Minolta Shifts Into Overdrive With Lineup of Versatile Point-and-Shoot Cameras!!!

Today's point-and-shoot cameras, do as much to stimulate amateur picture-taking as automatic transmissions did to encourage casual driving in the 1950s. These cameras make it easy for inexperienced users to take great pictures. More than anything else, these automatic, do-everything cameras have helped revive a renewed interest in picture-taking, causing the ranks of amateur photographers to swell to unprecedented levels. Some of these new photographers may eventually become interested in embracing single-lens reflex (SLR) camera systems like the versatile Minolta Maxxum®. Many people, however, just want to enjoy the terrific, fuss-free picture taking offered by today's versatile point-and-shoot cameras.

Minolta, this year, is once again the leader in 35mm camera sales in the American market. Part of the reason for this success is the versatile and value-packed lineup of cameras they offer. Regardless of what your photographic interests are, Minolta is likely to have a camera that's just right for you.

Today's high-tech point-and-shoot cameras go far beyond the simple snapshot cameras of yesteryear. Of course, every Minolta Freedom® camera has been designed for ease of use . . . but that's just about where the similarity to yesterday's cameras ends. All of the Minolta Freedom cameras accept 35mm film for high-quality, sharp, clear pictures and even the simplest ones offer features that were unheard of, in times gone by.

If you are planning to buy a point-and-shoot camera as a gift, or for yourself, look for features that are important to you. For pictures on the ski-slopes or near a backyard pool you might consider a splash-proof model like the Minolta Freedom 202. Switchable, dual-lens models like the Minolta Freedom Tele add creative flexibility which is especially useful when travelling.

Currently, there are seven Minolta Freedom models to choose from. They range, in price and features, from the basic Freedom 50 (Suggested list price $80) to the top-of-the-line Minolta Freedom Zoom 105i (Suggested list price $462). The Freedom Zoom 105i may very well be the ultimate point-and-shoot camera. Beneath its sensibly styled and beautifully finished exterior there is a feature-packed camera with a built-in 35-105mm compact zoom lens. The Minolta Freedom Zoom 105i is the most advanced lens-shutter camera ever to be offered by Minolta. It is also the first Minolta point-and-shoot camera to incorporate the Minolta Maxxum passive Through-The-Lens (TTL) autofocusing technology. Compared with active focusing systems found in most lens-shutter cameras, the TTL passive system provides a higher degree of focusing accuracy, resulting in sharper pictures.

Here are some reasons The Minolta Freedom Zoom 105i camera deserves to be on your best-buy list during this holiday season.

Environmental portrait made with the built-in zoom lens of Freedom Zoom 105i set to 35mm position

Close-up portrait made from same spot using the zoom lens set to 105mm position

First, there's a 3X 35-105mm f/4-6.7 autofocusing zoom lens. This built-in zoom lens heads up an impressive list of innovative features which includes the unique Eye-Start Operating System. This automatically activates the camera when it is brought to the eye for picture taking which, in turn, activates the Advanced Program Zoom (APZ) feature. APZ provides automatic composition control by selecting a suitable focal length based on subject distance detected by the autofocus system. Another important feature of the Freedom Zoom 105i is the TTL passive autofocusing system, which has been traditionally reserved for 35mm SLR cameras, like the Minolta Maxxum 3000i and 5000i. In addition, when light levels are low and/or subject contrast is low, a built-in AF illuminator is automatically switched-on, extending automatic focus.

The Freedom Zoom 105i's wide focus area, in the viewfinder, makes it easy for the photographer to locate and focus on a subject. The focus area is wide enough so that the subject does not have to be positioned in the center of the viewfinder for focusing. This feature is very convenient for photographing still subjects, but it provides distinct advantages when focusing on subjects which are moving; the Freedom Zoom 105i is the first point-and-shoot camera to feature Predictive Focus Control which combines continuous measurement of subject position and high-speed data processing to adjust for the change in subject position that occurs during the shutter release sequence. Finally, the Freedom Zoom 105i features four flash modes, which allows you to meet any of your shooting needs.

Whether you're looking to explore your creative potential or simply to preserve fleeting memories of your family, friends or vacations, there is a Minolta Freedom model that will help make it more enjoyable for you to get great pictures.

PHOTOGRAPHY

POINT AND SHOOT SHOW

We put five radical new cameras to the test.

● Combine many of the features of a modern 35mm single lens reflex (SLR) camera with the auto-everything operation of a compact point and shoot 35mm and you've got the latest in picture-taking: the compact, lens/shutter 35mm zoom.

Zoom is the operative word here. These new breed cameras all sport an integral power zoom lens, covering focal lengths in the moderately wide to telephoto range between 35- and 105mm. Touch a button and the lens flies in and out of the camera body, bringing distant subjects closer or offering a wider view of the world. The five cameras evaluated here have the biggest zoom lenses in the point and shoot category.

Though these cameras all fall in the 35mm lens/shutter category, they offer much more than ordinary snapshot cameras. They have auto-everything operation (load, wind, rewind, focus and exposure included), plus enough overrides and options to make them attractive to the most avid photo fan. The prices on these cameras also separate them from the simple point and shoot models—most have a suggested retail of around $500, though some judicious shopping will land one for less.

The zoom lenses are integral to the body designs of the cam-

DOWN

BY GEORGE SCHAUB; PM Photos by Michel Tcherevkoff

The Olympus SuperZoom 330 and the Canon Photura 35mm cameras are radically designed for 1-handed picture taking. Both feature fingertip control of the 35-105mm zoom lens.

eras. Unlike an SLR, they cannot be interchanged for other lenses. You don't see focus shift when you zoom, just the framing of the picture. The autofocus systems confirm sharp focus by some form of "focus OK" signal. The thinking behind these cameras is that the lens range is sufficient to most picture-taking needs.

The cameras we're covering here are the current crop—more will probably follow. To see how these cameras stack up against one another, PM decided to put them through a series of tests. Along with general handling, PM tested flash coverage, lens resolution and red-eye effect. These are home-grown tests, ones you can try yourself with practically any camera system (see "Tests You Can Do" on page 37). Finally, we compared them on a feature-to-feature basis. Some have surprisingly sophisticated

Canon Photura

The flash is fitted onto the inside of the lens cover. The flash zooms in and out in tandem with the lens.

operating systems, compliments of the microcomputers and intelligent programming of their internal works.

The lineup

The zoom compact crop includes the Canon Photura ($500), Fuji Discovery 2000 ($420), Minolta Freedom Zoom 105i ($512), Olympus SuperZoom 330 ($610) and the Pentax Zoom 105 Super ($438). The hallmark of this group is bold new body design—the Pentax and Fuji are the most conventionally styled, while the Canon entry is the most avant garde.

The lens and focusing systems are at the heart of these cameras. Most focus automatically as close as 2.3 ft., though some rely on "macro" (close-up) switches to get that close, or can only focus as close as about 4 ft. with the lens at telephoto position. The same goes with the flash coverage range. All can cover subjects about 15 ft. away with the lens at the wide-angle setting and ISO 100 film in the camera, but in almost every case, this falls off to about 10 ft. when the lens is at tele range. Why is this?

If you check the lens specs, you'll notice that the maximum aperture (the f-number) shifts as you go from wide to telephoto. The lower the number, the wider the opening in the lens diaphragm—thus, more light gets in. This shift occurs on many SLR zoom lenses as well. It's a price you pay for making complex, compact lenses.

But the aperture shift in SLR zooms is nothing like you see in some cameras here. For example, the Fuji Discovery 2000 zoom camera shifts from f/3.9 to f/9.5 when you go from wide to tele, and the flash coverage distance is almost cut in half. This characteristic is shared by all cameras in this class, except the Canon Photura. Though the maximum aperture does change, the Photura keys flash output to focal length and offers a constant 20-ft. coverage throughout the entire range. All the cameras have compensating flashes, but the Photura's the only one that doesn't drop off dramatically in tele range.

Pentax Zoom 105 Super

The zoom lens moves in incremental steps or in one continuous motion.

This dropoff can be disconcerting. One of the reasons you'd use a tele setting is to get closer to distant subjects. However, if that subject is more than 10 ft. away, it won't be well-exposed if you use flash in a dim-lighting situation. Fortunately, there are two solutions to this problem. One is to load your camera with a faster film, such as an ISO 400 speed. This brings all of these systems to the 20-ft. flash-coverage range. Another option, available with the Fuji model, is

Olympus SuperZoom 330

The lens cap of this camera doubles as an infrared control, so you can get yourself into the picture more easily.

CAMERA SPECIFICATIONS AND DIMENSIONS

CAMERA	Canon Photura	Fuji Discovery 2000 Zoom	Minolta Freedom 105i	Olympus Super-Zoom 330	Pentax Zoom 105 Super
AF ZONES	188	48	N/A (CCD Sensor)	200	24
FOCUS RANGE	2.6 ft.-infinity (1.8 ft. w/acc.)	4.3 ft.-infinity; macro (2.6-4.3 ft.)	2.3 ft.-infinity (4 ft. min. w/105mm)	2.6 ft.-infinity (4.3 ft. min. w/105mm)	4.4 ft.-infinity; 2.5-4.4 ft. (macro); 1.5 ft. (super-macro)
LENS	35-105mm f/2.8-6.6	40-105mm f/3.9-9.5	35-105mm f/4-6.7	38-105mm f/4-5.6	38-105mm f/4-7.8
FLASH RANGE (ISO 100)	2.6-19.7 ft.	2.6-20 ft. (wide); 4.3-11.6 ft. (tele)	2.3-18 ft. w/35mm; 3.9-10.8 ft. w/105mm	2.6-15.4 ft. w/38mm	4.4-16.5 ft. (wide); 4.4-10 ft. (tele); 2.5-4.4 ft. (macro); 1.5 ft. (super-macro)
ISO RANGE	25-3200	50-1600	25-3200	25-3200	25-3200
WARNINGS	Too close, shake, flash	Too close, flash	Too close, flash	Too close, flash	Too close, flash
WEIGHT/SIZE	21.3 oz./$3^{3}/_{8} \times 2^{11}/_{16} \times 5^{1}/_{2}$"	17.6 oz./5.9 × 3.3 × 3"	19.75 oz./$6 \times 2^{1}/_{2} \times 3^{1}/_{3}$"	21.5 oz./5.4 × 3.1 × 3.9"	16.9 oz./5.6 × 3.2 × 2.7"
PRICE	$500	$500	$512 ($462 black)	$610	$507
SPECIAL FEATURES	Eye-level finder; 3-point AF (wide AF detection zone) smart framing; camcorder-like grip	Accessory flash; slow synch flash	TTL autofocusing; Advanced Program Zoom; Predictive AF; wide AF detection zone; Eye-start operation	Portrait and closeup zoom modes; spot metering; remote control	Step and continuous zoom; interval timer; 1-60 second shutter speeds; super-macro; multiframe self-timer

to mount an auxiliary, more powerful flash on the camera.

Programmable options

All of these cameras are "user-programmable," that is, you have some degree of control over exposure and/or creative shooting techniques. For example, you can choose to have the flash on all the time (useful outdoors when your subject is backlit or in the shade). You can defeat the flash (for available light shots indoors when the flash ordinarily kicks on automatically). And in some cases, you can have the flash go off during a long exposure. Called "slow synchro flash," this comes in handy with night or interior shots when you want to have both the foreground and the background detail in the picture. The Olympus and Pentax models also allow you to override exposure, known in the trade as exposure compensation. This means you can add or subtract exposure time manually. This comes in handy when you want to bracket exposures, important if you want to shoot slides or want to get the best results in high-contrast shooting conditions. Olympus, Pentax and Fuji offer multiple exposure on one frame for special effects. Pentax offers an interval timer for sequence shooting, and almost all have motorized consecutive shooting for action events.

Minolta Freedom Zoom 105i

The 105i begins working automatically as soon as you bring the camera up to your eye.

A common problem in point and shoot 35s has been red-eye, those glowing circles of red that surround subject's pupils in flash-exposed pictures. This occurs because the flash is mounted too close to the lens on compact camera bodies. Three of the cameras in our group have new red-eye reduction systems, all based on the premise that the pupil will constrict if exposed to a bright light prior to the actual flash picture being made.

Smart features

Some of the built-in features on these cameras are downright amazing, though some of the buzzwords need explaining. For example, the Pentax Zoom 105 Super has both continuous and "step" zoom operation. The step zoom moves at set intervals. Hit the continuous option and you speed along until you take pressure off the zoom control.

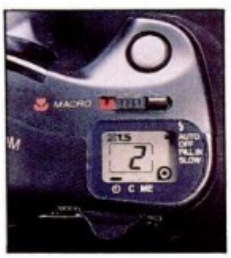
The Minolta Freedom Zoom 105i has an Advanced Program Zoom, a compositional tool that actually picks what it considers the best framing for subject matter. Don't agree with the camera? Override it by activating the zoom control to a framing of your liking. Photura has a similar system called Smart Framing, while the Olympus has an automatic framing feature that you program in.

The Minolta Zoom 105i also has an Eye Start program. Once you turn on

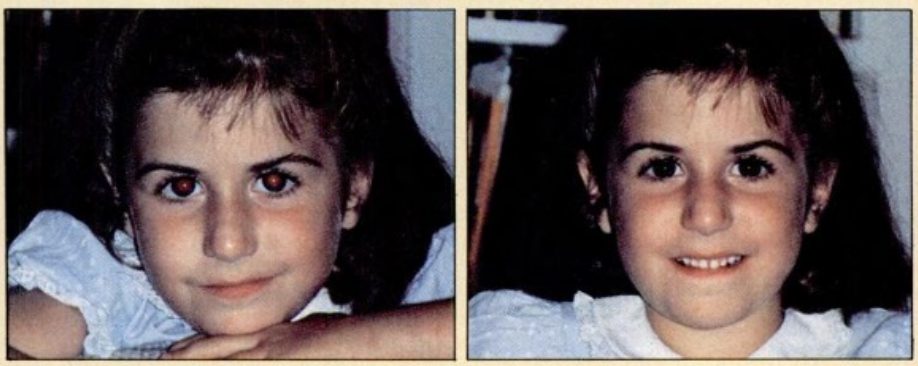
(Please turn to page 89)

Fuji Discovery 2000

Your fingers fall naturally to the controls with this comfortable camera. Eyepiece is rubberized, a plus for eyeglasses.



Tests You Can Do



Children can sometimes look devilish (left), but red-eye reduction makes them look angelic.

● PM designed its tests so that each camera could be judged on performance rather than on how it makes a needle jump or a gauge fluctuate. Also, our tests can be performed easily by you at home and can be applied to almost any camera, flash and lens system. To test flash coverage, PM set up each camera 2 meters from a white board in a darkened room and set off the flash at the minimum, maximum and halfway point in the zoom range. Negatives were then inspected for flash falloff at the edges of the frame.

To test lens sharpness, PM set up a newspaper at the same 2 meters and shot pictures at the same focal length ranges as the flash test. We then enlarged the negatives to 8 × 10 in. and visually inspected the prints.

To test red-eye effect, PM photographed a young child in a darkened room at 2 meters at the three focal length ranges. If a camera has a red-eye reduction mode, we used that for the test. Prints were made of the exposures.

These tests were made with one camera from each of our models. Naturally, some manufacturing leeway should be allowed for and considered when judging these tests. Here's what we found.

Our sharpness test indicated that all cameras deliver acceptably sharp pictures at all settings, a fact borne out by field shooting later. Though images do not have the crispness delivered by the best 35mm SLR lenses, they rank among the best with cameras in the lens/shutter class.

According to our tests, flash falloff at the wide-angle setting was endemic to all cameras. This means that the center received more light than the edges of the picture frame. In no case was falloff severe. (Keep in mind that falloff also occurs with some mounted flashes on SLRs as well.) Falloff becomes virtually unnoticeable at other than wide-angle settings.

Our tests show that the red-eye reduction systems in the Canon, Minolta and Olympus models work. Red-eye was present with the Pentax and Fuji cameras. It should be noted that red-eye was present in the normal auto-flash mode with the Olympus camera—you have to anticipate red-eye and switch to the red-eye reduction mode to eliminate it. With the Canon and Minolta cameras, the red-eye reduction systems came on automatically.

Both the Olympus and Minolta red-eye systems work with a pre-flash system. This means you have to prep subjects to hold their pose—something kids seem baffled by. The Canon bulb/spotlight system didn't cause this kind of confusion.

—G.S.

the camera, raising it to your eye (or putting it down close to another object) starts the camera operation. The 105i also has predictive autofocus (a feature shared with their SLR Maxxum cousins), which tracks moving subjects and keeps them sharp.

All of these cameras have autofocusing, and all but one use an active (infrared beam) system for getting pictures sharp. The focusing is not on the actual subject but in "zones" —ranges of discrete distances, or blocks of space. Though there's much dispute over how many zones are sufficient for these complex zoom lenses (some say the more zones the better the chance for a sharper picture at all distances), all of the cameras here deliver comparatively sharp pictures at most camera-to-subject ranges.

The Minolta 105i offers something new in a lens/shutter camera. Actually, it's something borrowed from the Minolta Maxxum SLRs. Rather than rely on an active infrared beam, the focusing system in the 105i is a charged-couple device (CCD) chip, known as a passive AF system. The 105i couples a predictive focus control program (which focuses by measuring the changes in a subject's position prior to shutter release) and a low-light autofocus illuminator (passive systems have a bit of trouble finding focus in very dim light), which works just like those in conventional lens/shutter autofocus cameras. The Minolta 105i may auger a new type of CCD camera.

PM picks

The ease of loading film and unloading film, how the camera feels in the hand, how basic controls fall naturally to the fingers, portability, clear view (especially for someone wearing eyeglasses) and the quickness with which optional programming modes can be set all go into making picture-taking a difficult or pleasant experience. While all of these cameras take good pictures, we did develop some preferences.

1. Canon Photura—The design of the Photura had people stopping us everywhere we went—a real conversation piece. With the grip in place, the camera feels like a minicamcorder and can be easily carried with one hand, though the size and shape is hardly pocketable. Zoom and shutter release buttons can be worked with one hand, and essential controls fall naturally to the fingers. Viewing is comfortable, and the top-plate viewfinder option opens up additional point-of-view opportunities. A flash on the lens cap is a clever idea, but when opened, we feared for its safety in a crowd, especially when we carried it in a ready-to-shoot position by our side. Optional controls are easy to set.

2. Pentax Zoom 105 Super—It's the most pocketable of the class, though the righthand grip is smallish and makes for difficult 1-handed carrying. Zoom control and shutter release fall naturally to fingers on the righthand side. Viewfinder is bright and easy to use, even with glasses. LCD panel lights up with button and helps tremendously in dark rooms. Supermacro closeup is aided by measuring wire enclosed in a side panel. A myriad of functions on this camera are easy to program with a host of back panel pushbuttons.

3. Olympus SuperZoom 330—Largish body is unpocketable, but the grip makes for comfortable 1-handed carrying. Zoom controls sit on the left side, with the shutter release on the right, so 2-handed operation is preferable. Viewfinder is bright and clear, but placement on far right means that your nose is flattened against camera body when shooting. Functions are accessed through flip-back panel on top plate. LCD is clearest to read of this class, and all function displays are well-marked. Separate lens cap doubles as IR remote control, but be sure to click it in or it can pop off.

4. Minolta Freedom Zoom 105i—A newly released camera, so a production model was not available at press time; hands-on was only with preproduction model. The 105i has a rectangular, boxlike shape that is too big for pocketability, but size gives a feeling of stability. Slightly raised, contoured hand grip allows for 1-handed shooting, though fingertip-small zoom controls on left side of camera force use of left hand for full use of features. Function buttons are limited to flash modes and self-timer; buttons are quite tiny on this pre-production model. Intelligent features are mostly built-in, so no other buttons are present on the body of this camera. Once you give in to the camera's opinion on framing and other controls, the 105i performs admirably.

5. Fuji Discovery 2000—Similar in design, but somewhat larger than the Pentax model, the Discovery 2000 is a conventionally comfortable camera. Hand grip is large enough for 1-handed carrying, and all essential controls (zoom, shutter release) fall naturally to the fingers of one hand. Pocketable in a sports jacket, if a bit heavy. Rubberized eyepiece is a nice touch that prevents scratching of glasses, with viewfinder bright and clear. Functions are easy to operate, with good readout in top-panel LCD. **PM**