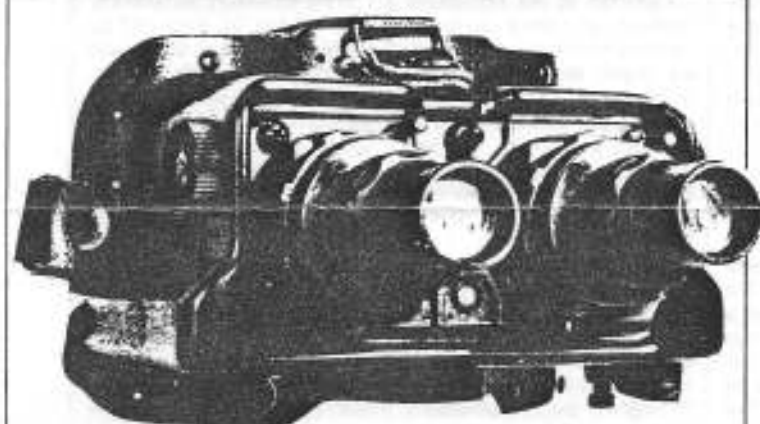


THE SUBMINIATURE TIMES

The Subminiature Times is published monthly by Doylejet, P.O. Box 60311, Houston, TX. 77205 (713) 443-3409

Supporting 110, 17.5mm, 16mm, 9.5mm, 8mm, 4mm, 1mm, Microdot, and Electronic Still Photography.

NIGHT VISION GOGGLES



TECHNICAL SPECIFICATIONS

IMAGE INTENSIFIER		Field of View	40°
Type	2nd Generation	Magnification	1x
Input	Fiber Optics, 18mm	Focus Range	25cm to infinity, adjustable
Output	Fiber Optics, 18mm	Resolution	1.5 mrad
Photocathode	S25	Distortion	less than 4.5%
Luminance Gain	12,000 fwc typical	Eyepiece Adjustment	+2 to -6 diopt
Magnification	6X	Interocular Distance	60 to 72mm
Power Supply	Integrated	OBJECTIVE	
IR ILLUMINATION GeAs LEDs		EFL	26.6mm
POWER SOURCE		Relative Aperture	f/5.4
Mercury Battery or "AA" Battery	2.7V	EYEPIECE	
Operating Time	approx. 20 hours	EFL	26.6mm
Weight	950 gr	Exit Diameter	10mm
Illumination	40 f to 1 f	Environmental	Meets applicable MIL-STD-883C requirements
Brightness Gain	500		

DRIVE OR WORK IN FOG, SMOKE, OR TOTAL DARKNESS "HANDS FREE" WITH THE PREDATOR VI GOGGLES

Completely self-contained in a lightweight pair of goggles, the Predator VI is one of the most convenient systems of infrared viewing. Simply strap the face mask into place for an unencumbered "hands free" viewing system.

The Predator VI uses available star or moonlight to illuminate the viewing subject. It's built-in low level infrared source allows close-up detail work as well as patrol, search and surveillance. The optical system consists of two focussable objective lenses, two image intensifier tubes and two adjustable eyepieces. Each tube contains a built-in high voltage power supply with automatic brightness control (ABC), and include bright source protection (BSP). A miniature mercury battery (or "AA" - Size battery) is housed in the goggles body. For near viewing tasks, as control panel or map reading, a built-in auxiliary infrared light source is provided. For maximum safety the source is activated only when an opposite switch is pressed.

The instrument is affixed to a face-mask secured to the operator's head by means of self-tightening straps. After switching on and adjusting the instrument, the operator has his hands free for driving or for any other purpose.

The Predator VI Goggles are supplied with a specially designed polycarbonate carrying case, internally cushioned with moulded plastic foam and equipped with a shoulder strap.

(CONCLUSION)

MODERN TESTS

control the built-in data back on which the date can be set in any one of three ways—American style (month first), European (day first) or Japanese (year first). You can also set the date and time on a 24-hour clock. Or you can choose nothing at all. The calendar is good until December 31, 2019—or after you've exhausted three of the backup batteries!

At the end of the roll, auto-rewind goes into effect, the frame counter counts down to zero and the cartridge symbol blinks. All these actions will also occur if you elect to rewind in midroll. The symbol keeps blinking and all controls are shut off until you remove your film.

All controls on the Samurai are intelligently placed and, with the exception of the date setting and mid-roll rewind buttons, large enough for convenient manipulation. You can easily change the mode buttons (exposure, drive, date) on the back with a fingernail—unless you're the nervous editorial type who keeps his fingernails well-gnawed. You

can take care of the tiny buttons with a standard piece of accessory-type equipment called the Eyepiece Cover—one of the neatest, most versatile little items seen around here in quite a while. A more-or-less rectangular piece of plastic, it has a hole in one side, a push-in eyepiece plug in the other and a pointed tip at one end. It must be used on the carrying strap, which is not a bad idea since you always know where it is and you can't lose it. The pointed end can be pressed into service, operating the tiny buttons mentioned above, or to adjust the diopter correction of the viewfinder eyepiece (in itself a very useful extra). Or you can attach the lens cap to the eyepiece plug and thus always be assured of the location of that essential, but pesky, little item. If you need to block excess light from entering the finder during a self-timed shot, the cover is tailor-made to snap right into the eyepiece. This clever little gadget comes as standard equipment—but it loses much of its usefulness if you don't believe in camera neck straps.

And speaking of accessories, the Samurai has a couple of its own, plus a half dozen more planned for it and an upcoming newer model: a rubberized finder eyepiece cap and the Portrait Flash Adapter SM-S1, which clips over the flash unit in front, and over the top of the camera to, respectively,

block the built-in flash and provide a conventional hot shoe. Into the latter you can slip either Yashica's portrait-type CS-140 or a larger, long-range electronic flash unit.

Last fall at the Photokina trade show in West Germany, Yashica introduced an upgraded, slightly more sophisticated model of the Samurai, the X4.0, which is just about to make its entrance in America. Sporting a slightly wider, all-black body, the 4's chief claim to fame is its longer range 25-100mm 1/3.8-4.8 zoom lens. Then there is a built-in hot shoe that accepts any accessory flash unit, auto-flash fill capability, and, most striking, an extra drive mode. Aptly indicated by the symbol of a golfer going through his swing, it provides a sequence of five exposures

within a two-second interval—perfect for analyzing that swing or similar activities such as your tennis stroke, pitching motion or pancake flipping technique.

In the accessory department, the X4.0 can be enhanced by two lens converters, a 1.4X tele and a 0.8X wide angle, a close-up lens set, and a flash diffuser. Introduced with the 4, but also usable on the 3, are a plastic handgrip and two straps, a hand model that's big enough to accommodate the Eyepiece Cover and a Grip Strap that's not.

The Yashica Samurai was actually the father of the ergonomic revolution and thus, despite an unusual body orientation and reversion to an older format, has led the way in making point-and-shoot cameras easier and more convenient to use.



Accessory Portrait Flash Adapter fits over top, blocks built-in unit and supplies hot shoe for...



...conventional flash operation with Yashica's A-200 (shown) or similar accessory unit. Provides more light and helps conquer red eye problem.



Sparse left side of body contains main power switch, neckstrap lug and reset button (pointer).



LED located below flash unit on front provides visual only indication of electronic self-timer.



Handy-dandy strap attachment does triple duty as light blocker on eyepiece (left), lens cap holder (center) or data/mode setting button pusher (right).

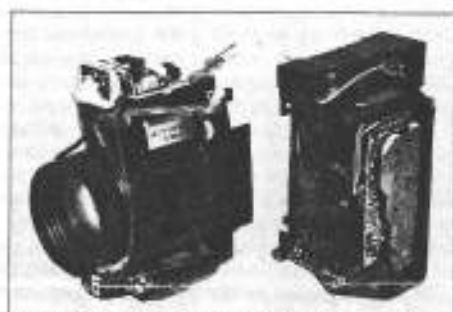


YASHICA SAMURAI

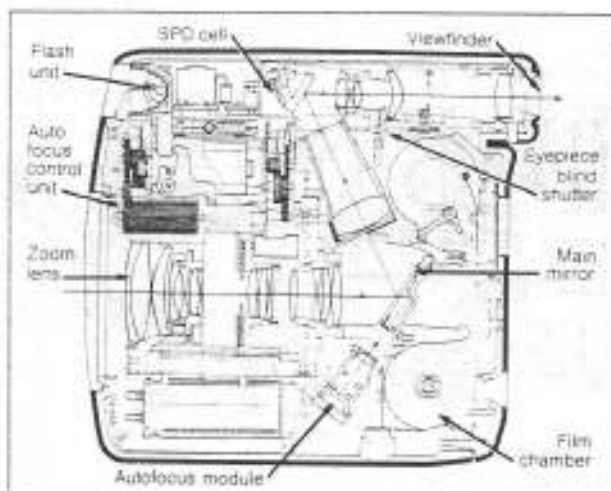
INSIDE THE YASHICA SAMURAI



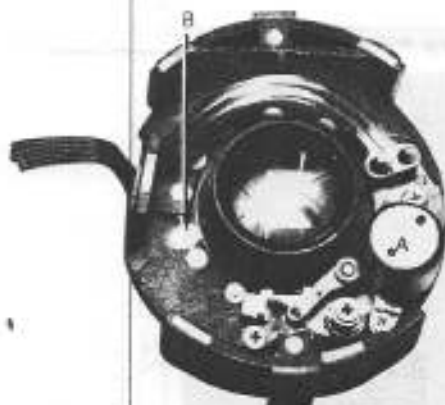
Although the Samurai is a half-frame camera, its electronic circuitry is approximately the same size as a conventional full-frame AF SLR. Central processing unit (a) controls general camera operation while IC (b) handles AE metering as well as AF, zoom and winding motors.



After removing the exterior shell, the Samurai can be divided into a lens/flash portion (left) and a camera body/finder optics portion (right), revealing the large area occupied by the lens.



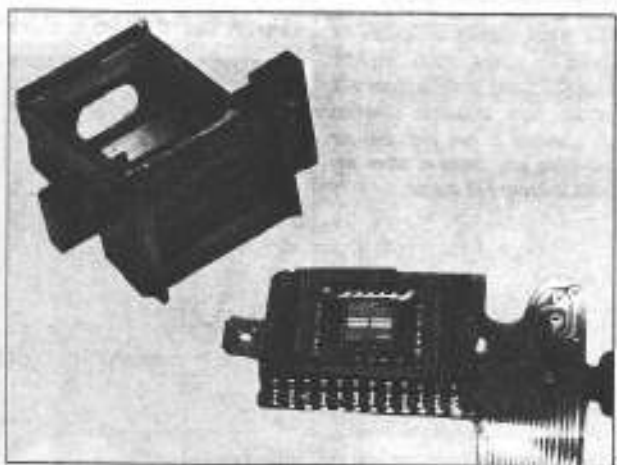
Three 3X zoom lenses compared: from left, Nikkor 35-105mm, Olympus Infinity Super Zoom's 35-105mm and Samurai's 25-75mm. Samurai's lens is smaller because half-frame format uses shorter focal lengths to achieve the same angle of view as full size 35s.



The Samurai uses a between-lens shutter even though it's an SLR. In this unit the shutter/aperture blades are operated by a motor (a) and a photo interrupter (b) detects proper aperture.



A two-segment SPD (at pointer), located to the front of the viewfinder optics, measures center spot and surrounding area separately.



The AF module, containing a pair of 64-cell sensors, is similar to that found on the Yashica 230-AF, but specially modified for use with the Samurai's 3X zoom lens.

Field test evaluation: Transparencies were crisp and snappy with detail well-rendered. Extremely slight barrel distortion noted at 25mm with very slight softness in corners. Very slight light falloff. Flare was well controlled. Results at 50mm were similar. At 75mm very slight pincushion distortion was present with slightly soft corners. Flare well-controlled. Overall results showed good sharpness and image quality.

Yashica Samurai X4.0 five-exposure mode with automatic flash provides sequential record of fast-moving subjects in action over a two-second span of time.

Technical tips for shooting winter

BY LISL DENNIS



The freezing of Nantucket harbor is about as likely as hell doing the same. But last Christmas, I could have skated around ice-locked boats and dinghies in six- to 10-degree temperatures.

On a chilly winter day in 1659, my mother's ancestors, the Macys, washed ashore and proceeded to steal Nantucket from the Indians. So spending holiday time on the island of whaling fame was a fun "Roots" experience for me. When I wasn't poking around the Whaling Museum and the Thomas Macy Warehouse, I was out freezing my tail feathers trying to harpoon a few photos of the decorations, the unusual snowfall and frozen harbor.

I fast learned I was no "old salt" when it came to near-zero photography. As I set my sights on wreaths and swags festooning classical New England doorways, churches, fences and wharf buildings, rigor mortis began settling into my fingers and camera batteries. Not wearing a serious parka, I was unprepared in every way for the penetrat-

ing ocean cold. Not having a hat, I had to defrost my brain every 10 minutes along with the batteries when my totally electronic cameras groaned to a halt.

What would I do this winter to prepare for near-zero travel photography? I would get a proper three-quarter-length parka, preferably one with both an inner and outer pocketed layer. The outer layer could be unzipped if it was up or to access extra batteries, a camera body, or to store an external power supply.

With all electronic cameras, batteries are subject to sluggishness or—worse—uselessness, in below-freezing temperatures. Therefore, an external power supply, which some manufacturers make for their top-of-the-line cameras, is an essential accessory. It is a battery pack you pop into a body-warmed parka pocket that attaches by a cord to a dummy replacement battery in the camera's battery chamber.

If your manufacturer does not provide an external battery supply, ask your dealer if Quantum makes one compatible with your camera. Failing that, contact Rick or Herb at Professional Camera Repair, 37 West 47th St., New York, NY 10036, (212) 382-0550. They will whip one up for you.

If you're going to be dealing with near-zero temperatures for only a short period of time, you may prefer to limp along with sluggish batteries. I've done this a lot; I keep the camera under my parka as much as possible, whipping it out for a quick shot here and there. On Nantucket, I kept a fresh set of batteries in a body-warmed pocket to swap with the groaning ones over frequent cups of hot chocolate.

I entered the cafe with my gloveless fingers frozen to a tripod. Now I know to wrap the legs with rubber PVC tubing, which provides great insulation. I found a pair of loden green wool

winter shooting gloves in England; the fingers fold back so you can hit the trigger and then recover your digits. You can find them at Hunting World, 10 East 53rd St., New York, NY 10022, (212) 755-3400.

Photographers who routinely work in drop-dead temperatures have probably hung onto their not totally electronic cameras. These cameras can be so-called "winterized" by replacing the heavier internal lubricants with lighter ones of silicon and/or graphite. A winterized camera body does not necessarily have to be regreased for year-round use; it will be noisier

due to the thinner lubricants. Professional Camera Repair performs the winterizing operation as well.

A new, non-electronic camera for Christmas? You must be kidding! Indeed, the Leica R6 SLR is a totally manual winterizable camera.

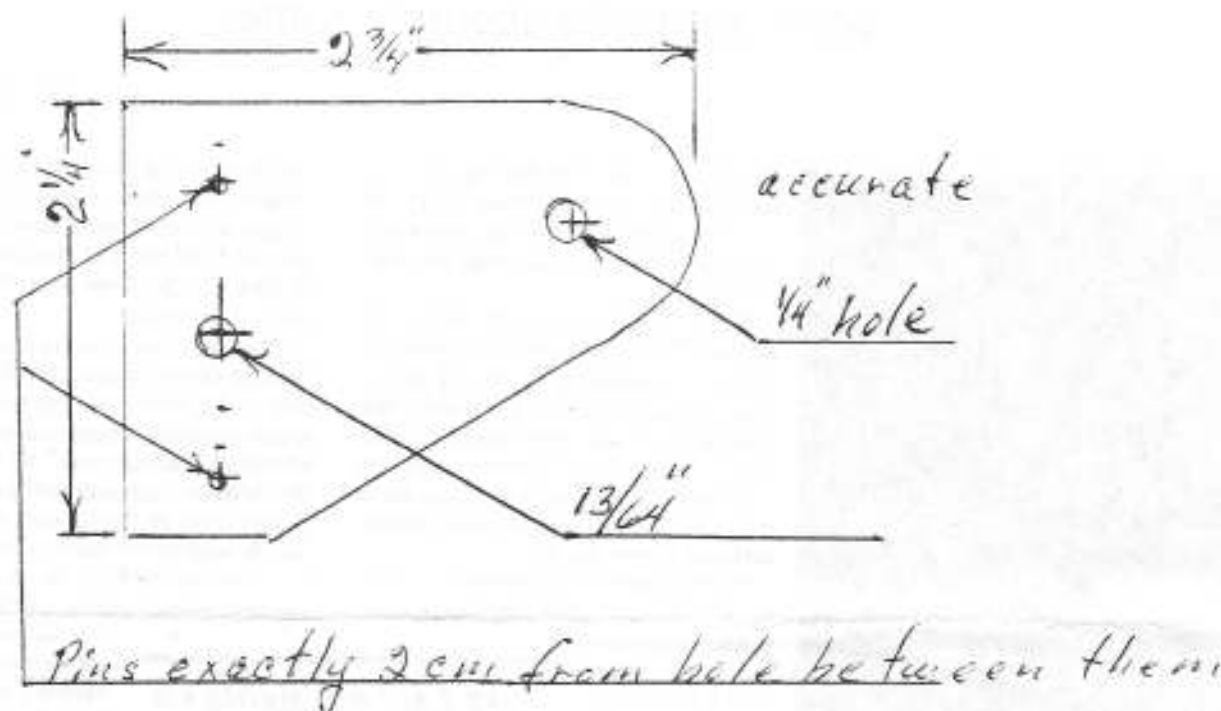
The main holiday expedition on Nantucket is the Christmas Shoppers Stroll, held on December 7.

The trees along the main street of the 19th-century Nantucket town are beautifully decorated by schoolchildren and other local groups. The shop windows are full of holiday cheer; the air is filled with carols and strains from instrumental ensembles. Having been protected from being over-commercialized before it was too late, Nantucket offers the purest Christmas atmosphere of any place I've traveled to in recent years. If you decide to go, be prepared for photography near zero.

If you go: The Jared Coffin House, 29 Broad St., Nantucket, MA 02554, (508) 228-2400, has a wonderful holiday atmosphere in one of the most historic hotels in Nantucket town. Shops and restaurants stay open until the end of December.

For more information, contact: Nantucket Chamber of Commerce, Pacific Club Building, Nantucket, MA 02554, (508) 228-1700. **or**

*As I set my sights on
wreaths and swags
festooning classical
New England
doorways, churches,
fences and wharf
buildings, rigor mortis
began settling into my
fingers and camera
batteries.*



LETTERS

Hi AL:

Copying with a Minox on a tripod was such a pain, I finally came up with this idea. Its easy to make, and works great.

If you think others might like it, pass it on.

Larry Rees,
Pleasanton, CA.

MINOX COPYING ATTACHMENT

9.5ers who have the Minox enlargers and would like to use it as a copy stand, but lack the Minox copy arm attachment, may want to try it this way.

You will need: For the LX, a cable release bracket or binocular clamp.

For the C, BL, B & IIS, a camera clamp or binocular clamp.

Having this, all that is necessary is to make a small bracket that will mount to the back of the enlarger. I used 3/4" plywood.

Note: Because the accurate location of the pins is critical, an alternative might be a small strip of wood glued to the bak of the bracket to keep it aligned.

Hardware (1) 1/4" x 20 x 1" thumb screw to camera.

(1) 6mm x 30mm hex head screw.

(2) 1/4" washers.

(2) pins cut from nails approx 3/4" long.

Three-CCD Color Video Camera

Utilizes 410,000-pixel IT CCDs



Hitachi Denshi America Ltd. is offering the HV-C20 color video camera, a 1/2" three-CCD camera utilizing 410,000-pixel (with micro-lens) IT CCDs.

Newly developed C-Mount prism optics allow a much smaller and less expensive package than was previously available with three-chip cameras. An automatic correction circuit eliminates shading errors sometimes occurring with C-Mount lenses. With specifications such as 700 TV line resolution, sensitivity of 18.0 at 2000 lux, a SNR of 60 dB, and vertical contour correction, the HV-C20 produces excellent picture quality. For more information, contact Hitachi Denshi America Ltd., 150 Crossways Park Dr., Woodbury, NY 11797. (516) 921-7200.

Pinhole Camera

- Requires 1/16" opening size
- 1-1/2" x 1-1/2" x 7/8"
- Power 7.5-12VDC n
- 8 lux
- 3.8mm lens included
- 380 lines resolution
- 12V DC Power Supply 9.95

model #CVC50PH 139.95



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