and a set of small screwdrivers, ring openers and a few other tools. The time invested is often less than what you would take to find out a service shop, pack the camera, ship it, etc. Living in one of those "strange third world countries" mentioned by Phil, I have no real option other than doing my own repairs. Shipping a broken camera to the USA would involve a very complicated and quite expensive "export and re-import" procedure. I have repaired a few dozen cameras and accesories over the years, both my own and those of friends, and found that in almost all cases the problem is something mechanical, often quite obvious. Electronic problems are much less common. It can be necessary to machine some part (this can get difficult!), but more often than not the sick camera can be healed without any special medicine!

If you have a quite new \$2000 camera that broke, and a nearby highly recommended service shop, and your hands are hardly able to handle any tool more delicate than a chainsaw, then by all means get it fixed professionally. But if the camera is 30 years old, worth \$200, you have reasonable skills, and the nearest service shop that may accept it is a continent away, it would be a good idea to fix it yourself! If you mess up, at least you had the opportunity to see how cameras look inside! :-)

Keep a tube of cyanoacrilate glue at hand. A lot of failures in autofocus mechanisms go back to cheap plastic gears sliding on the shafts!

And a small anecdote: Once a friend asked me to repair his Canon (I think it was a T50 or so). It looked like an electronic problem. He had replaced the battery without results (first things first!). Being an electronic engineer, I dived into the camera's circuitry,

reverse-engineered it until understanding what was happening - power supply problems! I removed the battery, connected the camera to a bench power supply, and it worked like a charm... I put in a new battery - problem fixed! The explanation: The battery had a manufacturing defect, manifesting itself in very high internal resistance, while the voltage at no load was perfectly normal. When my friend replaced the battery, he bought the new one at the same shop, and got one from the same manufacturing batch, with the same defect!!!

So, don't take anything for granted.

-- [Manfred Mornhinweg](#), May 21, 1999

Southern California? Camera Tech of Anaheim for all old cameras. The guy has been doing it for 30 years and does a great job for a great price. Doubt he'd be too good with the newer stuff, but if it's a mechanical, as opposed to an electrical, problem, bring it in.

David

-- [David Marhadoe](#), August 16, 1999

if in jacksonville, fl. and need repairs, check out southern technical photo services. factory authorized for at least nikon and canon. super good prices and quick turn around

-- [Tony Padilla](#), October 17, 1999

My Canon T90 needed a major overhaul a couple of years ago. The Camera Clinic in Reno, NV did a great job getting my favorite camera back into service.

-- [Michelle Dose](#), May 13, 2000

trial comment.

-- [waikit lau](#), June 28, 2000

In the Atlanta area, I highly recommend Camera Repair Japan (CRJ) in Norcross, just off Jimmy Carter Blvd. Excellent pricing and service. Compared to other service I've gotten, they certainly went the extra mile in CLA'ing my gear; it's the cleanest it's been since it came out of the factory 20 years ago. Tel: (770) 849-0555, Fax: (770) 449-7999, Email CRJCO@aol.com. I doubt you will be disappointed.

-- [Christian Deichert](#), July 3, 2000

If you own an older Canon A-series Manual focus camera, send it to Karl Aimo in Mass. His E-mail address is AE1REPAIR@aol.com, he caught a problem with my AE-1 and repaired it for a very good price. He charged \$65 to fix a jam, a dead hotshoe, and give the camera a CLA. The local camera shops in my area wanted \$120 to fix the hotshoe alone. Great service and fast turn-around along with great prices.

-- [Chris Pitassy](#), July 9, 2000

In Philadelphia, try to avoid Camera Brokers of Philadelphia (CBOP). Took a camera there for cleaning/adjustment in early August. Went back a week later to find out their repair technician wasn't (and hadn't) been around, so my repair waited until he returned. Received a phone call from him later, saying that my Canon SLR needed some other work - shutter repair, mostly - and that it would be another 2.5 to 3 weeks, and I would get a call.

After waiting for the call (in the meantime missing the opportunity to take the camera on a trip) I returned to the shop today (October 2) asking the whereabouts of the camera since I had never been called. I was told that "the camera just got in today" by one employee, and then "the camera came in a while ago, and we called you." (The number I provided was a work number, so there's no chance I "missed the call or there was no answering machine" as I was told. Even so, wouldn't good customer service dictate that you keep calling until A.) you speak with someone or B.) can leave a message?)

In any case, the second employee I dealt with "didn't like my tone" and told me to "take my business elsewhere." I suggest you do the same.

-- [Michael Kmiec](#), October 2, 2000

In the Washington D.C. area, I have experience with three repair shops:

Mora Camera Service: Just off Wisconsin Avenue, near Tenley Circle in the District. Nikon only. Small, personal, and they can do most anything on a Nikon. Reasonable prices and decent turnaround times. Their work for me has always been first rate. They also sell used Nikon and Nikon-compatible equipment. Last time I was there, they had a rare 500mm f5 mirror lens at a competitive price.

Alpha Camera: In the Clarendon area of Arlington, at the corner of Washington Blvd. and Wilson Blvd. This is another small shop, run by a Vietnamese guy who fixed Nikons for the war correspondents in Saigon. He has done some first-rate work for me on older mechanical equipment, cleaning fungus out of lenses and that sort of thing. Rates are quite reasonable. Don't be put off by the funky storefront, this guy does good work. I don't know how knowledgeable he is about the latest autofocus wonderboxes, but he is

definitely the first guy I would go to for work on an older camera.

Strauss Photo: Big, institutional, diverse, and slow. In a part of the District I would prefer never to set foot, Strauss does repair work for most of the camera shops in the DC area. They are factory authorized by several major manufacturers. I have had mixed results with them. They are basically good, but the operation is big enough that some sloppy work can slip through. Their size does mean they can fix a lot of stuff that a smaller outfit wouldn't have parts for. I don't send them Nikons any more; I wasn't real pleased with the last overhaul on my F3 and the camera wound up at Mora a few months later. I would still go to Strauss if Mora or Alpha couldn't help me.

-- [Bob Benzinger](#), May 26, 2001

Stay away from MACK CAMERA and Repair, in Springfield, NJ. They are arrogant, ham-handed thieves. Unfortunately, they provide lots of extended-warranty service to camera shops all over, so many consumers may have no other choice.

I live near Mack and recently brought them a Rollei TLR for servicing. I asked specifically to speak with their repair person before they worked on the camera. In fact, nobody called me, they went ahead with the work, and they returned the camera to me in much worse shape than it was before -- an exterior part entirely missing, a lock-lever detached, damage to the film transport mechanism and to the camera back/latch. This is beyond belief. When I complained that nobody had called, they said take your camera and leave, don't pay us--thinking I would be mollified. It was only when I got home that I saw what a botch job they had done.

Now, the company president refuses my phone calls, ignores my faxes. My next step will be Better Business Bureau, then Small Claims Court, I imagine.

Clearly, this company knows nothing about fixing real cameras. It is to be avoided at all cost.

I would be happy to hear of others' experience with them.

-- [John Verity](#), February 4, 2002

I highly recommend Superior Camera Repair and Exchange, in Woodland Hills, CA. The owner has done excellent work with my Minolta SRT-101 and XD-11 cameras, which most shops refuse to even look at. I had a short in my XD-11 which drained fresh batteries in less than a month; no problem, he fixed it inside a week. He loves working with classic cameras.

-- [John Wright](#), April 7, 2002

[Add a comment](#)

Related Links

- [Kominek Camera & Optical Repairs](#)- We are an independant shop specialising in camera and optical instrument repairs. Located in Toronto, Canada, we offer service to most makes of cameras, including Leica, Canon, Nikon, Pentax and most other makes. We also service many older models, including Zeiss and Voightlander. (contributed by [Roger Henriques](#))
- [Camera Repair Tips Page](#)- In the course of repairing SLR cameras for almost 25 years, I have compiled this list of the most common problems that I have run across. To see if I have some tips about your camera just click on your brand name and jump to your model. The most common SLR cameras that I work on are listed. (contributed by [John Titterington](#))
- [Bob Warkentin's Southern Nikonos](#)- THE place to go for Nikonos service. Simply the best. This is where the pros send their Nikonos gear. I have been using them since the 1980's and have always been 100% satisfied. Also a very informative Web site. (contributed by [Bob Benzinger](#))
- [Camera Fix Newsgroup](#)- This is a newsgroup for hobbyist camera repairers to share experiences about repairing their cameras. Specializing first in mechanical and semi-electronic cameras, any related discussion is also welcome. You can subscribe from the link above, or send blank email to: camera-fix-subscribe@yahoogroups.com (contributed by [Kelvin Lee](#))

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Buying Insurance for your Camera and Equipment

By Lisa Surati

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Guide Contents:

1. [Top](#)
2. [What type of policy do I need?](#)
3. [What if I use my equipment commercially only on occasion?](#)
4. [I want to add a floater to my homeowners or renters policy](#)
5. [I need a commercial policy](#)
6. [Bottom line](#)
7. [Survey Results](#)

[Reader's Comments](#)

Good camera equipment is not cheap. Most photographers spend years acquiring theirs. If you had to replace all your equipment at once, or even a portion of it, would you be able to? What would you do if faced with such a situation? Settle for a fraction of the equipment you once had? Stop taking pictures altogether and pick up a cheaper hobby?

None of the above sound appealing? Consider insuring your equipment. If your equipment is insured, check the coverage and exclusions of your policy to make sure you have the coverage you need. If you lost all your equipment tomorrow, would your insurance company pay for the replacement value of your equipment? Would you face exclusions if you receive photography-related income? Understanding your level of coverage today could save you from being unable to shoot pictures

tomorrow.

What type of policy do I need?

The type of policy you need depends on how you use your equipment. If you do not make any money through the use of your equipment, a standard homeowners or renters policy should cover against theft and fire, even when your equipment is outside your home. Typically, standard homeowners and renters policies cover you against named perils only. They also typically have deductibles. If your equipment is accidentally damaged, for example, you drop it, chances are it will not be covered under a standard homeowners or renters policy.

If you use your equipment for non-commercial purposes, another alternative is buying an "all-risk" floater. This attachment to your homeowners or renters policy includes a schedule of covered items. An all risk floater generally covers the scheduled equipment against everything except specifically excluded perils stated in the policy (e.g., acts of war). So if you're walking down a street and you accidentally drop your camera and a car drives by and runs it over, smashing it into pieces, it's covered unless that situation is specifically excluded in your policy.

If you use your equipment primarily for business purposes, you should be insured by a *commercial inland marine policy*. A commercial policy offers all-risk coverage for equipment, eliminates the potential of exclusions if equipment is used professionally, and offers a variety of optional floaters designed to insure against the liabilities faced by a professional (e.g., someone trips over your tripod).

What type of policy do I need if I occasionally use my equipment for commercial purposes?

That's a difficult question to answer. Some photographers who generate revenue from their work, even if it's not their primary source of income, need a commercial policy. Commercial policies are generally more expensive than personal policies and might be required depending on the value of your equipment and the level of income you generate from photography. It's not unusual for a photographer to talk with two different insurance agents and be told by one that they require a commercial policy while the other says a personal policy is sufficient. Your best bet is to talk to a number of insurance agents representing different companies and see which company will offer you the best deal. Remember that misrepresenting your information could cause your coverage to be denied. Worse, if you are offered a policy, misrepresenting your information could cause your claim to be denied, even though your policy is fully-paid!

Due to interest from the community, photo.net has been talking to insurance companies about potentially offering a photo equipment insurance program for photo.net members. This program, which will not result in a dime of income to photo.net, could provide photo.net members with a professional exposure with some combination of all-risk worldwide coverage, competitive rates, coverage for leased or borrowed equipment and peace of mind that your equipment is properly covered. **To determine if offering a photo equipment insurance program to photo.net users is viable, the insurance companies have asked us to post this [survey](#) to evaluate the demand for such a product.** If you

would be interested in participating in the photo equipment insurance program exclusively for photo.net members, please fill out this survey.

I want to add a floater to my homeowners or renters policy

Items of value, including photography equipment, that are not covered or have limited coverage on standard homeowners policies may be scheduled on a personal articles floater. Rates for insuring your equipment on a personal article floater vary among companies. Generally, you should expect to pay about \$1.35 - \$1.75 per every \$100 dollars of equipment with no deductible. Coverage is usually in addition to your unscheduled property, giving you more coverage if there is a total loss. Most homeowners and renters insurance policies provide coverage against named perils only. If your camera falls off a shelf and breaks, it is not necessarily covered. Personal article floaters are usually written on an all-risk basis, meaning your equipment is insured against everything except specifically excluded perils. So, if you're leaning over the side of a boat to get the perfect shot, your strap breaks and your camera falls to the bottom of the ocean, it should be covered unless that peril is specifically excluded in your all-risk floater or if you intentionally threw the camera overboard. With a personal article floater, the burden is on the insurance company to prove that a claim is not covered. With a standard homeowners policy, the burden is on the insured.

Personal article floaters provide broad coverage, usually with no deductibles. Generally, you're agreeing on the value of your equipment prior to loss. When you apply for a floater, your insurance broker will ask you to list all your equipment, the market value/replacement cost, serial number and other information on your equipment. The market value of an item is the replacement cost of the item in its current state, not a new piece of equipment. Generally, insurance companies replace insured equipment and do not pay cash for the value of the item. If you want cash to replace the item yourself, generally you will have to negotiate with your insurance provider.

Personal article floaters can also cover items you've bought even if you have not told your agent. Policies can provide coverage for newly acquired items for up to 30 to 90 days if you pay a pro-rated premium.

I need a commercial policy

If photography is your primary income, or a source of income, a commercial policy might be right for you. Generally a commercial policy is more expensive than a personal article floater attached to your homeowners or renters insurance policy. You should expect to pay between \$1.75-\$2.25 per every \$100 dollars of equipment with a deductible between \$250-\$500 per claim. A commercial policy offers a similar level of coverage for equipment as an all risk personal article floater, but eliminates the potential exclusion of equipment if used professionally.

Additional coverage available on a commercial policy includes general liability, commercial property,

workers compensation, commercial automobile coverage and umbrella liability to name a few.

Most states require you to carry workers compensation insurance(they're so good in Massachusetts of keeping track of this even photo.net had to comply when sent notice after only a month of incorporation). Professional photographers operating a studio with employees could be liable for any and all costs associated with injuries in the event fo an accident. Professionals not only face this liability with full-time employees, but also with anyone they have hired for an assignment. Carrying workers compensation protects you from personally being liable for such costs. General liability insurance further protects you from third party bodily injury or property suits.

Bottom line

The bottom line is that you should get the type of coverage that best fits your needs *before* you're faced with the strain of having to pay for equipment, injuries, or other liabilities. If your equipment is insured, check your policy and make sure you have the coverage you need and that you will not face exclusion if you receive income from your photography.

Photo.net Survey Results

We ran a survey on photo.net to determine both if there was interest from the community for a photo.net insurance program and garner the type of demand. There is great interest as we received 699 responses. We determined the average amount of equipment users wanted insured was 8452 and the median was about \$5500. about 15% of the users had greater than \$20,000 dollars worth of equipment to insure. We are currently looking at possible partnerships for a group discount for photo.net users.

More...

- [Camera insurance thread in photo.net Q&A forum](#)
- [Photo equipment thread in the photo.net Q&A forum](#)

Reader's Comments

A note about "theft" versus "mysterious disappearance." You may have theft insurance with your homeowners policy, which will cover your cameras if you are held up, robbed, or put in bodily harm in exchange for your property. But if you place your camera on the park bench next to you and three seconds later it is gone (stolen), it is not considered theft, but is termed "mysterious disappearance" by your insurance company. In this case, theft insurance will not cover you. If your camera is stolen from your office while you are out at lunch, theft insurance will not cover you. This is where the additional insurance discussed on this page will (hopefully) come into effect.

-- [Jay J. Pulli](#), July 10, 2000

Jay,

I'm not sure if I totally agree with your definitions of "theft" and "mysterious disappearance".

I ran an insurance agency for 8 years here in New Jersey and what the insurance companies REQUIRE is a police report. If my camera is with me at work (as it always is), and it disappears from my bag, I have to contact the police to report a theft. I receive a report from the police, detailing the theft, which I then turn over to my insurance carrier who then pays me according to the terms of my policy. While the camera may have "mysteriously disappeared", it did not jump out of my bag and walk away on its own. Someone, a person, had to remove it without my knowledge. That's theft.

"Mysterious disappearance", while it can apply to missing property, almost always applies to life insurance policies where the insured has "disappeared", usually without a trace. Under those circumstances, the insurance company can withhold payment until they are reasonably satisfied that the insured had passed away, and is not just simply hiding in a cave on an island somewhere out in the Pacific. One famous example of a "mysterious disappearance" was Amelia Earhart, the pilot. Although the Navy searched extensively, neither Ms. Earhart nor her plane were ever found.

According to Black's Law Dictionary, "Mysterious Disappearance" can also be the loss of property under unknown or puzzling circumstances which are difficult to explain or understand. Leaving your camera on a bench and then finding it has disappeared is not exactly mysterious, puzzling, difficult to explain or understand. Either the camera fell off the bench in which case it should be on the ground near the bench, or someone removed the camera from the bench and this is then clearly theft. Now whether the insurance company decides to pay you for the missing property is another matter but again, if you produce a police report, the odds are clearly in your favor that the company will pay you, assuming of course, you have not filed 200 previous claims for theft of equipment. This is also a good reason to remember to READ your insurance policy carefully and thoroughly and consult with an attorney on any segment(s) of the policy that are not clear to you.

A better example of "mysterious disappearance" as it relates to property, is if you come home to your apartment and find your stereo, computer and television set are gone and yet there are no signs of forced entry into the apartment. You will have a very tough time proving to the insurance company that those items were stolen from your apartment unless the police can trace the items back to someone who may have had access to your apartment such as a superintendent or landlord. Insurance companies want to see proof in

the form of a police report, that clearly indicates broken doors, broken windows, or some other form of forced entry into your premises before they will pay you for a claim of theft. If the lock has been picked on your apartment door, the police can usually tell, and will or should include this in the report. (Meanwhile, head down to your locksmith and pick up a MEDECO lock)

According to Black's Law Dictionary, Theft is defined as, the felonious taking and removing of another's personal property with the intent of depriving the true owner of it; larceny. Anytime your personal property "disappears", the insurance company has to assume the property was stolen and pay you according to your contract if you supplied them with the necessary documents to prove rightful ownership of the property and a report from the police indicating that the property has "disappeared" in a manner consistent with "theft"; you are innocent until proven guilty. Again, the key here is to read your policy and thoroughly understand what is expected of you in the event you have to file a claim with your carrier. Additionally, many states have laws which require insurance carriers to finalize all claims within a certain time frame. Check with your state insurance commissioner for details or again, speak with an attorney.

-- [Marika Buchberger](#), July 12, 2000



For us with digital cameras, there is at least one company that bundles your digital camera with your laptop and peripherals (<http://www.safeware.com/safeware/>). If I read correctly, right now their Texas policy does not cover over \$2000.00 in equipment while in transit (my laptop only cost \$500.00 so if I were in Texas it might cover my camera (Olympus C-2500L), that is, until I buy the Nikon D1). I don't think they cover my equipment while I am here in Korea.

And if I owned lenses, filters, hot shoe flashes and diffusers, stands, etc., who knows if that would be covered.

I consider my IBM slimtop, smart media disk, PCMCIA adapter, cheap plastic stand, and camera all as part of my photography equipment.

It would be great if there were an international insurance policy that would include your camera, laptop/peripherals, and photography equipment all under one bundle.

That's my 2 cents.

-- [N. David Guarneri](#), July 17, 2000

I have owned an insurance agency in California for the past twenty years and want to help my fellow camera enthusiasts.

Most homeowner policies have SEVERE limitations on "business" personal property. Some companies offer the option to purchase higher coverage and most of them will stop at \$2500 with a 10% coverage off premises. They provide NO coverage for loss of income or extra expense. They are designed to cover only non-business exposures.

Before you consider purchasing "commercial" insurance you should ask your agent or broker to see if you have options available on your existing homeowners policy. You may have to contact several different carriers to get the coverages you need.

One company my agency is contracted with is Allied Insurance, a member of Nationwide Insurance. Allied offers a Home Enterprise Program (available in 10 states) which is designed to provide most of the coverages needed by the typical small business being operated from the residence premises. It combines personal and commercial coverages on one policy. It is designed for exposures such as barber and beauty shops, dog and cat grooming, florists, photographers, music instructors and tutoring, etc.. Professional Liability is specifically excluded. Other companies may have similar products available.

Also, Personal Inland Marine Floaters, Personal Artical Flaoters, Scheduled Personal Property Endorsements are designed to add "all risk" coverage to specific personal property owned by the insured. This coverage is so broad as to include loss caused by accidently dropping a camera over the side of a boat. Don't wait until a loss occurs to find you have little or no coverage.

-- [Steven Hallbert](#), July 17, 2000

For underwater gear I've been insuring through a company called DEPP, or Diver's Equipment Protection Program, and been happy with the coverage. The deductable is low and they cover most losses including flood insurance. Not cheap, but worth the money to me. www.ProgramServices.com

-- [Dan Carey](#), July 24, 2000

I have an F1n outfit. I have valued the replacement cost today at \$3725 Canadian. When i phoned my household insurance agent he ask me to register the serial numbers with the carrier. He explained that the equipment would be added on as a named risk. This would ensure that there was no confusion with the carrier. I dropped off the info and a picture of

all the equipment as well and left it with him. Four days later i recieved the updated policy and to my surprise discovered that there was a ZERO deductable and it was a no hassle coverage (As i requested) and get this \$26.00 per year on top of my home policy. Good deal or what?

-- [Michael Borisko](#), August 1, 2000

The original article discused costs for personal articles floaters/riders on a homeowners policy in the range of \$1.35 to \$1.75 of value. I suspec that rates such as that are for urban areas where the acturial risks are relatively high. I mentionthis because the rates I have paid for years are much lower. Currently I am paying \$0.13 per \$100 of value for photographic equipment. Check with you insurance agent or broker. Even at \$1+ this is relatively inexpensive insurance.

-- [Ted Harris](#), August 4, 2000

I'm a "wanna be" professional photographer, still in the infancy stages of building a business. I contacted our personal insurer - USAA - about covering my gear. They don't insure equipment or inventory for business, so transferred me to their "General Agency" division. Their base coverage was \$350 a year, and covered up to \$15.0 at CASH value, not replacement value, with a \$250 deductible. any suggestions who to call?

I also hadn't even thought about insuring the office equipment! I've just added a CD RW and a photo printer. Guess I better check those out also.

-- [Steph Thompson](#), August 10, 2000



If you are not using your photographic equipment as "professional" equipment, you can add it to your homeowners/renters policy as a rider, usually with little or no deductible but it's only covered if it's "non-professional use" and it's covered for it's stated value so make absolutely certain you know what it will cost you to replace the equipment. Keep

this clearly in mind if you decide to go this route.

-- [Marika Buchberger](#), August 11, 2000

I live in Vancouver, BC, Canada, a great city albeit one with one of the largest hard drug user populations in the western world. When you have a large group of addicts around you'll realize they need a lot of money to support their habits. Two weeks ago my beloved GR1s and a T90 were ripped off when my apartment was broken into. I consider myself lucky...this is the first equipment loss I've had in 25 years. Since then I've tried to get all risk insurance to cover the \$20K worth of equipment I use (as an amateur)...no luck: either the premiums are too high or I'm laughed out of the office. Phil how about trying to organize some kind of policy in Canada...Anyone else: do you insure in BC? With whom? Thanks Jim

-- [Jim Vanson](#), September 21, 2000

Jim, if you use your gear for personal use only, a standard tenant or homeowner's policy will cover it. Just watch for what the perils you are insured against are, and check to see if there's an off-premises limit.

I'm an insurance broker in Regina, Saskatchewan (Canada), and the carrier I've chosen to insure my home has no off-premises limit on personal property. I pay a \$500 deductible, but given the value of my gear, that's okay.

-- [Jim MacKenzie](#), September 28, 2000

If insurance is an issue with you NANPA members have an insurer who writes Commercial Inland Marine Policies for members. I assume that there is a lower rate for NANPA members. I found that my homeowners insurance limits would not come near covering a major equipment loss even if I didn't have related income. This policy is all risk and covers me in most foreign countries. The NANPA website is www.nanpa.org

-- [John Pickles](#), December 10, 2000

My Insurance Company will list camera equipment in excess of 200.00 as scheduled items on my homeowner's policy. Items with a value less than 200.00 default to my standard homeowner coverage. This coverage is not as good as a scheduled item.

Now, I have a lot of "stuff" with a unit price less than 200.00 when added together would be a great loss to me. Am I being too picky here or is there another way to insure my equipment?

-- [Michael R. Amodeo](#), February 16, 2001

I recently had my residence burgled and most of my camera gear stolen. This was the first time I've had to deal with insurance companies, and I have to say I learnt a lot from it. Here are some comments for fellow naive insurance customers.

The first thing is that I didn't think through my policy. My insurance policy covers camera gear up to \$3000 Canadian. I'd bought all my stuff used and didn't think it was worth that much. Of course, the insurance covers replacement cost of new items. And a local camera store valued the stolen goods at \$4600. Plus tax on top of that. My \$3000 coverage doesn't even come close to covering all the items I lost. So when calculating the replacement cost of your gear remember to factor in both new cost and taxes.

Second, the policy replaces stolen equipment with the rough equivalent that's sold today. Sometimes that worked out to my advantage. I had an old Canon T50 camera stolen that was pretty well worthless. But the camera shop rated its replacement as the cheapest Canon SLR sold as a body (not a kit) - the Rebel G. A Rebel G replacing a T50 is a pretty darn good deal.

However, I also lost a 30 year-old Pentax Spotmatic that was in excellent condition. Having that replaced with a Pentax MZ-7 is kind of sad. It's like saying, "Okay - your beloved 1965 Ford Mustang, your first car, is gone. Here's a shiny new 2001 Mustang!" It's not exactly the same thing.

Finally, be absolutely sure to record every single item you own in a spreadsheet, with serial numbers for everything with serial numbers. And keep receipts and proof of ownership. Otherwise the insurance company may turn down parts or all of your claim.

So. Yes, I had insurance. Did it help me? Well. Kind of. I can't replace much of what was stolen, and I'm not sure if I will. I could obtain a cash settlement, but it's not going to be a \$3000 cheque or anything - the cash value is depreciated too.

Still. If I get burgled again at least this time there isn't much to take. :)

-- [NK Guy](#), June 12, 2001

I know this is really stupid of me but i don't have the receipts of many of many of the higher priced items that i own, and also one or two was given as a gift sans receipt (Mamiya 645 outfit) is there anything i can do besides photos and serial numbers that will be adequate proof to the insurance companies of my actual ownership of these items?

-- [Jared Zimmerman](#), June 17, 2001

[Add a comment](#)

Related Links

- [Seems to be a good deal.](#) - http://www.maginnis-ins.com/our_products.asp These guys insure ALL your photo equipment including bag, cables, etc. **WORLDWIDE!!!!!!!!!!!!!!** I even asked about if I dropped my Camera off the side of a boat and where unable to recover it. They said it would still be covered. It's an all risk policy paid yearly. And the replacement cost is the NEW price. There's a \$100 deductible per claim. The price is \$2.40 per hundred insured up to \$15000. I didn't get the premium for amount over \$15k. Check them out. (contributed by [Oscar Banos](#))

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And still they come and go: and this is all I know--
That from the gloom I watch an endless picture-show,
Where wild or listless faces flicker on their way,
With glad or grievous hearts I'll never understand
Because Time spins so fast, and they've no time to stay
Beyond the moment's gesture of a lifted hand.

And still, between the shadow and the blinding flame,
The brave despair of men flings onward, ever the same
As in those doom-lit years that wait them, and have been...
And life is just the picture dancing on a screen.

-- "Picture-Show", Siegfried Sassoon, 1920

- [Lens FAQ](#)
- [Lens Tutorial](#)
- [USAF 1951 lens test chart](#). Note this a reverse engineered unofficial version. It is easily scalable to any size. See the notes in the file itself.
- [Equivalent Lens Focal Lengths For Different Film Sizes](#)

[David Jacobson](#)

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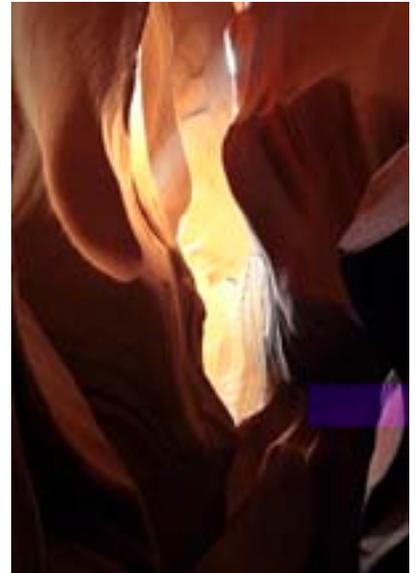


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Guide to Framing

[Home](#) : [Learn](#) : One Section

- [The Best Framers in the World](#)
- [Notes on framing](#)



Reader's Comments

Anybody ever hear of "swiss framing clips" A.K.A. "gallery clips"? They are a way to hang a properly matted photo with out the bother of framing. They are very inexpensive, costing pennies for the clips, I don't know how much for the glass or plexi. So, one doesn't have to be a web-master to afford a good looking presentation.

-- [Tim Even](#), March 14, 2002

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Related Links

- [Holton Studio Frame-Makers](#)- Exceptionally beautiful handcrafted hardwood frames from a small studio of dedicated craftsmen. Of particular interest to fans of turn-of-the-century work (pictorialism, etc.), & settings (Craftsman Bungalows) Timothy Holton & staff are in fact truly versatile, constrained only by their quest for good design marked by artful simplicity. Holton

Frames are also available at Goldfeder/Kahan (see Philip Greenspun article) and a handful of other shops nationwide. (contributed by [Tim Holton](#))

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Guide to Editing

[Home](#) : [Learn](#) : One Section

- **Adobe Photoshop How-to**
 1. [Sepia toning](#)
 2. [Sepia toning made easy](#)
 3. [Hand coloring](#)
- [Fixing the gamma on your monitor](#)



Reader's Comments

[The Gimp](#) does have some issues on Windows, mainly:

- Scanning problems. It refuses to scan from my Microtek Scanmaker 3700.
- No printing option.
- Opens a new Gimp instance for each file you click on the Windows explorer.

Nevertheless, it is a great tool that works well otherwise. For those in a budget who can't afford Photoshop (would you rather pay for a Photoshop license or a film scanner?) a great choice is to use a lesser tool for scanning and printing - such as the one that came with your scanner, in my case, PhotoImpact 4 Lite - and use The Gimp for image manipulation.

If you're wondering about available tutorials, there's an excellent book titled [Grokking The Gimp](#) available on Amazon.com as well as in [digital form](#).

Give The Gimp a try and save the money for equipment.

-- [Ricardo J. Méndez Castro](#), August 28, 2001

WRT GIMP: I have been using GIMP on Linux for a few years and have used it on windows for the last 18 months. As of 1.2.3-2002-03-10 it is stable and a lot of the plug in issues seem to have been fixed (But I haven't pushed this version hard yet).

It still doesn't beat photoshop on windows but it is getting closer, it is now a VIABLE alternative.

-- [Mark Reeves](#), April 8, 2002

[Add a comment](#)

Related Links

- [Making fine prints in your digital darkroom](#)- A three part tutorial on making fine prints in the digital darkroom. Features a description of an outstanding image editing program, Picture Window Pro 3.0, a powerful low cost alternative to Photoshop. (contributed by [Norman Koren](#))
- [The GNU Image Manipulation Program](#)- A [free](#) replacement for Photoshop. Unfortunately, as of July 2001, it only runs well on [Linux](#). (contributed by [Eric Hanchrow](#))

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([Voigtlander Heliar 12 F5.6](#) shown)



Nudes

by [Philip Greenspun](#)



[Home](#) : [Learn](#) : One Article

It doesn't have to be literal



This is one of my favorites nudes ever. I actually didn't see the picture until I got the film back. This is about 1/5th of a 6x6 negative that contains the model and a beach and some rocks and a whole bunch of other stuff. By itself, the picture is a loser. Cropped heavily, I would almost claim that it is art. That's one of the nice things about [medium format](#).

[Rollei 6008](#), 250mm lens, [tripod](#), Kodak VHC color negative film.

Does it tell a story?

Here's an excerpt from "[Career Guide for Engineers and Scientists](#)" ...



Rachel, PhD Biology UCLA 1992, enjoys the wealth of material comforts that she has accumulated during 10 years of hard work in science.

(click on the photo for a 500x750 JPEG; [click here](#) for a 1000x1500 screen-filling image)

1100 square feet of bare hardwood floors called to me: "You will never have this opportunity again. Tomorrow you are going to move all of your worldly goods into this [new condo](#). You'd better grab your Canon EOS-5, 20-35/2.8L lens, and TMAX 3200." The model and room both have to be bare to show the bleak poverty of the unemployed PhD.

Here's another image that I had completely planned in my head before I picked up the camera. It was during the 1992 presidential campaign when women's rights groups were upset by the Republicans' rhetoric. I call it *Republican Platform*. I really should have gone back and redone the image using smaller feet to create the red, white, and blue footprints on the model.



Remember when date rape was the subject of a *TIME* cover? This is the image they should have used IMHO.

Body as Structure

I took this in 1981 when I was a junior at MIT. I used a dark brown blanket as the background and the overhead light in my dorm room for illumination. The camera was a tripod-mounted Yashica twin lens reflex (6x6), valued at approximately \$100.



In 1993, I tried to duplicate the picture with higher-tech equipment. I used a \$5,000 Rollei 6008, elaborate studio strobe system with softbox, and motorized seamless paper background. Even the model was higher tech (taller, thinner). The results? Pathetic. The room light was too bright for me to adequately judge the outcome with the strobes' modeling lights. Consequently, the image was much too high in contrast.

Sometimes a brain is more important than a fancy camera.



Motion

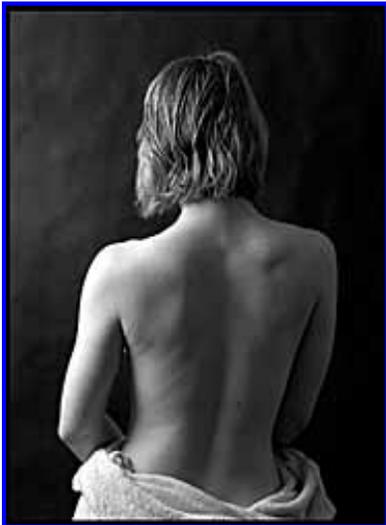
Most nudes are static, heir first to the tradition of painting and then to the limitations of early cameras. But with \$30,000 of studio strobes there is really no reason not to show the body in motion. Richard Avedon keeps his models constantly in motion so that he never gets a frozen deer-in-the-headlights look. To ensure that the light on each model stays constant as he or she moves, Avedon has assistants follow the models around with lights at the end of booms.





(To create some images like these, start by reading [the photo.net guide to studio photography](#).)

Environmental Nudes



I won't say that there is anything wrong with the picture on the left (standard studio shot; seamless background, medium format camera, softbox), but I really prefer the right hand "environmental nude."



This is one of my favorite images from [Travels with Samantha](#). Fuji Velvia film is not really noted for its subtlety with flesh tones, and therefore you might prefer the [version that I hand-colored in PhotoShop](#). (If you want to know how I did this, check out my [hand coloring tutorial](#).)

Mostly Covered is Usually Better

People get uncomfortable when staring at other people's genitalia, so it is generally best to either get rid of the genitalia or the face.



Of course, Mapplethorpe made almost a whole career out of violating this rule so if you want lots of money and fame, you should probably ignore this rule.

Covered by a Dog is Best



me and [George](#) (please do not send email asking which one is the dog)

George inspired me to write [Travels with Samantha](#), which begins with his end.

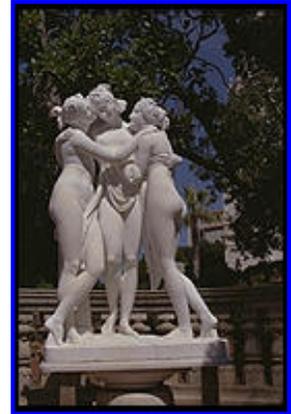




Three Graces

"I checked a few different sources for info on the 3 graces, and all I could find is that they are continually anointing mortals, making them appear extremely beautiful and immortal to their pursuers. But I couldn't find why there are three of them or why they are called "graces". I think there is some conflation with the Erinyes, who hounded Orestes after he murdered his mom, but then he sacrificed to them and they became Eumenides, and at the same time he sacrificed to the Graces. They are benevolent goddesses - that much I can say for certain."

-- My classics nerd friend (Ph.D. from Princeton)



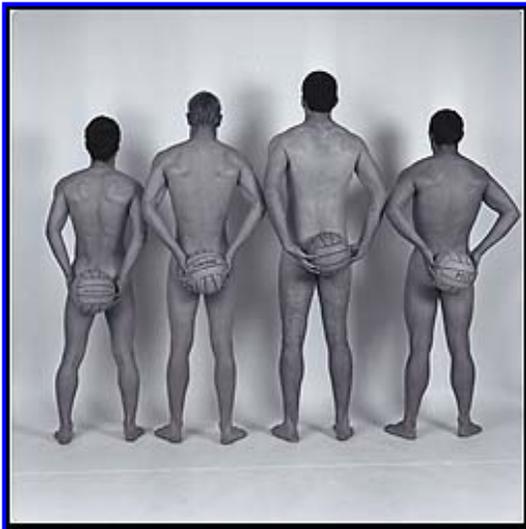
At right is a copy of a classical statue at the [Hearst Castle in San Simeon](#). Below, in declining order of fidelity to the classical traditional, are my interpretations of the theme.





"Nothing Beats a Wet Beaver"

That's the motto of the MIT men's water polo team. My friend Adriane and I did a fund-raising calendar (September 1998-December 1999) of these beefcake-y guys. Send e-mail to her at age@mit.edu if you want to buy a copy to help the team (cost will be \$10, available late August).





Note: yes, this is the same Adriane with whom I built [The Game](#).

Is it Art?

The line between art and pornography is fairly thin, but it is there. At right is a photo that I took as an MIT undergrad. A couple of photography professors loved it. They thought it was art, expression, new, whatever. They hated the arch nude above and preferred this one. Unfortunately they never did teach me how to describe this as a tortured artiste project and how to do more, or I'd be exhibiting in the Whitney museum...



More Practical Tips

Black & white infrared film tends to erase skin blemishes and imparts a lustrous luminous quality to human skin. It is worth reading Laurie White's [Infrared Photography Handbook](#) and then trying out a few rolls of B&W IR.

Every now and then someone sends email asking "How do you get women to take their clothes off." My personal theory is that the world divides into two classes of people: those who like to be photographed and those who don't. Those who like to be photographed think they have beautiful bodies. Naturally, if they look *good* in a picture clothed, then they'd look *better* without all those ugly clothes standing between their beautiful body and the camera. If you therefore find some folks who have survived the constant assault on their self esteem by advertisers, the challenge will be to get them to keep their clothes on. It also helps to have a portfolio of high quality work.



How to develop that portfolio? Here's a 12-step program:

1. Read [Making Photographs](#), our free online photography textbook. Concentrate on the "Light" chapter.
2. Read [our portrait photography tutorial](#); the challenges in nude photography are very similar
3. Buy a camera with full manual controls and a fast fixed focal-length lens from [one of the photo.net recommended retailers](#). If you've invested the time in arranging a venue and a model, you don't want to rely on automatic exposure. The fast (f/1.4, f/2 or f/2.8) lens is important so that you don't have to use flash for every photo.
4. [the photo.net guide to studio photography](#)
5. Practice (repeat).

Big photo labs generally will develop tasteful nudes with no questions asked. I once asked the customer service department at Kodalux (now Kodak) and they said "if there is only one person in the picture, we're definitely not going to have a problem with it." There are laws in some states requiring labs to report photographers who bring in images of naked children. More than a few serious photographers have had unpleasant, expensive, and prolonged dealings with government authority stemming from what you'd have thought were easy calls (e.g., a San Franciscan who took his 8x10 view camera to a nudist colony and photographed families with their consent).

Dead Trees

Before burning film, you might want to spend some time with [Nude & Glamour](#) by John Hedgecoe. It is not my favorite hunk of [processed tree carcass](#) but it is very pertinent.

If you are looking for inspiration rather than tutorial, you might leaf through the 425 smallish pages of [The Body](#) (William Ewing; Chronicle Books). This covers over 100 years of nude photography, right up to the repulsively hairy body of John Coplans, whose self-portraits definitely constitute one of the nastiest things one can do with a 4x5 view camera (actually his assistant takes the pictures; he just sells them for \$5000 a whack).

If you're looking for something more in the coffee table line, then [Graphis Nudes](#) (Graphis Press) gives you 200 big well-printed pages of contemporary nudes. Not as huge and only 116 pages long, the [Aperture monograph of Edward Weston's nudes](#) can be awe-inspiring. Do you really have something to say that he didn't say back in 1930? And if so, is it aesthetic?

More

- [an ancient page that used to have six in-line FlashPix nudes](#)
- [the rest of photo.net](#)
- [body painting](#)

Also check out the user-maintained list of related links at the bottom of the page

Credits

Photo of me and George by [Rebecca Schudlich](#); lighting by me (in my studio); ProPhotoCD scan from 645 negative courtesy [Frank Caico](#).

All other photos are [copyright 1981-1995 Philip Greenspun](#) and were scanned to ProPhotoCd by [Boston Photo Lab](#), my favorite PhotoCD shop.



Note: in order to assist parents in keeping their children from seeing my nude images, I have voluntarily rated this site using the [PICS standard](#). If you wish to set up your browser to block nudity, simply follow the instructions at the rating bureau that I have used: <http://www.rsac.org>.

If you're a Web publisher and want to know how to quickly add arbitrary output headers on your site, you might also want to read [my book on Web publishing philosophy and technology](#).

philg@mit.edu

Reader's Comments

Just looked over your photography pages, and found the info on B&W IR photography.

I do a bit of freelance work, and I have done some work with IR at nighttime activities, such as dances, when a flash would blind everyone. I had quite good luck placing a #87 IR Gel Filter (Kodak) over my flash, an old Vivitar 283, set on auto in the "yellow" range. I was surprised to find that the flash read the IR light as if it was a regular flash.

I got shots from about 50' in to about 15' (and no one was blinded). Of course any closer and people's skin began to take on a strange appearance.

Just wanted to pass this on. Keep up the good work.

Jim Rementer

-- [Jim Rementer](#), September 30, 1997

The nude is one of the hardest subjects to do well. I have found through my galleries that the images which sell best are ones without pubic hair. For some strange reason -- prints displaying pubic hair seem obtrusive to the viewer, while the hairless versions are much more collected. Perhaps we can learn something from 17th century painters? Also, as far as shooting black and white of models, I use a red filter over my lens and dark haired models for some of my work with great success. The red filter "whitens" the skin tones and greatly conceals skin blemishes and discolorations. Photographers just starting out may want to try this outdoors against grass -- the grass turns very dark and contrasts well with the white skin tones of the model. To the artist, my praise. Of the hundred or so gallery sites I've visited so far -- yours in the best organized and most informative. Thanks!

-- [James Falkofske](#), October 8, 1997

Isn't nudity being able to show who you are beneath the clothing, beneath the flesh, the person you are within the body. Being nude, to show yourself, be yourself, nothing covered nothing hidden, beneath the clothing beyond the body.

-- [Ruey Loke](#), April 9, 1998

WOW!, first of all. Next, I think that your work is wonderful. You are one of the only artists I've ever read, that i truly able to write - to convey the emotion of their artwork into language, not just art. My mother is an artist (not starving, I'm happy to say), and I've learned a lot about art over my eighteen years of life. At least enough to know that you are a "genius" I use the term loosely, only because people throw the word around way too much, and the true essence of the word is lost. Thank you for your time, and your art. And by the way, I feel that the one controversial picture is art, not pornography.

-- [Jarrod Wolos](#), July 8, 1998

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-- [Jarrod Wolos](#), July 8, 1998

A comment on Mr. Wolos' note above:

The image referred to on the gateway page that "might disturb or offend some people" has apparently been deleted. It was a photo of a stripper on stage, dark background, on camera flash, legs spread directly toward the camera.

I disagree with Mr. Greenspun's choice of examples to illustrate the point that the line between art and porn is a thin one. The arm and sheets photo is obviously not porn - maybe it's art; while the (now deleted) photo was IHMO, soft core porn and not art. Both photos were far away from that thin line by my way of thinking.

A photo balancing on that thin line might be the infamous Robert Maplethorp self portrait of himself facing away from the camera, bent over, with the end of a bullwhip inserted in his rectum. The lighting and sharpness of the large format photograph is very precise. Porn? maybe - a "penetration" shot. Art? also maybe - a statement about Maplethorp's lifestyle, shocking the viewer into forming an opinion of him, you pick the meaning or the reason. Viewers' reactions may change after considering that Maplethorp died of AIDS several years after making this photograph.

-- [Mike Rosenlof](#), July 14, 1998

I enjoyed looking at your photos of nudes in motion. As a sculptor who does figurative nudes in motion I am always pleased to find someone who can work with this fascinating subject. The photo reference books I use, however, are few in number: Thomas Easley's "The Figure in Motion" and the works of Eadweard Muybridge. The latter did not have \$30,000 in strobes when he made his 100,000 glass plates at Penn in 1888. Using the sun or whatever reflected light he could capture, he made such a statement that the artists of Europe treated him as a Messiah when he toured. It would be good if a photographer of today were such an artist that he would seek to duplicate 1/10th of Muybridge's work with modern equipment. The nude in motion has more than a front and a side. You have made a good start. Arne

-- [Arne Smith](#), March 6, 1999

I see that the artist is somewhat dismayed that this is a very popular page of his, and feels that there are better works. I for one much prefer seeing a nude on a beautiful landscape, or a nude on an interesting and artistic backgrounds, etc. than most any other subject.

The artist should ask himself: Why is the viewer bothering coming to his site to look at his nudes when there are literally thousands (probably millions) of sites out there featuring nude women in an astounding variety of positions and states of exposure?

Because many, like myself, want to see TASTEFUL NUDES. Especially those of us that live in the United States where a nude body put in an elegant or sophisticated light is so rare to behold that it is craved like gold or money or other precious commodities.

We will spend hours searching the net for a site that gives us nude people (most often nude women) in a high-resolution and high-quality format, that (1) aren't sticking strange objects into their body orifices, (2) aren't surrounded by 800 orange, yellow, and red flashing advertisements, and (3) have words accompanying the image that make our minds actually think a little bit.

For my part, I have found not a single other site on the internet or web besides this one that provides all these things, and FREE OF CHARGE to boot?!?! I'm surprised your page of tasteful nudes in high-quality format aren't visited so often that your web server doesn't halt completely!

I have viewed your images (the non-nude ones, too) and enjoyed all of them. But because the nudes are the most rare and precious images in my society, at least, I keep coming back to them, like an addiction. I never have this urge to go to any of the 1,000,000 porn sites that are the alternative.

Now a shameless plug: my web site, at www.philovivero.com/~philov has a super-small set of static pages that emulate this. No photographs of nudes, but a few image-manipulated drawings. No commercials, no credit cards. So maybe viewers would like to go there just to check it out for a little bit.

-- [Philo Vivero](#), May 6, 1999

Beautiful images, I must say. Specially gorgeous is the picture of Heather combing Alex on a bench: the picture looks so simple...

-- [Ricardo J. Méndez Castro](#), May 25, 1999

I would like congratulate you on your excellent photo layout well done!also the photo date rape really touch me.as a man I don't have any idea what a woman feels after a brutal attack. This photo gave me a tiny insight how horrible rape is.I feel that it is time for society to conditioning our young boys to be overly agresive and teach our sons how a man should treat others with kindness&respect.9years ago my wife and daughter were killed by a drunkdriver leaving me alone to raise our son God I hope i did my best.

-- [Gary Carnegie](#), September 13, 1999

This site is simply superb, and of course the way tips are given on such type of photography is of great assistance for the amature photographer. Furthermore thephotographs are not at all obscene, these are the real class photograph.

-- [Babul K Jha](#), September 25, 1999

I was extremely impressed with the shot of the nude with back arched that you did as a junior at MIT. It is actually quite unusual, and quite original in its feel. I agree that photography has little to do with the camera, and everything to do with what is in your head. Fine work!

-- [David Schwartz](#), September 28, 1999

Phil, a picutre of your naked friend in an empty condo, or rather your narrative to it reminds me of an excerpt from one of Sergey Dovlatov's books, who had some mind-boggling humor leaning towars absurd, like a real Russian writer should. You might want to read his mamoirs of working for an Estonian newspaper in 1970s, where he describes a news photographer, who had cigarette-butts floating in the developer, etc. Anyway, this is a piece I translated from memory. "In a museum of partisan warfare somewhere in Russia... A large glass-clad display case with a human skull. The description reads - ""This is a skull of partisan Kowalczuk. Here are personal belongings of partisan Kowalczuk - a nail which he used to attack the German officer and a bullet from his skull."" ...Partisan Kowalczuk spared no expenses..." Love the site, BTW.

-- [Dmitry Zhukov-Gelfand](#), October 27, 1999

I am 18 and just getting into nude photography. I really enjoyed looking through the photos because they aren't just pictures of someone nude, they are feelings, and personalities. I look for the more modern pictures to get my ideas from. I really think this will contribute a lot to my personal study of black/white nudes. Thanks for a site like this.

-- [Jessica Bruso](#), January 24, 2000

i, myself, speaking as an artist of both audio and visual medium, can honestly appreciate some subtlety and simplicity, meaning that less is more and does leave the imagination and emotional charges open to the experience that "tasteful nudism" brings to the table. by not exposing everything to the naked eye, your senses are drawn more to the overall beauty and splendor of the subject rather than a blatant statement of mere sexuality, as such. the human element in and of itself is dynamic and multi faceted like a cut diamond, and it is the archetype for every perspective, that we perceive it as such.

-- [doug king](#), June 30, 2000

well, I know within me that I see these things in a very different perspective. others would call it porno but looking at it even without the paints on the body is per se an art. what is wrong with other prople is their pre-conditioned judgment once they see this thing. one thing more, this concept of pre-judgment maybe to others would say it just came when they saw it but actually they were conditioned to

be so. it was how they were brought up and what kind of environment they used to live in as their consciousness passess through time.

Beowoulf Agate/LSD

-- [Leonard Dagaerag](#), July 3, 2000

I dont believe showing off body parts, especially private parts, for viewing to the public is a form of art. In fact i think its embarassing. To me this form of activity could lead to a more negative society, a society without rules...maybe a society without dignity. We cant expect everybody to view these pictures as a form of art? Maybe these form of art should be constrain within its community and not to the open public especially where places that is accessible to the underage. This is just a comment. No intention whatsoever to offend anybody. Thank you.

-- [Razak Abdullah](#), August 2, 2000

I think when it comes to decieding whether or not something should be considered ART or PORN, You must analyze your feelings. Does this photo that your looking at have focus, balance, and point of impact? or does it make you feel like you just took your viagra? If its's the later, then YOU individually have to deciede whether or not its pornography. I observed all the photo's posted. My personal feelings say its ART. Not because its in black and white. Not because there seems to be a layout in a respectable nude position, But because I FEEL its art. Thats what art is.....FEELINGS!

-- [Wud Upa](#), August 13, 2000



girl in blue room

An impressive site, but some words of criticism... first suggestion, perhaps you should use more serious models, or else have the models perform more serious acts and expressions. I find it very hard to respect a nude photograph of a person smiling or jumping when put in such a serious atmosphere as a white drop with diffused lighting, such as with the photos you posted of the female nude in motion or "The Three Graces." Secondly, try bringing your subjects out of the studio. I enjoyed the photograph of the model in the bare condo because it gave the subject ground, reality and atmosphere (although your intended message was hard to accept: hardwood floors and clean white walls are not a typical sign of poverty!). Thirdly, and probably most importantly, research the zone system; try adding some contrast. Many of your photographs were so grey they bored me, and the only ones I actually stopped to view were the color photos and the one of woman's back (torso wrapped in a towel, with a black backdrop). That one was exceptional; very beautiful. But in order to

evoke any emotion from a work, light is the key in photography. My photography instructor constantly pounds, "We live and die by light." Dramatic lighting is key in provoking any mood from a studio piece. These are the words of a 19-year-old photojournalism student who hates the studio and produces slightly-blurred movement shots, so you're getting tips from a completely opposite view of photography. In fact, my jaw drops in awe of your technical abilities, for I am far from producing such beautiful prints! However, if your intent is to create a mood, at least consider my comments. I prefer criticism over empty praise, also, so forgive me if I seem harsh. To Razak, the one who commented that nudes are unacceptable and should be kept private in order to sustain dignity in society: OBLIVION in society is hollow and unacceptable. Children who are permitted to drink at early ages in other countries proceed to drink responsibly, while American teenagers are drinking themselves and others dead. Particularly with tasteful nudes, as this site displays, the unclothed body would be chuckled at less often by immature young adults if it was exposed more freely to them at youth. And besides, we all wind up getting laid at one point. My site: <http://hometown.aol.com/toonist/Toonist.htm> (this is a rough unfinished sketch of a page and is not NEARLY as impressive as this one is as far as construction goes!)

-- [Danielle E. Corsetto](#), November 12, 2000

As someone who once had an interest in nude photography (until society imposed restrictions on this interest) it was refreshing to see this site. I think the nude in motion is very hard to do get right, your shoot of the girl dancing in the studio is a perfect example. A nude should not only be a record of the human body, but to give the mind something to think about, the photos' of the feet and arched back are good examples, and some are to please the eye with magnificent backdrop of nature that take the eye from the nude so she/he becomes second to nature. The one thing your site does show very well, is that even here in the work of a serious nude photographer, male genitalia is still somehow tabu, even if it was not conciously done so. Otherwise some very good photography, keep clicking and good luck with your future shoots. lance.

-- [lance A](#), December 12, 2000

 I like this page, but the author almost seems to apologizing for its existance in some places. Unfortunately, that attitude seeps into the rest of the site. I have a number of nude images - art, not porn - posted here on Photo.net, and I have been flamed, both on the boards and in private email, for them. I have asked the webmaster for help several times in dealing with the posted flames, and my emails are ignored.

 This is a site with many well-educated, intelligent members. They are surely aware that the nude has been a legitimate subject of art for centuries. Yet I still have to stuggle against criticism - not of my technique, which I do not mind, but attacks on my morals and my character for taking such photos. I think that of the administrators of this site could be more supportive of artistic nude photography. They choose not be, which I find significant. I think it limits the site - people moan and complain about the boring photos here, but until the site administrators show support for more personally risky photos, thats mainly what its going to be. I like Photo.net - thats why I am here - but I wish it could be less...narrow.

Amy Powers

-- [Amy Powers](#), March 10, 2001

Phil,

A few things. The first is that I really like your three graces and motion pieces. One of the issues with motion however is lack of context. You were clearly playing with an undeveloped concept and I regard it as a sort of a "sketch" for the three graces set. The thing I like most about "three graces is the humor you bring to the subject through the use of props. Others have objected that your studio offers too serious a setting for smiling joyous models, I disagree; your picture of the three graces skipping rope with the cloth was the first nude that has ever made me laugh. It captured a wonderful joie de vivre and speaks well of the working relationship among your models.

The other thing regards Christina. You've framed it badly, tucking it away by itself and contextualizing it as a concession to thrill seeking teenagers. Why did you actually work with her? There must be a story behind it, and you have done some marvelous work with it. You've been accused on this comments page about being overly apologetic for your nudes. Nowhere are you more apologetic than there. Rethink the way you are contextualizing the images.

-- [Rich Furman](#), March 13, 2001

I agree with the writer who said that a nude against an interesting backdrop posed artitically is totally captivating and much sought after. In fact I think that Phil has a lack of interesting backdrops in his nudes, although they are quite good. For a better example of nude photography in natural settings check out [Erick Boutlier Brown](#), He is a Nova Scotian photographer with an impressive body of work that relates to the subject. I am grateful to Phil however, I want to get into nude photography and have found this site to be very helpful and informative on the subject.

-- [Traverse Davies](#), May 7, 2001

Most of all I enjoy the different opinions verbally fostered by the the viewers, reflecting so many things about us: our religious upbringing, that of our parents, personal (good & bad) experiences with nudity or members of the other sex, society, parents...I enjoy the shots for what they show: both the good and not so good. Light is the most important factor in shooting nudes, or anything else, certainly. I've found some bodies(skin) love light and the camera and even certain types of films and I love experimenting with the differences. Composition is second. Motion--nearly impossible to get right with nudes (what does one wish to say?). Sort of like catching a close-up portrait of someone blinking--half-closed eyelids are not so impressive.

A note to anyone using B&W infra-red film. If you have a cloth (non-metalic) shutter you may experience exposure problems. IR light (or, technically, energy) can be kept away from the film only by metal enclosures so a cloth shutter will change your exposure, considerably. I've never tried making IR shots with a camera that had a cloth, focal plane shutter. Possibly a contact with Kodak might offer assistance.

Jerry Revelle

-- [Jerry Revelle](#), May 26, 2001

In the time since I made my first comment, I have perceived a shift in the general attitude of Photo.net habitués towards being more open to nudes as an legitimate art form. There are still some who will snigger and elbow each other in the manner of sixth grade boys, but I have also found some insightful and very encouraging voices here, and that really great for me. I hope that this general trend continues...

-- [Amy Powers](#), May 31, 2001

I am surprised, and disappointed also, about the very reserved attitude I find on this page toward nude photography. I see two main bordering or parent genres of nude photography being portrait and artistic. Both are about exposing something of yourself or the person in front of the camera in the picture. For one person that will be very subtle but for the other it is more progressive, striking. That is what makes photography like any other art form so interesting: it's personal and it shows emotions that are not to be seen all the time. Remember what Freud says about art: "Art is a form of replacement-satisfaction for unfulfilled desires, like dreams. The difference is that art forms are not narcissistic or a-social, but intended for other people to share and fulfill the same desires." Like Freud or not there is a truth in it. There is nothing dirty about it other than our nature. In normal life we want to hide it away and it can only come out in neurotic forms, whereas in art it is "exposed" in a different way that more people can relate to. . Artist in the widest form have always played a progressive role in history, allowing more of what's inside people to come out. Please don't be too reserved about nude. I'm not saying you have to share your ideas with everybody but this is a page for photographers and believe me, the distinction with porn pages if you will is more than evident: we don't have to defend it further. You're nude back with towel in B&W is really high quality and I loved the nude reflexion on top. Keep up the good work!

-- [Remco den Boer](#), June 5, 2001

Someone with way too much time on their hands!

-- [Rog Schmidt](#), August 6, 2001

I wish you would leave politics and photographic technique separate. Your photo of a woman being stepped on and your association of

that with the Republican party is poor. Very weak indeed. Why not do the same but with a baby being stepped on by the woman who decided to kill it? And associate that with the Democratic party? See, not very appropriate either is it?

Richard Martin

-- [Richard Martin](#), October 22, 2001

As a amateur photographer who is looking to get into more nude-are photography I just want to thank you for giving me some insight and motivation on this art.

Your insights and photos are wonderful, and they help me come to grips with my creative inabilities of which I am trying to conquer.

Again, Thank you.

Mark.

-- [Mark Smith](#), November 15, 2001

In one of the above comments, Danielle E. Corsetto, (November 12, 2000) said "I find it very hard to respect a nude photograph of a person smiling or jumping when put in such a serious atmosphere as a white drop with diffused lighting..."

Why only a nude person? Why would a smiling clothed person in such a 'serious' atmosphere be taken more seriously?

While I agree that a beautiful face with a solemn expression has a high element of class, these type of 'candid' shots have their place, and I personally didn't have a problem with the setting.

In fact, the contrast between the setting and the expressions is what I liked the most.

Artistic nudes have the cliché of being serious, and solemn. They also have the cliché of depicting something depressing, like being alone and naked to the world, etc. "This is artistic nudity! No giggling allowed! That would be immature.."

Here, for once we can see people in their natural state, expressing natural emotions. I think its quite appropriate.

-- [Clint Hobson](#), April 23, 2002

I've little interest in labels individually assigned to images, nude or otherwise. I enjoyed this tutorial because it displays and explains photographing nudes. I don't expect to do much (if any) nude photography, but I still want the insight.

I think your work is fantastic. I was impressed with the woman in the empty room.

Jeff

-- [Jeff Bishop](#), May 11, 2002

Shadow, Light, texture, setting, yes... but above all; beauty, strength, grace, intrigue... le femme mystique ... bring forth our sense of awe and wonder and impel us to LOOK again. Herein the child and the eye meet, something stirs within, and you are responsible for that. Thank you.

-- [Tom London](#), May 19, 2002

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- [Leroy Dickson's Web Portfolio](#)- An educational work in progress, aimed at photographers of all skill level. Working on the site improves my knowledge and hopefully will yours. (contributed by [Leroy Dickson](#))
- [JR Photo Jerry Rybansky](#)- Photographer gallery fine-art figure and stock. (contributed by [Jerry Rybansky](#))
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See also: [The Best Photos - Professional, Stock Advertising and Amateur Photos - www.propho.net](#) (contributed by Gencho Petkov)

- [Expon.Net :: Erotic / Fine Art](#)- Erotic galleries, nudes, fine Art. The meeting point in on-line Art. (contributed by [Fran HP](#))
- [Jeff Norman - Photographer](#)- Jeff is based in Essex in England. He specialises in portrait and figure photography. This was a quick attempt at a website which Jeff hopes to improve soon. Comments and communication are welcomed to mail@jeffnorman.co.uk (contributed by [Jeff Norman](#))
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Macro Photography

"how to take close-up pictures of small things"

by [Philip Greenspun](#)

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macro \ˈmak-(.)ro-\ əj [macr-] 1: excessively developed : LARGE, THICK 2: of or involving large quantities 3: GROSS

Taking close-up pictures of small things is called "macro photography." I have no idea why. Perhaps because the small things in macro photography are generally larger than the things you are taking pictures of when doing "micro photography". If you really want to be pedantic then you should say you are doing "photomacrography".



What Kind of Camera

You probably want a standard 35mm single-lens reflex camera. You will see in the viewfinder what the film sees. If you have a lot of money, you can get a 6x6 single-lens reflex such as the [Rollei 6008](#). That's more or less the same idea. If you have a lot of patience, you can do macro photography with a 4x5 inch view camera.

In the digital world, true macro photography is possible only with single-lens reflex cameras that take interchangeable lenses, such as the [Canon D30](#), the Fuji S1, the [Nikon D1](#), and the various Kodak professional bodies. One nice thing about these cameras is that their small CCDs effectively magnify the image captured by whatever macro lens you've purchased. Thus a 100mm macro lens mounted on a Canon D30 effectively becomes a 160mm lens. And if the lens gives 1:1 magnification on 35mm film, you get 1.6:1 on the D30's sensor.

Doing it all with a 50mm Normal Lens

In the good old days a 35mm single-lens reflex camera came with a 50mm "normal" lens. These lenses were extremely light, rugged, and high quality so naturally the consuming public abandoned them for heavy, fragile, low quality zooms. But that's another story... Anyway, suppose that you are out in the woods with your Nikon and a 50mm normal lens and you want to take a picture of the tip of a pine needle.



First, though, you want to take a picture of the moon. That's pretty far away, so you feel comfortable setting the lens focusing helical to "infinity". The "nodal point" of the optics will now be 50 millimeters from the plane of the film. [Note: exposure for the moon should be roughly f/11 and 1/film-speed.]

The effort of setting up your tripod is so great that you become tired and fall asleep. When you wake up in the morning, there is a bear standing 10 feet away. You refocus your 50mm lens to get a picture of the grizzly. As you turn the helical from "infinity" to "10 feet", notice that the optics are racked out away from the film. The nodal point is a bit farther than 50 millimeters from the film plane. The lens is casting an image circle somewhat larger than the 24x36mm frame. Some of the light gathered by the lens is therefore being lost but it isn't significant.

After snapping that photo of the bear, you notice that his fangs are glistening. These aren't going to appear very large in your last shot, so you move up until you are about 1.5 feet from the bear. That's about as close as the Nikon lens helical will let you focus. The nodal point is now pretty far from the lens. Extra light is spilling off to the edges of the frame, but still not far enough to require an exposure correction. The bear's face is 1.5 feet high. You've oriented the camera vertically so that the face fills the 36mm dimension. 36mm is about 1.5 inches. So that means you are working at "1:12". The subject is 12 times the size of the subject's image on film.

You're losing some light, but also you notice that you don't have too much depth of field. A 50mm lens focussed down to a foot from the subject only has a depth of field of 1/16th of an inch at f/4. No problem. You haul out a big electronic flash and stop down to f/11. Now your depth of field is a whopping ... 1/2 inch.

Looking down, you become fascinated by some pattern's in the bear's claws. Each one is about 1.5 inches long. You'd like to fill the 35mm frame's long dimension with a claw, which means that the subject and its image will be the same size. You want to work at "1:1". But those scumbags at Nikon skimped on the helical. You can't rack your optics out far enough to focus at 1:1. It looks like that pine needle tip photo is completely out of the question.

Why did Nikon limit your ability to focus close? For starters, at 1:1 your lens would be so far away from the film that it would cast a huge image circle. The standard 35mm frame would only be a tiny fraction. So only about 1/4 of the light gathered by the lens would reach the film. A scene that required a lens setting of f/16 at infinity would require a lens setting of about f/8 at 1:1. All this other light would be bouncing around inside your camera and lens, reducing contrast. Finally, a fixed stack of optical elements can't be designed to form sharp images at so many different focussed distances.

Close-Up Lenses

Your eyes don't focus so great on really small things either. Do you try to pull your cornea a foot away from your retina? No. You stick a magnifying glass in front of your cornea. You can do the same thing for your 50mm lens. Unlike your cornea, it even has convenient threads for attaching a magnifying glass.



A photo shop could never sell you a "magnifying glass" for \$50 so they call these things "supplementary lenses" or "close-up lenses". Good things about close-up lenses:

- they don't require any exposure corrections
- you can throw a couple in your pocket in case you need them

Bad things about close-up lenses:

- they aren't very high quality though they might be good enough if you stop down to f/16 and if you can find two-element close-up lenses (e.g., Nikon-brand) instead of the cheapo one-element ones.
- you have to take them on and off constantly if you are taking pictures of things at different distances.

I never use close-up lenses but they are described fairly thoroughly in the [Kodak Professional Photoguide](#).

At right: a model of Sacre Coeur, captured with a Minolta 50mm lens and single-element Minolta-brand close-up lens. The image has lots of problems but I think I was 11 years old when I took it.

Macro Zoom Lenses

Macro zoom lenses are not macro lenses. They don't allow significantly greater magnification than a 50mm normal lens and they deliver low quality.

Macro Lenses

What you want is a macro lens. Fortunately, it is difficult to buy a bad macro lens. This is kind of odd in a world where 90% of the lenses sold are bad. Here's my theory: Every day at least one man wakes up and says to himself "I have a 1.5 inch long penis; I think I will buy a big SLR like a pro. But I don't want to spend money on frills like lenses so I'll get a Tokina zoom." However, no man ever wakes up and says to himself "I have a 1.5 inch long penis. I think I will buy a macro lens so that I can make a 1:1 photograph of my penis and distribute this photo from my Web server. But I don't want to spend too much on this lens so I'll try to find a cheap Sigma."



In short, anyone in the market for a macro lens is already fairly sophisticated and quality conscious. If you read USENET then you know that the world is full of people asking "is this \$150 Tamron 75-300 zoom as good as a \$900 Nikon 300 prime?" Can you blame Tamron/Tokina/Sigma for trying to separate people like this from their \$150? But there isn't apparently a big enough collection of fools in the market for macro lenses to support a junky macro lens subcategory.

In my humble opinion, the best macro lenses are the latest autofocus mount models made by Nikon (my primary 35mm system is Canon EOS, by the way). Nikon makes 60mm, 105mm and 200mm focal lengths. Each lens will focus continuously from infinity to 1:1. You can shoot the moon and capture the bear claw without stopping to change lenses or screw in filters. How do these lenses work? Do they just have a much longer helical than the 50mm normal lens? Yes and no.

Yes a macro lens helical has much more travel than a normal lens helical. You can watch the front element move an inch or two. However, these helicals aren't just pushing a stack of glass back and forth like the 50mm's helical. Inside one of the elements is moving ("floating") so that the optical design changes to a more appropriate one for close-up photography. Thus you get sharp images at all focussed distances.

How do you choose a focal length? The same way you do with a non-macro lens. If you can't get very close to your subject at a soccer game, you don't pull out a 50mm lens; you get a 300. If you can't get close to an insect without it getting scared and flying away, then you want the 200mm lens and not the 50. If you want to compress features in a woman's face, you don't get a 28mm lens; you get a 105mm lens. It is the same with macro work; longer lenses give you a flatter perspective.

What about other companies? Canon makes 50, 100, and 180mm macro lenses. All three incorporate floating elements. The 50 is cheap but it only goes to 1:2 without a "life size converter" (sort of like a telextender) that you stick between the lens and the camera. The 50 is also annoying because it has the ancient non-USM Canon motor. So it can't do simultaneous AF and MF like the ring-USM lenses. The 100 goes to 1:1 but also has the old-style motor. The 180/3.5 is a new design with three low dispersion elements, a tripod mount, and USM for full-time manual focus. It is also compatible with the Canon telextenders. At right, you can see about as close as one can get with the Canon 50 (from my [Christina page](#); part of the reason that photo.net is banned by most of the Net censorship services).



Tamron makes a newish 90/2.8 macro lens that goes to 1:1. It is probably pretty good.



If you feel like spending a lot of money then what you want is a 6x6 cm [Rollei 6008](#). The 120/4 Zeiss Makro-Planar (same lens as for a Hasselblad) will set you back about \$3400. That's right, you could buy a Nikon 105/2.8 macro lens and three N90 bodies for the price of the Rollei lens alone.

Rollei probably has the most intelligently designed macro system in the world.

I photographed these orchids at left in Hawaii with the 120 Zeiss macro lens, Kodak Gold 100 film (120 size naturally), tripod, f/16 and 1/15th of a second.

Exposure

Unless you are using close-up lenses, when doing any kind of macro work, you always have to consider the effective f-stop. Even if you are using the SLR body's built-in meter, which will correct automatically for light loss, you can't turn off your brain. Why not? Because the effective aperture affects picture quality.

Taking pictures through a pinhole results in tremendous depth of field but very low sharpness due to diffraction. This is why lenses for your 35mm camera stop at f/22 and don't go to f/45 or f/64. View camera lenses provide these smaller apertures for two reasons: (1) the lenses are longer (f/64 on a 210mm lens is not all that small a hole); (2) the negative won't be enlarged very much.

If you're at 1:1 and have selected f/22 on the macro lens barrel, you need to look at the lens markings and/or the close-up exposure dial in [the Kodak Professional Photoguide](#) to learn that your effective aperture is f/45.

If you're using a handheld meter, then you absolutely must use these corrections (e.g., meter says f/22 but you're focussed down to 1:1 so you set f/11 on the lens barrel).

[Note: the modern Nikons, e.g., 6006, 8008, N90, show you the effective aperture in the viewfinder; the F4 does not; Canon EOS cameras do not. Another reason to go with the Nikon system if you are into macro photography.]

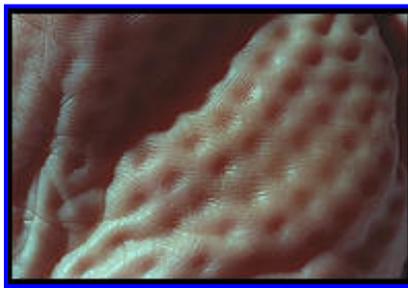
Lighting

A good quick and dirty lighting technique is to use a through-the-lens (TTL) metered flash with a dedicated extension cord (SC-17 in the Nikon system). A modern handheld flash is extremely powerful when used a few inches from a macro subject. That lets you stop down to f/16 and smaller for good depth of field. I sometimes just hold the flash to one side of the subject and have an assistant hold a white piece of paper on the other side to serve as a reflector. Anyway, you have enough power in the flash to pretty much use all the diffusion material that you can find. Let the camera turn the flash off when enough light has reached the film.

Lighting is the most important and creative part of any kind of photography. I've written [an entire book chapter on the subject](#) so I'm not going to try covering it here.

The Samoyed nose at right belongs to [Alex](#). I captured it with a Canon EOS-5, 180/2.8 macro lens, and TTL-metered Canon flash. Below: a foot recently pulled out of one of those weird sandals with all the bumps. Nikon 8008, 60/2.8 lens, SB-24 lens with SC-17 cord





Let's combine what we've learned until now: the aquarium

Combining everything we've learned up to this point, let's look at a case study: the aquarium. The items inside are pretty close, so you need a macro lens. If you put a rubber lens hood on the front of the lens, then you can mush it up against the glass and avoid reflections. Now you need light. Well, you can just get a flash on an extension cord and point it into the aquarium from just about anywhere.

Here are some examples from the public aquarium in Monterey, taken with a Nikon 8008, 60mm AF macro lens (set for manual focus), SB-24 flash, SC-17 extension cord. I wiped the glass with a handkerchief, asked my friend to hold the flash, and pushed the lens hood up against the glass:



I'm still trying to figure out how I managed to get a lawyer in that last frame...

Focus

With a depth of field of around one millimeter for precise macro work, camera positioning and focus become critical. If you have a good tripod and head, you'll find that you have at least 10 controls to adjust. Each of them will move the camera. None of them will move the camera along the axis that you care about.

That's why people buy macro focusing rails. These are little rack and pinions capable of moving the entire camera/lens assembly forward and back. You use the tripod to roughly position the camera/lens and then the macro rail to do fine positioning.

I snapped the photos below in the garden of [the Getty Center](#) and, though I had a fancy Canon 180 macro lens, I didn't have a tripod. So I couldn't focus precisely and couldn't stop down enough to get sufficient depth of field. The results are rather disappointing...



Beyond 1:1 the Canon Way

In the Canon EOS system, going beyond 1:1 is as simple as calling up [one of the photo.net recommended retailers](#) and ordering a [Canon MP-E 65 1X-5X macro lens](#). Mount lens on tripod, mount camera on lens, twist ring on lens, release shutter:



(Flower interior at above left was captured with a traditional EOS film body; the jelly bean image at above right was taken with a [D30 digital body](#).)

Beyond 1:1 with Nikon, et al

Going beyond 1:1 requires more than buying a Micro-Nikkor and turning the focusing helical. In fact, you probably should read a real book by a real macro photographer. [Bob Atkins likes [John Shaw's Close-ups in Nature](#) .]

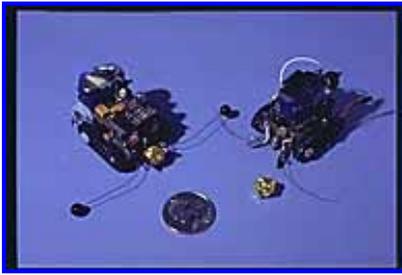
Here's a basic introduction to the tools, though...

First, you can get a bellows (flexible accordion) and/or some extension tubes. These will let you push the lens farther away from the camera body. Extension tubes are rigid and tough; they only let you separate your body and lens in fixed increments. Bellows are delicate but they let you continuously control the lens distance from the body. How much magnification this extra extension will get you depends on the focal length of the lens. If you have a 1000mm lens that already needs its nodal point 1000mm from the film plane to focus at infinity, then a 50mm extension tube isn't going to be worth much. However, if you have a 50mm lens, then that same 50mm extension will take you all the way to 1:1.

Second, you probably want a "reversing ring" for your lenses so that you can turn the back element of the lens toward your subject. Why? Think about the normal way you use a lens. You are taking a picture of the Statue of Liberty. The Statue of Liberty is larger than 24x36mm. So you point the front element of the lens at the statue and the back element at the (smaller) film. Your lens is designed to work like this, taking the large and compressing it into the small. However, if you are working at 10:1, where the tip of a pine needle is going to take up a big portion of the frame, you want the lens to take the small and expand it into the large. So you want to just flip the lens around.

Third, once you've reversed the lens, you probably want some way to retain the automatic diaphragm. You want the aperture to remain fully open until just before your exposure and then close down to the selected shooting aperture. My old Rollei 6008 had all-electric lenses so you could do this with a clean and reliable electric contacts. Nikon has mechanically stopped-down diaphragms for backward compatibility so they can't do this; you end up with a strange dual cable release contraption. Canon EOS has all-electric lenses but in 10 years they haven't figure out how to engineer a bellows or reversing ring so don't hold your breath (instead they make a kludge to adapt their ancient Canon FD macro system to the EOS).

Beyond 1:1 the Lazy Way



At left are a couple of Ant Robots built at the [MIT AI Lab](#) by James McLurkin. Photographed with Canon EOS-5 and Canon 50/2.8 macro lens (lit by off-camera 430 EZ flash). This lens only goes to 1:2.



At right is a detail of the ant claws, which was taken with the Raynox MicroExplorer. The Raynox is a set of close-up lenses available for about \$150. I mounted the 6X lens on a Canon 35-350L zoom lens (the kit also comes with 12X and 24X lenses). Yes, in the end I stuck a

magnifying glass in front of my lens.



Here is the original ant claw picture. You can see that vignetting was severe at f/16. Fortunately, I could see this in the viewfinder to a large extent with the DOF preview and Adobe PhotoShop papers over a lot of photographic sins. Vignetting is the principal drawback of the MicroExplorer and it is apparently worse at small apertures.



A couple more example MicroExplorer shots (at left is an Ant robot detail; at right is a quarter on a \$20 bill, full frame at f/8 (I think)). Note that vignetting is not as severe as it was at f/16 (above left).



More

- [Macro threads in the Q&A forum](#)
- [review of Canon MP-E 65 1X-5X macro lens](#)

Macro photography is an equipment-intensive endeavor. If you need to add to your armamentarium, check out [the photo.net recommended retailers](#).

Top photo: Salmon roe. [Nikon 60/2.8](#), Fuji Velvia, SB-24 flash, SC-17 extension cord, from [Travels with Samantha, Chapter XII](#).

Frog: Canon EOS 50 macro. 430EZ with Off Camera Cord 2. From [my Costa Rica story](#).

Orchids: Canon EOS 50 macro. Tripod and natural light. Fuji Velvia. From [Hacienda Baru in Costa Rica](#).

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