
Modern Photography's Annual Guide '85

48 TOP CAMERAS

Once again the time has come for MODERN's annual selection of the world's best cameras from among the literally hundreds of different models in current production. To join the exclusive club, a camera must be the best in its own family, with the most advanced features, or possess a goodly number of new, distinctive and/or unusually interesting characteristics. This doesn't mean that those cameras not listed are inferior. Many worthy machines were just edged out by companion models possessing more interesting and innovative features. We begin the roll call with the most prolific group, the automatic 35mm SLRs, followed by a few non-auto members of the breed. Next come the rangefinder 35s, 2¼ SLRs in three different formats, 2¼ twin-lens reflexes, small press, instant picture and, finally, the wacky, wondrous world of the miscellaneous, including some interesting examples of the mini, the maritime and a brace of roll film folders. Individual reports on each of the 48 do not follow a rigid, parallel pattern. Some are condensations of our regular "Modern Tests" reports, some isolate something exclusive and/or unique that sets the camera apart, while a few are so new that we've barely had time to lay our hands on them and, thus, can give you just a cursory description of how they work and where they fit in. As in the past, the prices listed were furnished by the manufacturer or importer and should be used mainly for purposes of comparison—THE EDITORS

Canon A-1

LENS: 50mm f/1.8 Canon FD in interchangeable Canon bayonet mount, stops to f/16, focus to 24 in.

SHUTTER: Electronically-controlled cloth focal-plane with speeds from 30 to 1/1000 sec. plus B, X, FP, M sync, electronic self-timer with 2 and 10 sec. delay.

VIEWING: Fixed eye-level prism with service station-interchangeable split-image rangefinder, microprism collar, full-focusing screen.

OTHER FEATURES: 6-volt silver-oxide-battery powered silicon diode cell above eyepiece measures slightly below center-weighted area of focusing screen at full aperture at ASA 6 to 12,800, choice of aperture priority, shutter-speed priority, full program or stop-down-aperture automatic exposure, auto-exposure-compensation scale, memory hold button, double exposure, motor winder and motor drive provision, locking electromagnetic release, battery-check button and diode, built-in viewfinder blind, film-box-end reminder holder, removable back, hot shoe for auto-coupling flash, depth-of-field preview, LED digital viewfinder readout of shutter speeds, apertures, under-, over-exposure; manual control, flash warning signals, accessory hand-grip and spare battery container furnished.

PRICE: \$557 with 50mm f/1.8, \$625 with 50mm f/1.4 FD.

MANUFACTURER: Canon Camera K.K., Tokyo, Japan.

IMPORTER: Canon USA Inc., Lake Success, NY 11040.

PHYSICAL DIMENSIONS: 5½ in. wide, 3½ in. high, 3¼ in. deep.

WEIGHT: 1 lb. 14 oz.

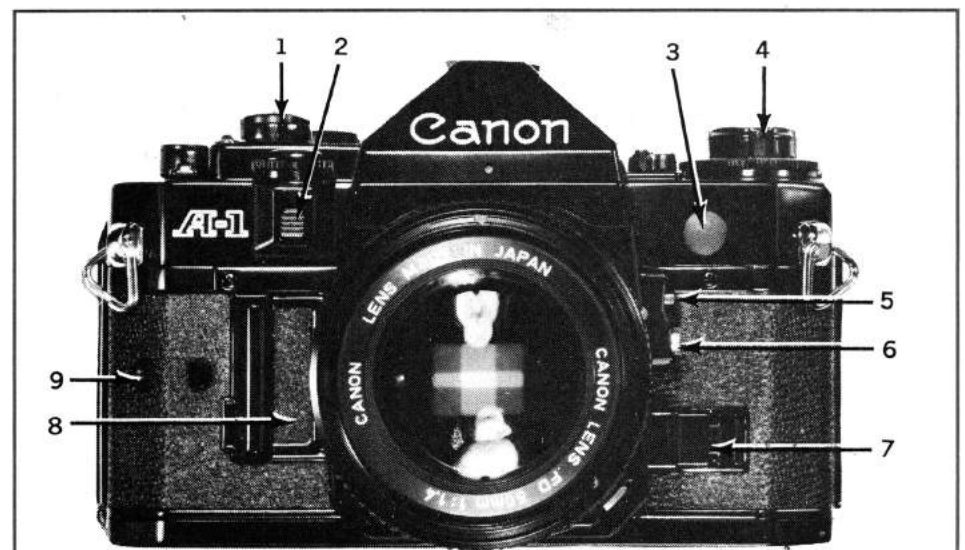
tings and a bright string of EEEEEEs appears. In bright light, the numerals are at their most brilliant, but they dim in four stages as the light on the subject diminishes, for most comfortable viewing.

The A-1's incredible finder readout system is exceeded only by its variety of auto-exposure possibilities. Instead of a conventional shutter-speed dial there's an over-hanging "aperture/time" dial on the front which lets you set apertures or shutter speeds which are read out in a window on top, and a mode selector switch is settable for aperture- or shutter-preferred auto exposure, for completely programmed automation, or conven-

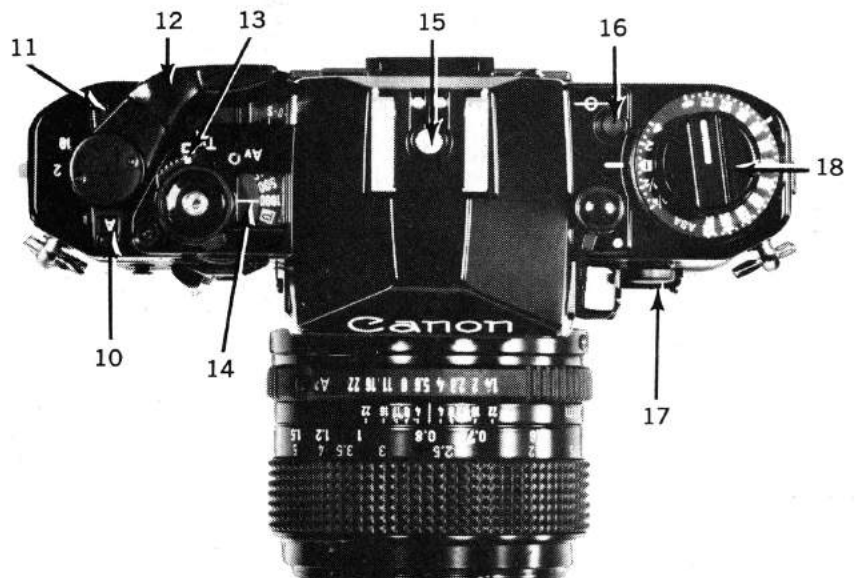
tional manual settings. (For a complete technical and field evaluation see "Modern Tests," July 1978, page 122.)

In terms of handling, we found the well-finished, all-black camera with its highly durable, almost scratch-proof plastic top and bottom plates fit well into most hands. As we predicted, the A-1's programmed automation or "P" mode has proven to be very popular with amateurs and pros alike—so popular in fact that it has formed the basis for the Canon AE-1 Program and Canon T50.

Although the A-1 remains a technical milestone, it is also an eminently practical, easy-to-use camera that continues to appeal.



1. Electromagnetic shutter release. 2. Aperture-time dial cover. 3. PC-terminal cover. 4. Rewind crank. 5. Exposure-hold button. 6. Exposure-advance button. 7. Stop-down metering lever. 8. Battery compartment. 9. Hand-grip attachment socket. 10. Shutter-release lock. 11. Self-timer lever. 12. Wind lever. 13. Exposure-mode selector. 14. Shutter-speed/aperture scale. 15. Dedicated flash contacts/hot flash shoe. 16. Battery-check button. 17. LED display switch/battery check light. 18. ASA/exposure-compensation dial.



It seems incredible that this, the first of the modern, multi-mode, electronically controlled SLRs, was first introduced back in 1978. But even more remarkable is the way in which its once-radical design concept has stood the test of time.

Pick up this light, well balanced camera, look through the viewfinder while pressing slightly on the ultra-smooth magnetic shutter release and you will see an information display so comprehensive and clear, it's still considered one of the best and most user-friendly yet devised.

Below the focusing screen, in bright red calculator-type numerals, are displayed the shutter speed set and the aperture set. Swing the camera from a light to a dark area, and the numbers magically change. Although the exposure is continuously variable in aperture and stepless in actual shutter speeds, the digital readout provides half f/stops and mid-shutter speeds all the way from f/1.4 to f/32 and from 30 sec. to 1/1000 sec. Switch to manual operation and an M appears; use a fully-coupled flash unit and an F appears when the unit is fully recycled; shift to a bulb exposure and the word "bulb" appears; into over- or underexposure and the appropriate aperture or shutter-speed numeral flashes in warning; foul up your set-

Canon AE-1 Program

LENS: 50mm f/1.4 Canon FD in interchangeable Canon breech-bayonet mount, apertures to f/22 plus "A", focus to 24 in.

SHUTTER: Electronically controlled cloth focal-plane with speeds of 2 to 1/1000 sec. plus B, X sync at 1/60 sec., electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with split-image rangefinder, microprism collar, interchangeable full-focusing screen.

OTHER FEATURES: 6-volt battery powers silicon photo-diode metering circuit; single cell above eyepiece provides center-

weighted readings at full aperture, shutter preferred or program auto exposure at ASA 12-3200, manual override; exposure memory hold button; shutter lock; battery check with audible signal; film box reminder slot; removable hand grip; depth-of-field preview switch; dedicated hot shoe; provision for winder or motor drive; apertures, program and manual signals, flash symbol LEDs, over- and underexposure signals visible in finder. **PRICE:** \$452 with f/1.8; \$520 with f/1.4; black body, \$33 extra.

MANUFACTURER: Canon Camera Co., Tokyo, Japan.

IMPORTER: Canon USA, inc., Lake Success, NY 11040.

PHYSICAL DIMENSIONS: 5 $\frac{7}{8}$ in. wide, 3 $\frac{1}{2}$ in. high, 3 $\frac{3}{16}$ in. deep.

WEIGHT: 1 lb. 10 $\frac{3}{8}$ oz.

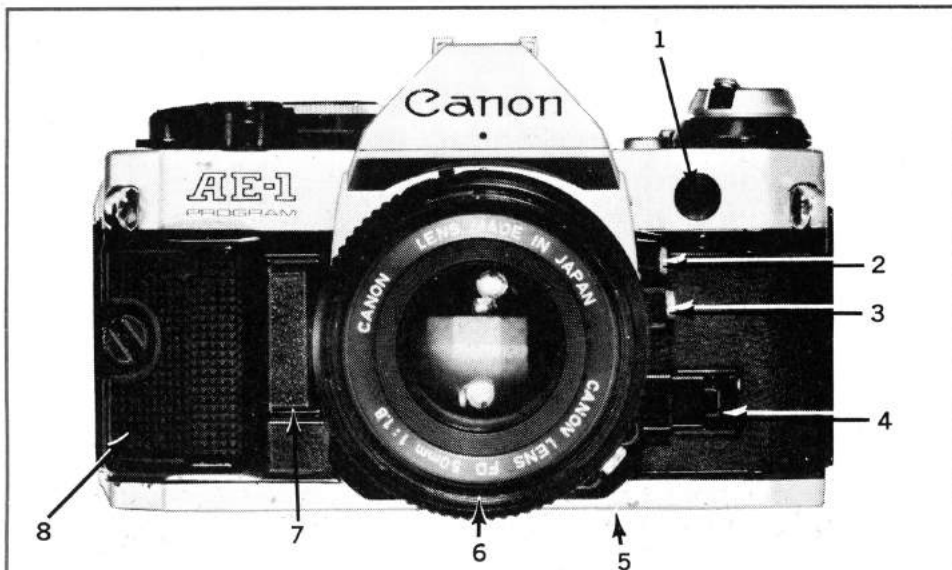
Having witnessed the amazing success of the Canon A-1 with program exposure, Canon lost little time in planning to include program in the next model of its most successful SLR, the Canon AE-1. Thus the Canon AE-1 Program was born.

Incredibly, in a camera 1 oz. lighter than the AE-1, Canon has managed to add a full program auto-exposure mode (the silicon photo-diode metering circuit selects both shutter speed and aperture), interchangeable focusing screens with a brighter, vastly improved split-image rangefinder which doesn't black out one half or the other at apertures of f/5.6 or larger, a highly visible, rugged LED viewfinder readout in place of the AE-1's needle indicator and many, many more improvements. These include provision to accept a 4-frame-per-second motor drive, a beeping battery checker, an exposure hold button (in place of the AE-1's 1 $\frac{1}{2}$ -stop backlight exposure compensation button), a removable, furnished hand grip, a padded finger rest, an easier-to-operate stop down and preview lever, an easier to set ASA dial and a repositioned shutter-speed dial far less likely to be turned inadvertently. Other small improvements, such as the higher, more accessible rewind lever, reveal themselves in use.

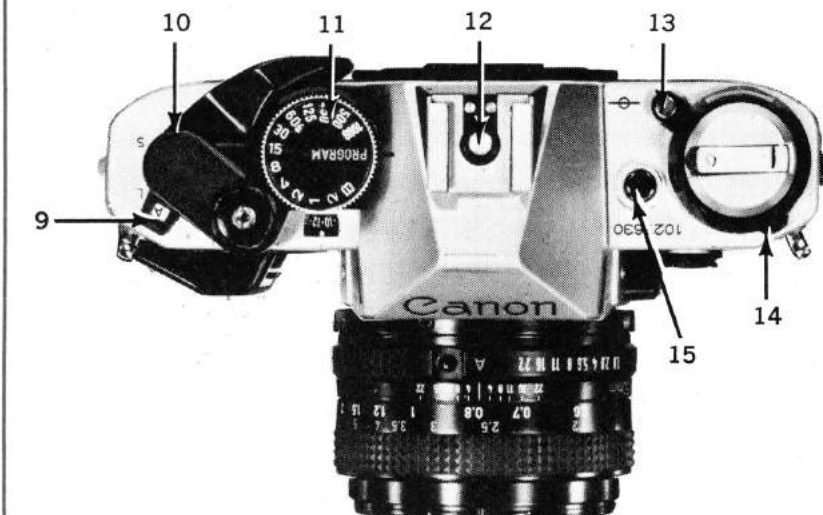
For most owners, the two major changes are the addition of the program auto exposure mode and the LED viewfinder indicators. With the shutter-speed dial set to "program" and slight pressure applied to the shutter release, a bright P in a green LED rectangle appears atop the aperture scale to the right of the picture area within the finder. The metering system, as light changes, will select the apertures and shutter speeds from f/1.4 at 1/8 sec. to f/16 at 1/1000 sec. The aperture set appears as a black numeral against a bright red LED on a vertical scale to the right in the finder. Below 1/30 sec. (lowest safe hand-holding speed) the P will blink in warning. (No, the shutter speed set does not appear in the finder.) Above f/16 or below the minimum aperture, the numerals blink to warn of under- or overexposure.

Turn the shutter-speed dial to any speed and the camera will automatically set the correct aperture (as on the AE-1) and show you the aperture set as a highly visible glowing LED backlit red numeral. Switch the lens aperture to manual openings, a red-backed M LED lights in the finder to warn you. The aperture scale continues to show you the proper aperture to set. A lightning LED indicator in the finder flashes when the flash unit is recycled and blinks after exposure if there is sufficient light.

While those who can afford the feature laden Canon A-1 will probably remain loyal to it, the AE-1 Program provides many of its features at a considerably lower price.



1. PC sync terminal. 2. Exposure-hold button. 3. Exposure-preview switch. 4. Depth-of-field preview lever. 5. Accepts accessory power winders and motor drive. 6. Canon bayonet-breech lock mount lens. 7. Battery compartment. 8. Removable hand grip. 9. Main switch, self-timer control. 10. Wind lever with finger rest. 11. Shutter-speed dial with "Program" setting. 12. Dedicated sync hot shoe. 13. ASA dial release button. 14. ASA dial setting lever. 15. Battery check.



Canon New F-1

LENS: 50mm f/1.4 Canon FD in interchangeable bayonet mount, stops to f/22, focus to 18 in.

SHUTTER: Titanium focal-plane with electromechanical control; mechanically-controlled speeds of 1/2000-1/125 sec. plus flash sync of 1/90 sec. and B, electronically timed speeds of 1/60 to 8 sec.

VIEWING: Interchangeable eye-level prism, interchangeable screens, standard screen has central split-image rangefinder surrounded by micropism collar, full-focusing Fresnel screen.

OTHER FEATURES: One 6-volt lithium, alkaline-manganese, or silver-oxide battery powers through-lens SPD metering system to provide center-weighted averaging, selective area, and spot metering depending on focusing screen installed; match-needle, aperture-preferred and/or shutter-preferred modes plus full manual control depending on meter prism or accessories fitted; auto flash possible with dedicated Canon Speedlites; viewfinder illuminator; eyepiece blind; exposure preview; two-stop exposure-compensation dial; shutter button lock; depth-of-field preview control; multi-exposure capability; electronically controlled self-timer.

PRICE: \$912 with 50mm f/1.8 lens; \$980 with 50mm f/1.4 lens, ASA 6-6400.

MANUFACTURER: Canon Camera Co., Tokyo, Japan.

IMPORTER: Canon USA, Inc. Lake Success, NY 11040.

PHYSICAL DIMENSIONS: 5 $\frac{7}{8}$ in. wide, 3 $\frac{7}{8}$ in. high, 3 $\frac{1}{2}$ in. deep.

WEIGHT: 2 lbs. 5 $\frac{1}{2}$ oz. with 50 mm f/1.4.

The rugged, comfortable, versatile New F-1 continues as the top-of-the-line professional Canon, catering to the needs of the most demanding sector of the market by virtue of its wide range of mechanically controlled shutter speeds, choice of center-weighted, spot and limited area metering patterns and extreme durability even under adverse conditions. While the main metering system and control circuit reside in the body, the Canon New F-1 has a lot of brainpower positioned where you'd expect it—in and around the prism area.

Remove the standard Finder FN, replace it with the slightly taller AE Finder FN, turn the shutter dial to "A" and you've got aperture-preferred auto exposure with full finder read-outs below the focusing screen. Mount either the AE Power Winder FN and any of its three power sources to the bottom of the F-1, set the lens aperture dial to the green "A" setting (past f/22 on 50mm lenses), choose your shutter speed and the bottom readout scale disappears; it is replaced by a vertical aperture scale with a needle reading out camera-selected f/stops along the right-hand side of the finder. You're now in shutter-preferred mode, and user-selected shutter speeds appear directly below the aperture scale.

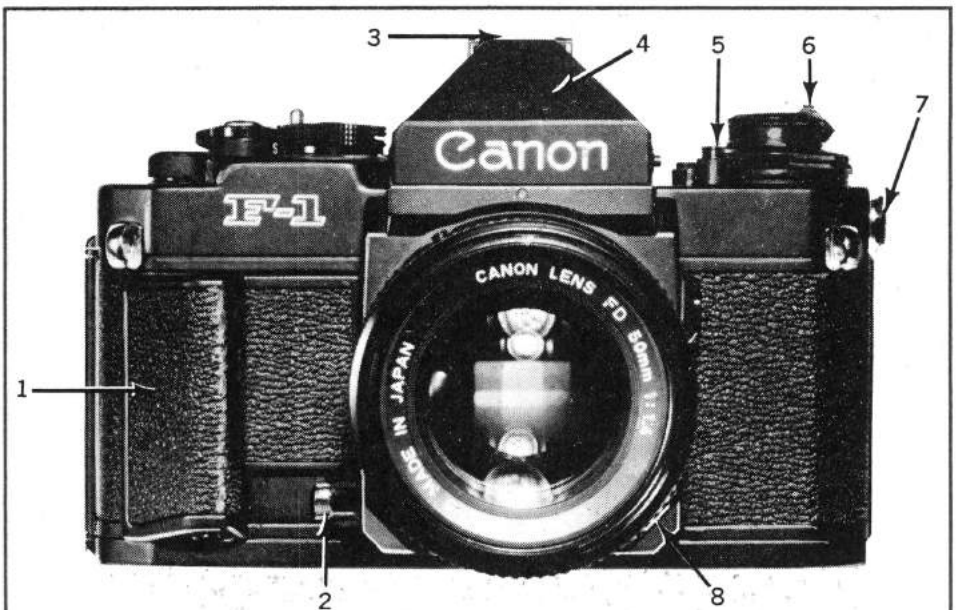
Just below the slide-out pentaprism, you'll find something even more ingenious—user-

interchangeable focusing screens that provide a choice of center-weighted averaging, limited area (12%) metering or spot metering (3% in the center of the viewing area). You can change them as you see fit.

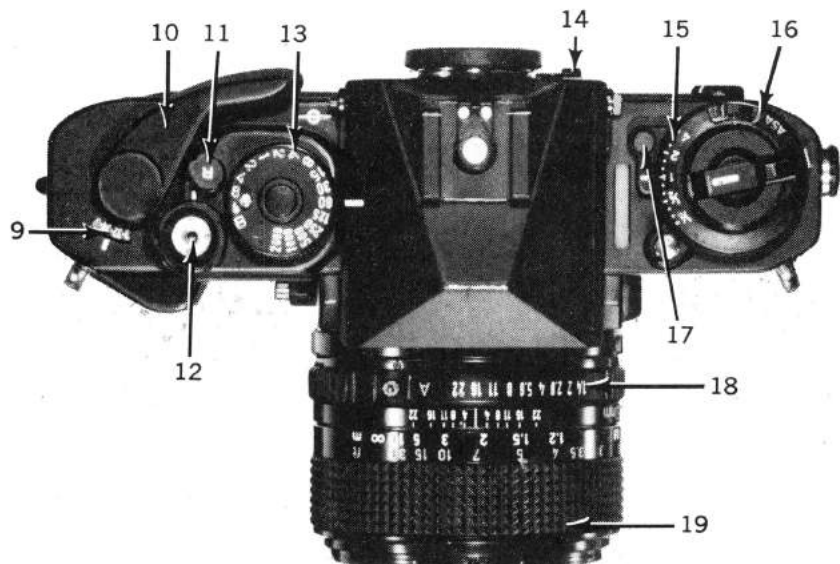
Merely hefting the New F-1 with a normal lens mounted gives you a feeling of its overwhelming solidity. This is probably due to a combination of factors—including its medium size, moderate-to-heavy-ish weight, excellent balance, and ergonomically rounded contours, including an Action Grip/battery compartment cover on the front that feels even more comfortable than the grips on previous Canons, notably the A-1. The film-wind

lever is comfortably contoured to the thumb, all plastic, and has a 30° stand-off angle. It's ratcheted to advance in a single 139° stroke or a series of shorter strokes, and its action is very smooth—a significant improvement over previous Canon SLRs, and the equal of any found on a current SLR.

The Canon F-1 possesses enough design details, logical engineering, advances and refinements in the state of the art of 35mm SLR manufacture to earn it a deserved place as one of the finest cameras made. It certainly remains a camera sought after by pros and amateurs alike for a wide spectrum of photographic tasks.



1. Hand grip. 2. Depth-of-field preview. 3. Integral dedicated hot shoe. 4. Removable pentaprism. 5. Secondary back lock. 6. Rewind crank. 7. Covered PC outlet. 8. Lens-release lock. 9. Exposure counter. 10. Wind lever. 11. Rewind control. 12. Shutter release. 13. Shutter-speed/aperture-preferred mode dial. 14. Eyepiece-blind lever. 15. Exposure-compensation dial. 16. ASA dial. 17. Exposure-compensation release. 18. Aperture ring. 19. Focusing collar.



Canon T70

LENS: 50mm f/1.4 Canon FD in interchangeable Canon breech-bayonet mount, apertures to f/22, focus to 18 in. **SHUTTER:** Electronically-controlled, metal-blade focal-plane with speeds from 2 to 1/1000 sec. plus B, 1/90 sec. X sync, electronic self-timer with beeper. **VIEWING:** Non-interchangeable eye-level prism, split-image rangefinder, micro-prism collar, full-area focusing. **OTHER FEATURES:** Two AA cells power auto wind, rewind, shutter mechanism and silicon photo cell metering circuit with cell above eyepiece; dual cell measures either center-weighted or selective

area for shutter-speed preferred, normal, wide or telephoto program auto-exposure, manual or stop-down metered exposure control; LCD panel atop camera indicates battery condition, film load, wind, film speed index, rewind, exposure mode, shutter speed, hand-hold speed limits, exposure limits, frame counter, bulb and self-timer second counter; LEDs in finder indicate aperture, program exposure limits, AE lock/selective area metering, flash ready and O.K.; dedicated hot shoe; shutter lock; accepts remote control, accessory data back with delayed interval release capabilities.

PRICE: \$538 with 50mm f/1.4 Canon FD; \$470 with 50mm f/1.8 Canon FD.

MANUFACTURER: Canon Camera Co., Tokyo, Japan.

IMPORTER: Canon USA Inc., Lake Success, NY 11040.

PHYSICAL DIMENSIONS: 5⁷/₁₆ in. wide, 3⁹/₁₆ in. high, 3¹/₂ in. deep.

WEIGHT: 1 lb. 12 oz.

The Canon T70 represents a giant step ahead in electronic camera control and demonstrates the wide variety of possibilities and conveniences that such control can provide. With a push of the right button or slide of a switch, metering patterns can be varied, exposures locked. ASA speed film changed, exposure modes shifted from shutter preference to any of three different program modes in which the camera makes the choice of shutter speed and aperture. Further, an LCD panel (7) atop the camera offers graphic displays of what the camera is doing in a manner akin to that of a computer screen. The T series is Canon's most sophisticated advance into the future, featuring cameras with auto wind, auto load and heavy-use electronic operations.

Battery replacement is efficient and simple. No coin edge, no fingernail. Just pressure from a finger and the solidly locked bottom cover of the chamber (2) flips open to accept two AA cells. Loading is equally intelligent. Rather than pulling up on a rewind knob (not needed on this camera), a double catch on the camera end consisting of a button and slide lever can be managed nicely with a single finger.

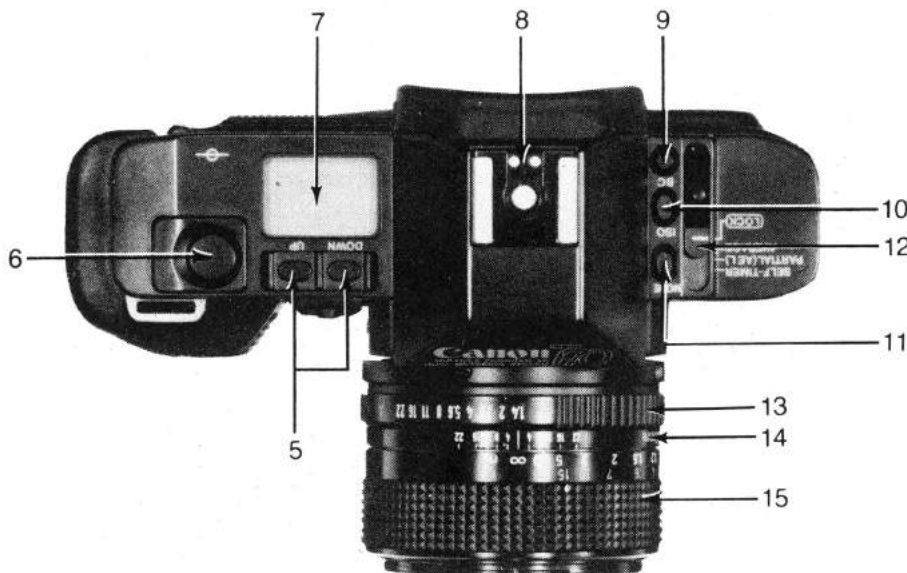
The film cartridge needs only a push into the chamber since there is no rewind spindle to raise out of the way. Move the film leader across the film plane making sure the leader perforations engage the sprocket teeth and close the back. (When the film leader is too long—and it sometimes is—you'll have to re-roll a bit into the cartridge.) Immediately a series of soft winds and clicks occur as the camera advances film to frame 1. If you happen to be looking at the top panel LCD (7) you will be fascinated by the film cartridge pictograph, which shows the film leader extending outward from the cartridge and winding until a large frame 1 appears.

To set the ISO/ASA index, push the ISO button (10) on the left side of the camera. The film speed indication appears on the LCD. To reach a higher index push the "up" button (5) on the right side of the camera. Too high? Push the "down" button (5). The ASA indices will change one after the other until you get the right numeral. You can recall the ASA index as a reminder whenever you wish by pressing the ISO button (10).

In the T70, Canon has used electronics to the utmost, providing amateurs with the most flexibility and ruggedness possible in a beautifully balanced, supremely comfortable package. You may wonder whether its unconventional controls and readouts prove a bane or blessing in the marketplace. That remains to be seen.



1. Remote control socket. 2. Battery compartment/hand grip. 3. Exposure preview button. 4. Shutter speed shift lock lever. 5. Up/down shift buttons. 6. Electromagnetic shutter release. 7. LCD control panel. 8. Dedicated hot shoe. 9. Battery check button. 10. ASA/ISO film speed selector button. 11. Exposure mode selector button. 12. Control/exposure/self-timer switch. 13. Aperture control ring. 14. Depth-of-field scale. 15. Distance scale/focusing.



Chinon CP-5S

LENS: 50mm f/1.7 Auto Chinon in interchangeable Pentax bayonet mount, stops to f/22, focus to 18 in.

SHUTTER: Electronically-controlled Seiko metal-blade focal-plane with speeds from 8 to 1/1000 sec. plus B, X sync, electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with central split-image rangefinder surrounded by microprism collar, full-focusing screen.

OTHER FEATURES: 4.5-volt battery-powered silicon-blue-cell circuit reads center-weighted area of focusing screen at full aperture for dual programmed or aperture-preferred (you set aperture, camera selects shutter speed) automatic exposure, or metered manual exposure; LED display in finder indicates shutter speeds, over- and underexposure warnings, flash ready; auto-exposure-compensation dial; exposure memory hold; audible and LED indications for: slow shutter speeds, incorrect lighting, self-timer, manual shutter speed selection; provision for power winder, dedicated auto flash unit, data back, wireless remote control.

PRICE: \$518.75 with 50mm f/1.7 lens, \$501 with f/1.9 lens, \$571 with f/1.4 lens; body only, \$425.

MANUFACTURER: Chinon International Corp., Tokyo, Japan.

IMPORTER: Chinon U.S.A., Inc. Springfield, N.J. 07081.

PHYSICAL DIMENSIONS: 5¼ in. wide, 3¾ in. high, 3¾ in. deep.

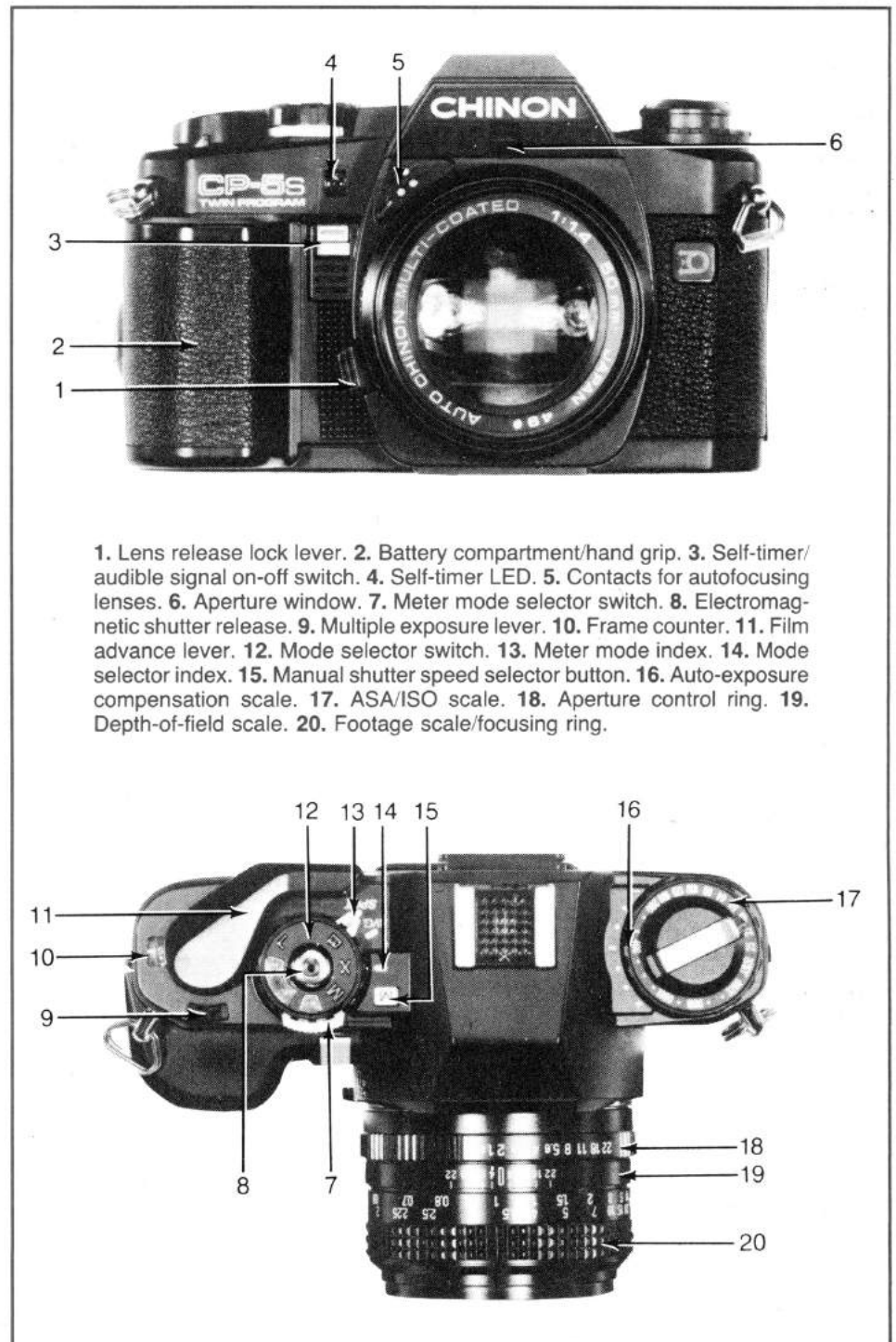
WEIGHT: 1 lb. 10½ oz.

mode selector dial (12) and the program's speed settings start at 1/8 sec. In P2 the lens stops down and the shutter speed gets faster as the light level increases.

The CP-5's finder has a complete shutter speed scale with over, under, flash ready and mode indicators. Shutter speeds are shown in green, yellow or red LEDs, providing a warning as to when to start considering use of a tripod and/or flash. The audible signals come in the form of the familiar electronic beep, accompanied by the visual illuminated LEDs either in or outside the finder. If you don't want to listen to the beeps, choosing to rely solely on the LEDs, keep the lever on the

right front (3) in its lowest ("Off") position. But if you like an audible check that will allow you to operate the camera without removing your eye from the finder, push it up to its middle or topmost position (the latter activates the electronic self-timer—4). Its middle setting gives you an audible confirmation of under- and overexposure, slow shutter speeds, manual speed selection via the button (15) on top and locked-in, pre-exposure close-up meter readings.

The entire CP-5 operation is run by three AAA batteries which fit inside a convenient grip (2) on the front. This grip, or one of Chinon's auto winders, must be in place.



A scant 12 months after introducing the first dual-program auto SLR—a year in which most other major SLR makers followed suit with their own multi-program models—Chinon is back with a couple of refinements to their pioneering CP-5 Twin Program. One revision is apparent in the addition of the "S"—a spot metering option. The flick of a switch (7) converts the meter from center-weighted averaging to spot reading. You have to look into the finder for the other change. Shutter speeds are now indicated by their numbers, rather than via LED dot.

The logical extension of the company's C series of compact auto SLRs relying on the Pentax-type bayonet lens mount, the CP-5 is the first such camera to sport a dual program. But the innovations don't stop there as Chinon has embellished its star with, literally, a generous serving of useful bells and whistles which, along with a rather full information viewfinder, provide you with a series of audible and visual signals and checks on the camera's various functions.

Among those functions are the two programs, aperture-preferred auto control and metered manual control (there's no shutter speed dial for the manual mode). The double-barreled program, subtitled "action" and "creative," means you can use P1 when you're after action or other shots favoring a faster shutter speed. P1's settings start at 1/60 and go to 1/1000 sec. Select P2 via the

1. Lens release lock lever. 2. Battery compartment/hand grip. 3. Self-timer/audible signal on-off switch. 4. Self-timer LED. 5. Contacts for autofocus lenses. 6. Aperture window. 7. Meter mode selector switch. 8. Electromagnetic shutter release. 9. Multiple exposure lever. 10. Frame counter. 11. Film advance lever. 12. Mode selector switch. 13. Meter mode index. 14. Mode selector index. 15. Manual shutter speed selector button. 16. Auto-exposure compensation scale. 17. ASA/ISO scale. 18. Aperture control ring. 19. Depth-of-field scale. 20. Footage scale/focusing ring.

Contax RTS II

LENS: 50mm f/1.4 Carl Zeiss Planar T* in Yashica/Contax bayonet mount, stops to f/16, focus to 18 in.

SHUTTER: Quartz-timed, electronically-operated, horizontal-travel titanium focal plane with speeds from 16 to 1/2000 sec. in auto mode, 4 to 1/2000 sec. in manual mode, plus B, X sync., 1/50 sec. mechanical, or B exposures without battery, and electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with interchangeable focusing screen having central microprism, fine-focusing collar, full-focusing screen showing 97% of picture area.

OTHER FEATURES: Single silver-oxide-battery-powered silicon photodiode circuit with cell above the viewfinder eyepiece measures center-weighted area of entire focusing screen at full aperture; second SPD inside mirror box measures exposure off the film with dedicated flash units; aperture-priority auto exposure with auto-compensation dial and compensation warning in finder; AE lock; provision for electronic remote and cable release; removable back with memo holder; depth-of-field preview; hot sync shoe with provision for special flash unit coupling; provision for auto winder, motor

drive and data back.

PRICE: \$1,016 with 50mm f/1.4.

MANUFACTURER: Kyocera Corporation, Japan.

IMPORTER: Yashica Inc., a division of Kyocera International Inc., Paramus, NJ 07652.

PHYSICAL DIMENSIONS: 5 $\frac{5}{16}$ in. wide, 3 $\frac{3}{16}$ in. high, 3 $\frac{3}{4}$ in. deep.

WEIGHT: 2 lb. 5 $\frac{3}{8}$ oz.

A "pro" SLR with features that are still "state-of-the-art" more than two years after its introduction, the RTS II is a proud descendant of the Contax line. The original Contax RTS was introduced in 1974 as a sophisticated "top-of-the-line" model. During the interim between the introduction of the RTS and the RTS II, Yashica designers added many sophisticated features to Yashica and Contax cameras, but it wasn't until the RTS II was unveiled that many of these were seen on the top model. Ergonomics played an important role in the design. All controls are well placed and easy to operate. The Contax sporty look is European-designed.

Basic improvements to the original RTS design include a power on/off switch, automatic power off after 16 sec., the addition of a shutter-speed dial selector lock for A, B, and X settings, and an electronic self-timer. A brighter finder (one of the brightest we've seen) designed to show 97% of the picture area was a major area of improvement.

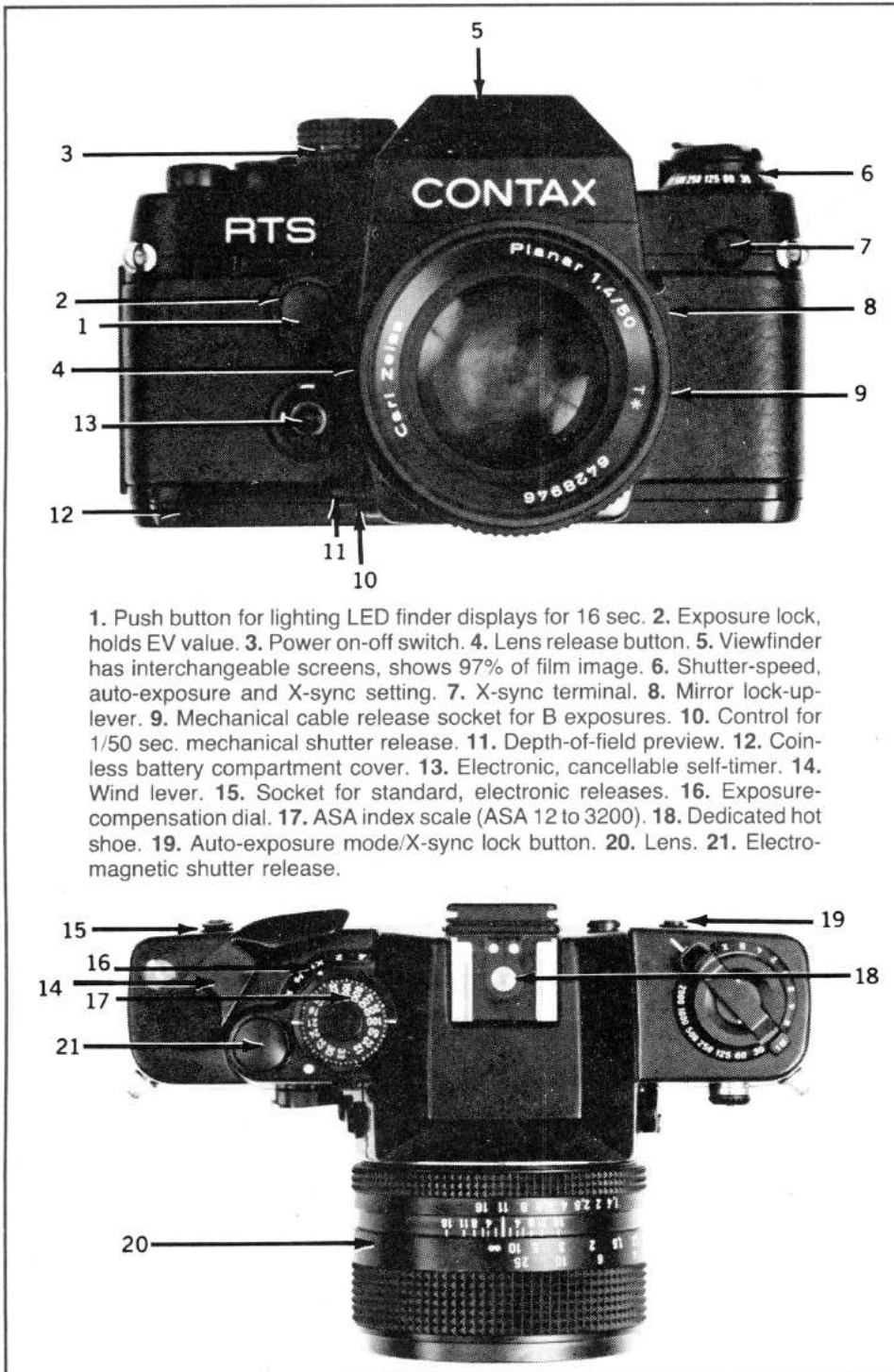
Featured in the finder are easy-to-read LED shutter speeds and an LED aperture setting that displays digitally in $\frac{1}{2}$ stops. When auto-exposure compensation is in use a + or - appears next to the aperture.

The RTS II has an ingenious auto-exposure lock. Turn the collar around the exposure check button and the exposure value is stored in the camera. If you now change the aperture, the camera will automatically change the shutter speed to give the equivalent exposure.

Yashica included off-the-film flash metering, a very desirable feature already in use on the Contax 139 and 137. Flash ready and confirmation signals are visible in the finder when proper flash units are used.

Mechanical features, as well as electronics, are major factors on the RTS II. If battery power fails, flip the lever surrounding the depth-of-field preview and the plunger becomes a release for a completely mechanical 1/50 sec. exposure. If you take long time exposures with a locking cable release, there is a mechanical shutter release socket located on the lower, right side of the lens mount which will not cause any battery drain. Extensive use of ball bearings throughout help maintain the ruggedness of the mechanical systems of this distinctive machine.

You can add a motor, winder, data back or any of the elaborate Contax accessories. High performance lenses are necessary for a "pro" camera. Contax lets you choose from the two full lines of lenses: Zeiss and Yashica, including some of the finest optics available to date.



1. Push button for lighting LED finder displays for 16 sec.
2. Exposure lock, holds EV value.
3. Power on-off switch.
4. Lens release button.
5. Viewfinder has interchangeable screens, shows 97% of film image.
6. Shutter-speed, auto-exposure and X-sync setting.
7. X-sync terminal.
8. Mirror lock-up-lever.
9. Mechanical cable release socket for B exposures.
10. Control for 1/50 sec. mechanical shutter release.
11. Depth-of-field preview.
12. Coin-less battery compartment cover.
13. Electronic, cancellable self-timer.
14. Wind lever.
15. Socket for standard, electronic releases.
16. Exposure-compensation dial.
17. ASA index scale (ASA 12 to 3200).
18. Dedicated hot shoe.
19. Auto-exposure mode/X-sync lock button.
20. Lens.
21. Electromagnetic shutter release.

Contax 137MA Quartz

LENS: 50mm f/1.7 Carl Zeiss Planar in interchangeable bayonet mount, stops to f/16, focus to 1¼ ft.

SHUTTER: Quartz-timed, electronically controlled, horizontal travel, cloth focal-plane shutter with speeds from 11 to 1/1000 sec. in auto plus B and 1/60 sec. X in auto, 1 sec. to 1/1000 sec. in manual, plus electronic self timer.

VIEWING: Non-interchangeable eye-level pentaprism with central split-image rangefinder, microprism collar, full-area focusing screen. Shutter speed, aperture, auto-compensation warning LED, frame counter, flash ready and confirmation signal visible in finder.

OTHER FEATURES: Four AA alkaline or nicad batteries supply power for integral auto winder and two silicon photo diodes (SPDs). One SPD reads a center-weighted area of the viewing screen for continuous illumination, second SPD reads off film during exposure for electronic flash. Aperture-priority auto exposure (you set the aperture, camera sets the shutter speeds), full manual with metering, auto-compensation dial, auto-exposure memory lock, electromagnetic shutter release, provisions for electronic remote and cable release, removable back with memo holder, depth-of-field preview, hot-sync flash shoe with provision for special unit coupling, film-feed indicator.

PRICE: \$747 with 50mm f/1.7, \$836 with 50mm f/1.4.

MANUFACTURER: Kyocera Corporation, Japan.

IMPORTER: Yashica Inc., a division of Kyocera International Inc., Paramus, NJ 07652.

PHYSICAL DIMENSIONS: 5½ in. wide, 3¾ in. high, 3⅜ in. deep.

WEIGHT: 2 lb. 3⅜ oz. (with batteries).

Using a built-in motor to control all of the camera's functions, including film advance, a quartz oscillator supplies the timing to the motor which in turn controls the mirror, shutter and film advance sequences. The Contax 137 is still the only camera with a frame counter visible in the viewfinder. The 137MD offered the best combination of features in the line, less manual exposure control.

Virtually identical to its predecessor, save one knob on the top left, the 137MA has it all. Manual shutter speed settings have been added to the automatic exposure system, (now engaged by setting the shutter speed dial to "A".) The rewind crank has been reshaped slightly to accommodate the larger setting knob.

Two SPDs are present for metering. One reads a center-weighted area for ambient light, while the second gives off-the-film control for dedicated flash. This auto-flash metering system is advantageous as it provides the correct exposure for flash on camera or off, bounce, through bellows or other accessories.

The MA is an aperture-preferred automatic, with ± 2 stops of auto-compensation, and

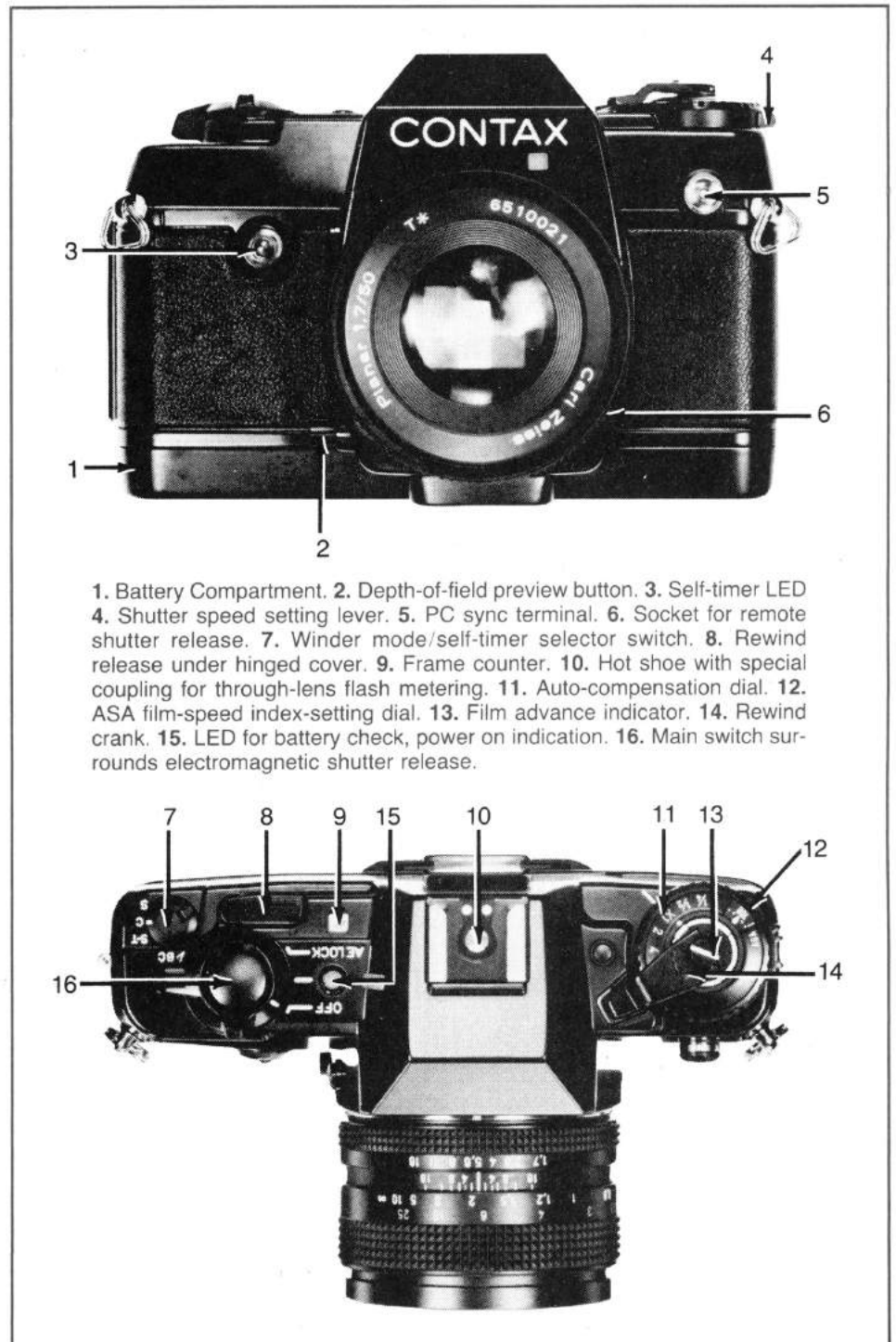
an exposure lock for override. In addition, the AE lock can be used for quick and easy bracketing by locking in the "correct" shutter speed, then varying the aperture. In manual mode, the viewfinder shows both the recommended and set shutter speeds, as well as the set aperture.

Missing from the top of the camera is the traditional film-advance lever. Instead, a large lever dominates the top-right of the camera (as viewed from the back). Pulling back on the lever lights a bright green LED if the batteries are OK. Pushing forward turns the camera on. Pushing forward once again sets the AE lock. In the center of the lever is

the electromagnetic shutter release.

Unique to the Contax 137 is a frame counter within the viewfinder, a handy feature, especially with a motorized camera. The built-in winder operates at single frame, or continuous firing at rates up to 3 frames-per-second.

Remarkably quiet for a motor-driven camera due to a cloth focal-plane shutter and careful, thorough engineering, the 137MA is a proud member of the Contax family. Most of the Contax accessories will work on the 137MA including full lines of lenses from both Zeiss and Yashica, and OTF flash units featuring full off-the-film metering control.



1. Battery Compartment. 2. Depth-of-field preview button. 3. Self-timer LED. 4. Shutter speed setting lever. 5. PC sync terminal. 6. Socket for remote shutter release. 7. Winder mode/self-timer selector switch. 8. Rewind release under hinged cover. 9. Frame counter. 10. Hot shoe with special coupling for through-lens flash metering. 11. Auto-compensation dial. 12. ASA film-speed index-setting dial. 13. Film advance indicator. 14. Rewind crank. 15. LED for battery check, power on indication. 16. Main switch surrounds electromagnetic shutter release.

Contax 159

LENS: 50mm f/1.7 Zeiss T* in modified Contax/Yashica bayonet mount, apertures to f/16, focus to 1 ft. 9 in.

SHUTTER: Quartz-timed, electronically-controlled, vertical travel metal focal-plane with speeds from 1/4000 to 60 sec. in auto mode (to 1 sec. in manual) plus B, X sync at 1/250, electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with extended eye-point, split-image rangefinder, microprism collar, interchangeable focusing screen.

OTHER FEATURES: Two 1.55-volt silver oxide batteries power SPD in finder for center-weighted metering of ambient

light, with second SPD cell in mirror box for off-the-film TTL flash control; aperture priority AE, manual, three program modes; ASA 12 to 3200; AE lock; exposure compensation dial; contoured grip; program graphs visible in film reminder slot; provision for winder, data back.

PRICE: Not yet available.

MANUFACTURER: Yashica Div., Koyocera Inc., Japan.

IMPORTER: Yashica USA Inc., a Division of Koyocera International, Paramus, NJ 07652.

PHYSICAL DIMENSIONS: 5 $\frac{3}{8}$ in. wide, 3 $\frac{1}{2}$ in. high, 2 $\frac{1}{8}$ in. deep.

WEIGHT: 1 lb 1 $\frac{5}{8}$ oz.

A non-slip rubber coating surrounding the camera body gives the Contax 159mm a soft, comfortable feel especially when held by its raised contoured grip. But the feel of this camera along with its sleek styling are just part of the Contax design. Within this body is an electronically-controlled, multi-mode, multi-program camera with features designed to let you concentrate on your picture taking, not the camera.

A choice of three programs lets you set the camera to select both aperture and shutter speed based on the light level. Each program responds differently to increasing light. Three graphs on the back of the camera, in the film-box reminder slot, help you choose the best program for the situation. The main program, labeled "P," increases the shutter speed and decreases the aperture as the light intensity rises, typical of most program modes. This type of program lets you get good pictures over a wide variety of subjects and lighting conditions. Sometimes that isn't enough. When shooting action, for example, you'll want a program which will hold the shutter speed fast, and adjust the aperture for the proper exposure. The "HP," high-speed program holds the shutter-speed to 1/1000 for most of its range. If you want to maintain depth-of-field, the "LP" low-speed program holds the aperture to f/16 over most of its range.

The three programs, plus aperture priority auto-exposure, exposure lock and auto compensation provide a wide range of auto-exposure choices. Manual, match-diode metering is present for complete control.

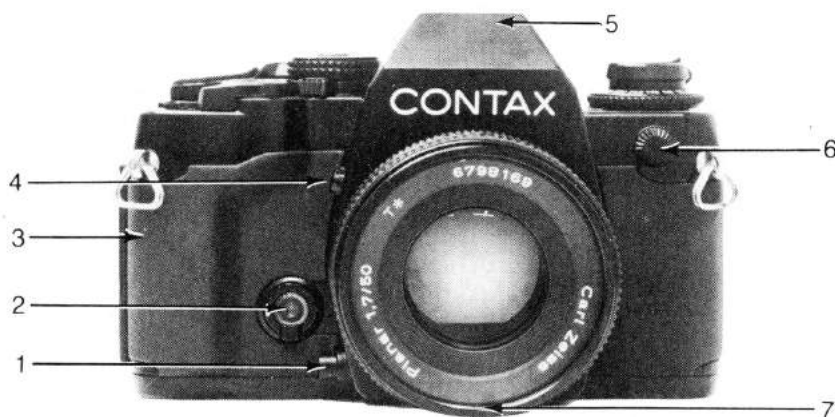
Top speed of the 159 is 1/4000 sec., enough to freeze most action. Flash sync on the 159 is 1/250, to help eliminate blur caused by ambient background light. Flash automation is off-the-film controlled TTL, which works with all exposure modes, although if you let the flash set the sync, the flash sync will be at 1/100 not 1/250 sec.

The 159mm would be a fine camera if the designers stopped right there, but they didn't. A new viewfinder design allows better visibility of the viewing area and information displays (shutter-speed, aperture, flash signals and compensation warnings) for eyeglass wearers. Multiple exposure provision, changeable focusing screens, and depth-of-field preview are welcome features.

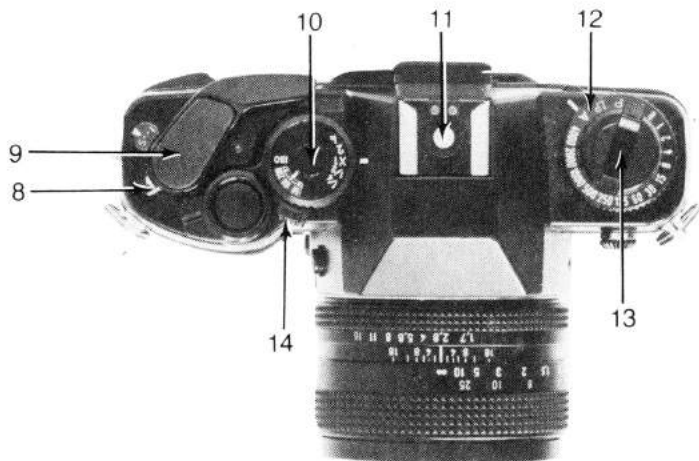
The Contax 159 can deliver all the above at up to three frames per sec. with the winder W-7. The winder features an additional grip, shutter-release, and AE lock, making it easier to shoot verticals.

The 159 is part of the Contax system. A slight modification of the lens mount allows for full programmed operation. Even older Contax/Yashica mount lenses will work in aperture preferred autoexposure mode.

With a wide range of Zeiss and Yashica lenses to choose from, along with many Contax accessories, the 159mm with its many exposure modes will make this an interesting camera for MODERN to test in 1985.



1. Depth-of-field preview lever. 2. Cancelable electronic self-timer. 3. Raised, rubberized contoured grip. 4. Lens release button. 5. Viewfinder with interchangeable screens, extended eyepoint for better viewing with glasses. 6. Auxiliary PC terminal. 7. Zeiss lens in modified Contax/Yashica bayonet mount. 8. Multiple exposure lever. 9. Film advance lever. 10. ASA/ISO setting and exposure compensation dial. 11. Dedicated hot-shoe. 12. Shutter Speed setting, mode/program selecting dial. 13. Film rewind crank. 14. Power on/off switch.



Fujica AX-5

LENS: 50mm f/1.6 EBC X-Fujinon DM in interchangeable Fujica bayonet mount, stops to f/16, focus to 18 in.

SHUTTER: Electronically-controlled cloth focal-plane, with speeds from 2 to 1/1000 sec. plus B, X sync, and electronic self-timer with audible signal.

VIEWING: Non-interchangeable eye-level prism with central split-image rangefinder, microprism and fine-focusing collars, full-area fine-focusing screen.

OTHER FEATURES: Battery-powered silicon photo-diode circuit measuring center-weighted area of focusing screen at full or shooting aperture for ASA 12 to 3200, choice of aperture priority, shutter-speed priority, full program or stop-down-aperture automatic exposure, auto-exposure-compensation scale, memory lock, electromagnetic release, multiple exposure, removable back, motor winder provision, depth-of-field preview, hot shoe for auto-coupling flash, built-in viewfinder blind, LED indicators for aperture, shutter-speed, exposure mode, under- and overexposure warning.

PRICE: \$600 with 50mm f/1.6 X-Fujinon DM, \$625 with 50mm f/1.6 EBC, \$680 with 43-75mm f/3.5-4.5; body only, \$490.

MANUFACTURER: Fuji Photo Film Co., Ltd., Tokyo, Japan.

IMPORTER: Fuji Photo Film U.S.A., Inc., New York, NY 10001.

PHYSICAL DIMENSIONS: 5 $\frac{3}{8}$ in. wide, 3 $\frac{3}{8}$ in. high, 3 $\frac{3}{8}$ in. deep.

WEIGHT: 1 lb. 8 $\frac{1}{16}$ oz.

Fuji's early SLR activity included some remarkable "firsts" (LED digital readout, for one) despite its commitment to the tried-and-true M42 universal thread lens mount. As more and more electronics find their way into SLR technology, new mounts must also be developed. And so enter a new family of Fujica SLRs complete with an exclusive new bayonet mount. The X mount, as it's known, serves as the base for the X family of cameras, Fuji's definite commitment to the future. At the head of the new family we find the AX-5, a multi-mode auto model requiring a complex set of sophisticated electronics which can only be run by the new type lens which can only be run by the new type lens mount. And, in keeping with the current trends, the AX-5 is now available in black finish body only. This Fujica, with its three major auto-exposure modes, relies on conventional LED readouts in its finder, rather than the digital readouts of some competitors and its own discontinued ST901, even though it does feature digital electronic circuitry. Otherwise, the AX-5 has what we've come to expect from the modern automatic SLR—a generous supply of electronics and provision for some heady accessories.

As with all automatic, electronically-endowed cameras, the AX-5 must have a battery in order to operate. Fuji's choice for this power source is the 6-volt. no. 544 (or equivalent) cell, a sort of sawed-off AA, welcome news to fat-fingered photographers who may have trouble with the smaller and

more numerous "button" type. The inside of the compartment (2), just to the right of the lens mount on the front, is prominently and clearly marked as to correct polarity, but the compartment cap is not attached and thus eligible for loss.

The top, where most of the action is, like the body front, is made of a polycarbonate plastic. Film speed (from ASA 12 to 3200) is set easily and quickly on the large knurled collar (14) surrounding the rewind crank.

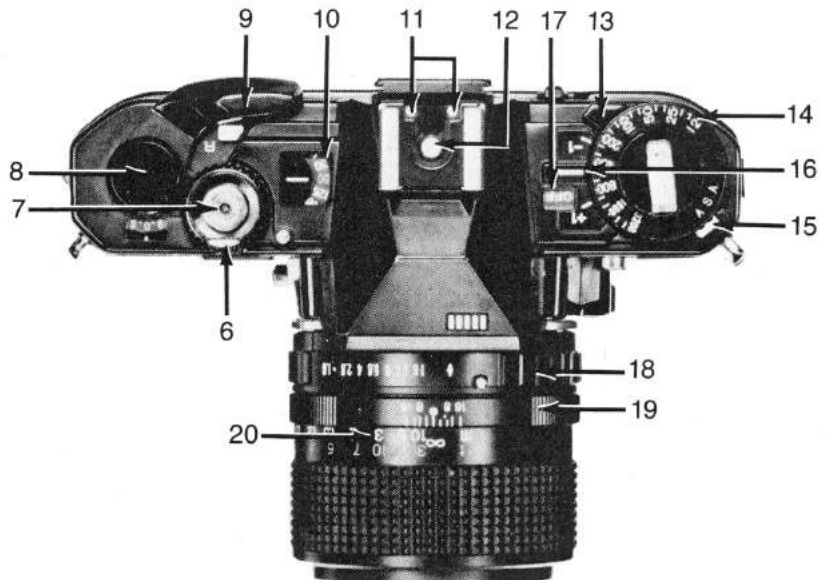
Above the index mark you'll find a small window (17) with a white-on-black "OFF" peeping through. Pull the tiny, black-plastic-tipped lever (13) at the back edge (it looks

and moves as a miniature film-advance lever but in the opposite direction) to its first detent position and an orange "ON" appears. Pull back some more and a black-on-orange "SELF" pops into view, setting the electronic self-timer into position.

Moving over to the right edge of the top, we come to the multiple-choice exposure control, in the form of a small free-wheeling shutter-speed and exposure-mode selector dial surrounding the shutter-release button (7). Though small, its knurled rim juts out slightly from the front of the body and can thus be rotated, quickly and smoothly, with your forefinger. All settings are click-stopped.



1. Depth-of-field preview button. 2. Battery compartment. 3. Shutter-priority setting lock button. 4. X-sync PC terminal. 5. Lens lock release button. 6. Exposure meter activating button. 7. Shutter-release button. 8. Rapid-wind lever. 9. Rewind release button. 10. Shutter-speed scale and index. 11. Contact points for coupled auto-flash unit. 12. X-sync-only hot shoe. 13. On/off/self-timer switch. 14. ASA film-speed scale. 15. Film-speed scale release button. 16. Auto-exposure-compensation scale. 17. On/off/self-timer indicator window. 18. Aperture control ring. 19. Depth-of-field scale. 20. Footage scale/focusing ring.



Konica FT-1

LENS: 50mm f/1.8 Hexanon AR in Konica bayonet mount, stops to f/22, focus to 1 ft., 9 in.

SHUTTER: Electronically-controlled Copal CMS metal blade focal-plane shutter with speeds from 2 to 1/1000 sec. plus B, X sync, self-timer.

VIEWING: Non-interchangeable eye-level prism with split-image rangefinder, microprism collar, full-focusing screen.

OTHER FEATURES: Built-in, battery-powered motor drive with auto wind to first exposure; auto-film threading; shutter-preferred auto exposure (you set the speed, the camera sets the aperture),

manual override; four alkaline AAA cells in handgrip power winder and shutter; Gallium Arsenide Phosphide photodiode metering circuit reads a center-weighted exposure from the focusing screen at full aperture; diodes in finder indicate aperture set, over- and underexposure warning, manual operation, flash ready for dedicated X-24 and other dedicated units; electro-magnetic shutter release with remote electronic release provision; blinking electronic self-timer; hot shoe; shutter release lock; film box memo holder; magnetic film advance confirmation signal; battery check.

PRICE: \$398 with 50mm f/1.8 \$299, body only, black body \$8 additional.

MANUFACTURER: Konishiroku Photo Industry Co., Inc., Tokyo.

IMPORTER: Konica Camera Co., Woodside, NY, 11377.

PHYSICAL DIMENSIONS: 5 $\frac{5}{16}$ in. wide, 3 $\frac{3}{8}$ in. high, 3 $\frac{1}{4}$ in. deep.

WEIGHT: 1lb. 12 $\frac{1}{16}$ oz.

Few SLR camera makers seem to take criticism to heart and attempt to bring out a second model of a camera incorporating all the improvements possible over the original. And yet that is just what Konica has done in the FT-1, five years after the original FS-1, on which it is based, appeared.

While Konica appears to have concentrated on the major problems—battery contact and drain (solving the difficulties admirably)—it has gone ahead and added many another valuable feature. One feature Konica hasn't touched is the use of shutter-speed priority automation, in which you set the shutter speed and the camera sets the aperture, surely a more meaningful system for many amateurs than aperture priority in which the aperture is set first and the camera then selects the shutter speed.

The new FT-1 offers increased battery mileage, up to 25 rolls from 4 AAA cells (instead of AA) in a consequently more compact right-hand grip, a new spinning, magnetically-coupled film advance confirmation indicator, quiet, smooth operation, revamped control location along with two methods of auto-exposure modification (as well as manual mode). Auto exposures can now be locked in using a conveniently located AE-L switch, while an auto exposure compensation dial offers ± 2 EV correction.

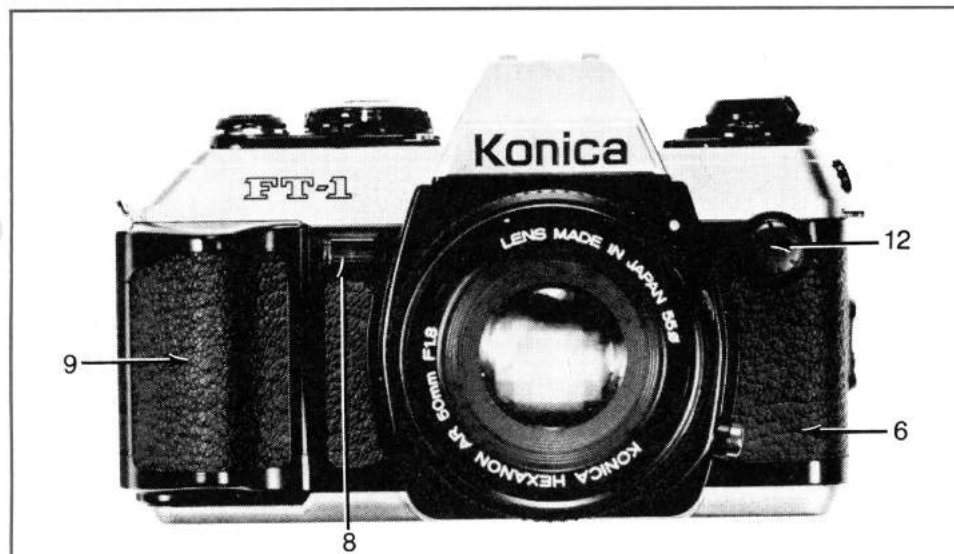
Diodes in the bright eye-level finder indicate the aperture selected by the fast-acting center-weighted photo-diode metering circuit for your pre-selected shutter speed. Other diodes signal over-, or underexposure, blink in manual mode, signal flash-ready and aperture selected. The bright finder is easy to focus with split-image rangefinder, microprism ring and full-focusing screen. The electronic self-timer has a blinking red indicator, increasing in tempo to warn the subject of impending exposure.

Auto-loading is quite dependable, with only cursory attention to leader positioning; the spinning film advance indicator confirms film loading and advance.

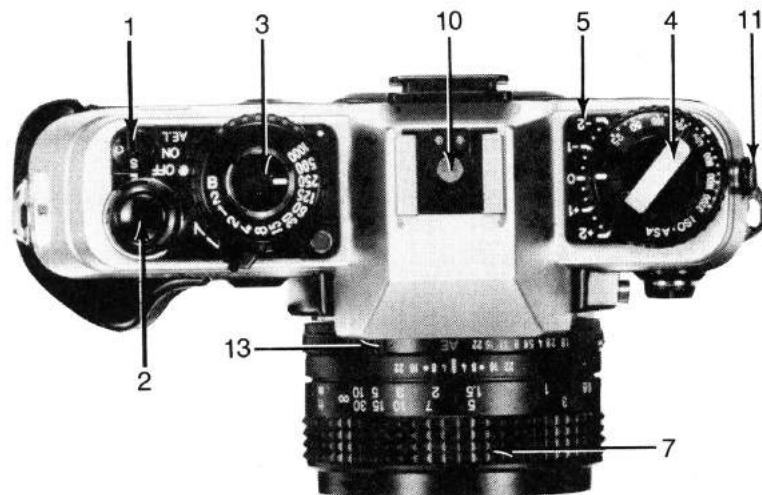
The FT-1 is a well-thought out SLR, with convenient controls, comfortable electronic release, well-designed shutter dial and large frame counter. Its remote contact permits use of left hand releases and wired and radio remote releases. The quiet motor drive permits single frame and continuous shooting up to 2 frames per second.

For the few exposure situations which cannot be handled in auto mode, manual mode is retained.

The FT-1 is a comfortable and competent SLR, relatively foolproof yet providing control flexibility needed to meet most needs.



1. On-off/exposure mode selector switch. 2. Electromagnetic shutter release. 3. Giant shutter speed dial. 4. Rewind crank with concentric film speed dial. 5. Exposure override control. 6. Lens bayonet release. 7. 50mm f/1.8 normal lens. 8. Blinking self-timer LED. 9. Removable battery compartment handgrip. 10. Dedicated flash hot-shoe. 11. PC sync terminal. 12. Multi-pin contact for remote accessories. 13. Automatic exposure/manual aperture ring.



Leica R4

LENS: 50mm f/2 Summicron-R in interchangeable bayonet mount, apertures to f/16, focusing to 20 in.

SHUTTER: Modified Seiko MFC metal-blade focal-plane, electronically-timed speeds of 1-1/1000 sec. plus, mechanical speeds of B, X sync, 1/100 sec.

VIEWING: Non-interchangeable eye-level prism; standard screen has central split-image rangefinder, microprism collar, full-area fine-focusing outer area.

OTHER FEATURES: 3-volt batteries power single silicon cell in camera base, providing full-area or selective readings off Fresnel reflector behind mirror; aperture-, shutter-priority, programmed auto-exposure modes and match-diode metering mode; aperture set and/or camera-selected aperture and shutter speed are read out in finder by LEDs; over-, underexposure, exposure compensation and flash ready LEDs in finder; dedicated hot shoe with auto flash sync-speed setting contact; interchangeable viewing screens; depth-of-field preview lever; removable back; accepts R4 motor winder or motor drive; eyepiece blind; electronically-controlled self-timer; ASA 12-3200.

PRICE: \$1,458, body only; \$1,833 with 50mm f/2 Summicron-R; \$2,613 with 50mm f/1.4 Summilux.

MANUFACTURER: Leitz, Portugal S.A.R.L., Vila Nova de Famalicão.

IMPORTER: E. Leitz, Rockleigh, NJ 17647.

PHYSICAL DIMENSIONS: 5³/₈ in. wide, 3¹/₂ in. high, 3¹/₁₆ in. deep.

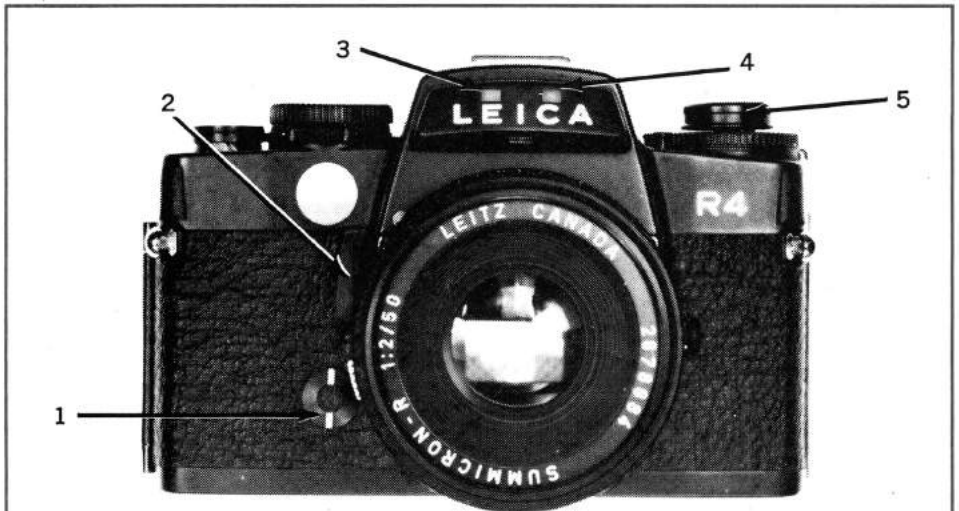
WEIGHT: 2 lb. 4¹/₁₆ oz.

the shutter-speed scale and the LED show the camera-set lens stop.

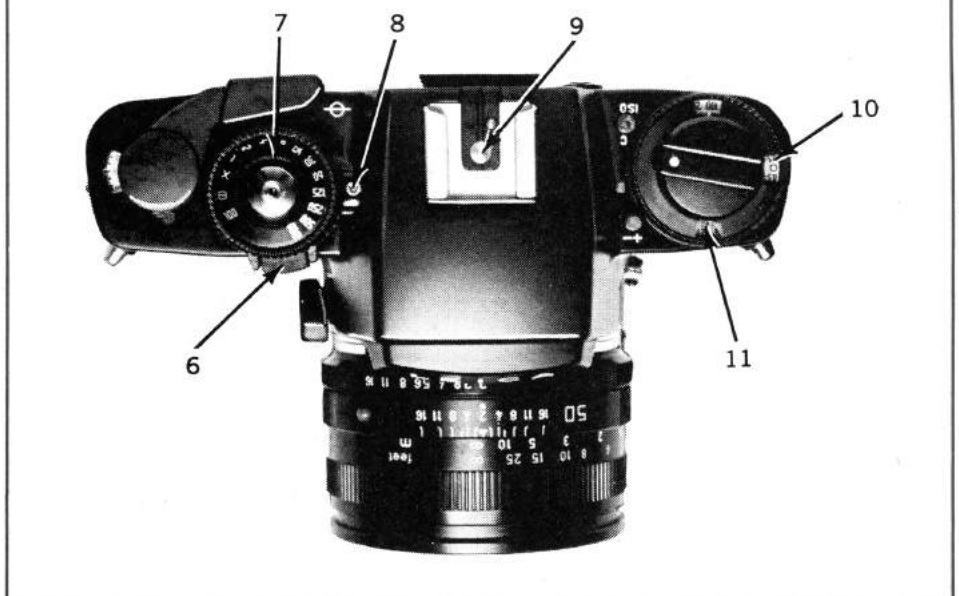
The R4 retains the R3's selective/full-area metering option only in the manual and aperture-priority modes. The metering configuration is unique. Leitz has switched from a CdS cell to a silicon photodiode, and the main mirror, now semi-transparent over its whole area, diverts 70 percent of the light into the finder and lets through 30 percent to a special reflector that hangs down just in front of the shutter. This reflector carries a Fresnel pattern of concentric rings broken up into 1345 micro-reflectors to concentrate the light onto the photodiode which sits in the bottom

of the mirror housing and is angled at the reflector. Normally the silicon cell reading the light thrown back from this Fresnel reflector takes in virtually the whole image area. In spot mode a powerful converging lens can be slid in front of the SPD cell to read a 7mm circle in the center of the finder. The R4 provides a memory hold in much the same way as the R3, but for a far longer time.

The awesomely versatile R4 was joined earlier this year by its simplified brother, the R4-S, sacrificing shutter-priority and programmed auto-exposure, to permit a tidy \$561 price reduction. Both cameras have traditional Leitz solidity.



1. Switch for electronic self-timer. 2. Depth-of-field preview lever. 3. Shutter-speed scale illumination window. 4. Self-timer signal. 5. Folded rewind crank. 6. Integrating/selective metering and program switch. 7. Release within shutter-speed dial. 8. Meter mode indicator. 9. Dedicated hot shoe. 10. Exposure-compensation scale. 11. Film-speed indicator.



A slight roll-back in the price of Leitz' deluxe R4 heralds the new year. Neither internal nor external changes of note have occurred in the trim, deluxe, ultra-precise, multi-mode SLR. Integrated and selective area metering, aperture-, shutter-priority, and programmed auto-exposure, interchangeable focusing screens and an LED-studded interactive viewfinder system keep you on top of the all-important exposure. Multicoated mirrors and prisms contribute to bright, contrasty focusing and viewing image. A comfortable body shape permits easy handling. R4 or R3-adapted Leicaflex lenses complete the picture.

All mode indications appear in the finder when the release key of the mode selector is depressed or when you lightly press on the release button. In all modes a control window below the finder screen shows the aperture. In the manual and shutter-priority modes you also see a preselected shutter speed in a window to the right of the aperture window. If the P (programmed auto-exposure) or T (shutter-priority) mode indicators blink, you are being warned to check your preset lens aperture. You also see the shutter-speed scale in the A (aperture-priority) mode when the LED simply indicates what speed the camera has set. In the M (manual) mode the LED indicates the camera-recommended speed for correct exposure. In the T mode

Minolta X-700

LENS: 50mm f/1.4 Minolta MD in interchangeable Minolta bayonet mount, stops to f/22, focusing to 18 in.

SHUTTER: Electronically-controlled, horizontal-travel cloth focal-plane with speeds from 1-1/1000 sec. plus B, X sync at 1/60 sec., electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with dealer-interchangeable screens; standard screen has central split-image rangefinder, microprism collar, full-area fine-focusing.

OTHER FEATURES: 3-volt batteries power silicon photo-cell atop the pentaprism eyepiece, reading center-weighted area

of focusing screen at full aperture for programmed or aperture-preferred (you set the aperture, camera selects shutter speed) automatic exposure, or metered manual exposure; LED display in finder indicates camera-selected shutter speeds in auto exposure modes, recommended shutter speeds in manual mode, plus over-, underexposure warnings, mode in use, flash ready and flash distance check; exposure-compensation dial with viewfinder warning; off-the-film autoflash via second silicon cell in side of mirror box; built-in exposure hold; film-advance verification signal; audible slow

shutter speed and LED self-timer warning; provision for wire or electric releases and IR remote; depth-of-field preview button; body accepts winder or Motor Drive, Multi-Function back, IR remote control.

PRICE: \$517.50 with 50mm f/1.4 Minolta MD lens, \$438.50 with 50mm f/1.7 Minolta MD lens, \$618.50 with 50mm f/1.2 Minolta MD lens; body, only \$364.50.

MANUFACTURER: Minolta Camera Co., Ltd., Osaka, Japan.

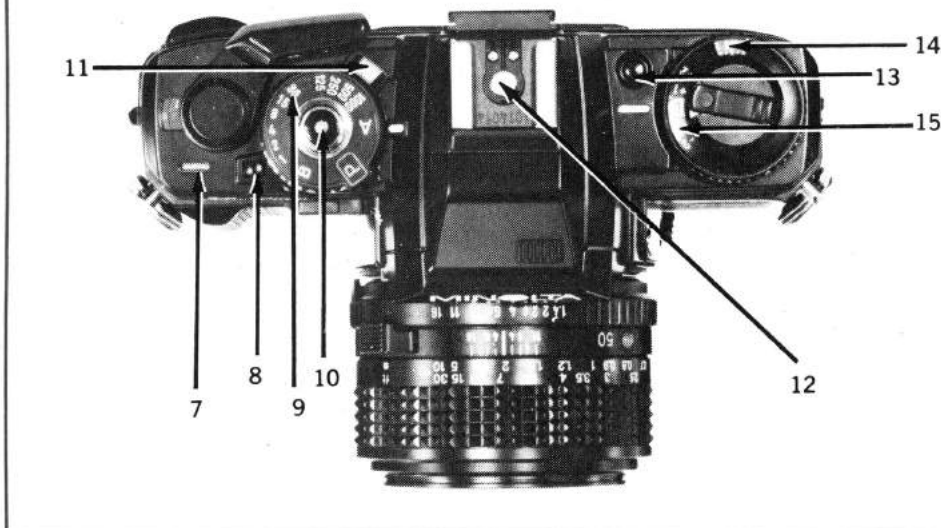
IMPORTER: Minolta Corp., Ramsey, N.J. 07446.

PHYSICAL DIMENSIONS: 5 $\frac{3}{8}$ in. wide, 3 $\frac{5}{8}$ in. high, 3 $\frac{1}{16}$ in. deep.

WEIGHT: 1 lb. 7 $\frac{1}{16}$ oz.



1. Integral grip. 2. Self-timer/AE lock. 3. Piezo-electric beeper. 4. Folded rewind crank. 5. Lens-release button. 6. Depth-of-field preview. 7. Film-advance confirmation window. 8. AE mode release button. 9. Shutter-speed/AE-mode dial. 10. Shutter-release/exposure system turn-on button. 11. Main power switch mode window. 12. Dedicated hot shoe. 13. Exposure-compensation release button. 14. ASA scale. 15. Exposure-compensation.



The most sophisticated camera of the Minolta line, the X-700 is the product of this manufacturer's considerable experience and success with multi-mode auto SLRs. Going beyond its predecessor, the XG-M, the X-700 adds programmed exposure control to aperture-preferred automatic and manual metering capabilities. The X-700 is also the first Minolta SLR with off-the-film (OTF) flash exposure metering, permitting the use of "any-aperture" auto flash in the aperture-preferred mode and extended range auto flash in the programmed mode. With its complete viewfinder LED readout, this is a camera that the company proudly claims as "the center of the Minolta Program System."

That system consists of a comprehensive array of accessories that includes a most amazing data back that not only imprints sequentially but controls the camera's functions, a three-channel infrared remote, a dedicated, hot-shoe-mounted flash which converts to a tiltable, rotating mini-potato-masher, and the usual motors and winders. Clearly, Minolta's intention was to produce an SLR with broad-spectrum appeal, a camera usable by beginners and nonexperts, but having enough sophistication to satisfy the most advanced amateurs and some pros.

The satin-black-finished X-700 body is based on the XG-M. It's about average in size and weight among contemporary SLRs, and its controls are conveniently and conventionally located. As soon as you pick the camera up you become aware of one of its most agreeable features, its built-in "anatomical grip (1)." It's complemented by an angled, contoured thumb rest on the hinged back, which has an adjacent textured surface similar to that on the front grip. Grab the camera with your right hand and arch your index finger over the shutter release (10) and it feels comfortable and secure. Most of the major controls are conveniently arrayed on top and are easy to manipulate while shooting.

As you can see, the X-700 qualifies as a photographic system as well as a very well thought out camera. For all its individual niceties and sophistication, it has few, if any, "window dressing" features. It's all very straightforward, easy to understand and use, and so cleverly automated that it will appeal to non-technical amateurs as well as advanced photographers.

Minolta XK Motor

LENS: 50mm f/1.7 Minolta MD in interchangeable Minolta bayonet mount, stops to f/22, focusing to 18 in. (0.45m).
SHUTTER: Electronically-controlled horizontal titanium focal plane with speeds from 16 to 1/2000 sec. plus B, FP and X sync. (1/100 sec.)

VIEWING: Interchangeable eye-level prism with central split-image rangefinder, outer matte full focusing screen.

OTHER FEATURES: Integral motor drive advances film with aperture-priority auto exposure through 3.5 frames per sec., powered by 10 AA batteries; 3-volt battery-powered silicon photo cell, center-weighted full aperture metering, ASA 12-6400, manual control; four stop auto exposure override control; finder displays shutter speeds with eight LED indicators in two ranges and aperture; multiple exposure provision, hot shoe sync, battery checks, eyepiece blind, motor rewind; accepts the following: other battery packs, 250 exposure film back, remote control, intervalometer.

PRICE: \$2274 with 50mm f/1.7 Minolta, \$2353 with 50mm f/1.4 Minolta, \$2454 with 50mm f/1.2 Minolta.

MANUFACTURER: Minolta Camera Co., Ltd., Osaka, Japan.

IMPORTER: Minolta Corp., Ramsey, NJ 07446

PHYSICAL DIMENSIONS: 5¾ in. wide, 6¾ in. high, 3¼ in. deep.

WEIGHT: 3 lbs. 2¼ oz.

Designed with the professional in mind, Minolta's XK Motor is a rugged, multi-featured system camera incorporating integral motor drive to advance (and rewind) film while maintaining aperture priority auto exposure at speeds from single frame to 3.5 frames per second.

The AE-S finder employs a silicon photo cell for fast meter response to changing light conditions, increased sensitivity, and minimization of the "memory" effect.

Looking through the AE-S finder, you will see the aperture you've set at top center. To the right, a red LED will light opposite the black-on-white vertical shutter speed scale (high range) from 1/30 to 1/2000 sec. For low light metering, push and turn the small lever on the left of the AE-S finder so that the scale changes to settings from 1/15 to 8 sec. To activate the meter, turn a small switch just to the left of the eyepiece, or press in the "Senswitch" which falls under your middle finger as you hold the camera normally by its built-in grip.

Though internally complex, the camera's operation could hardly be more straightforward. Set the film speed on a click-stopped dial atop the prism, set the shutter to "auto," select a shooting aperture and you're ready to go. As you grip the camera, your right hand will almost always come to rest on the rectangular spring-loaded "Senswitch" on the built-in anatomical grip, thereby activating the meter. And by the time you've brought the camera to eye level, the LED indicator to the

right of the finder area will have come to rest opposite an automatic, camera-selected shutter speed. Should you want to change the automatically-selected shutter speed while in "auto exposure" mode, just grasp the lens's aperture ring and turn it until the needle points to the shutter speed you require.

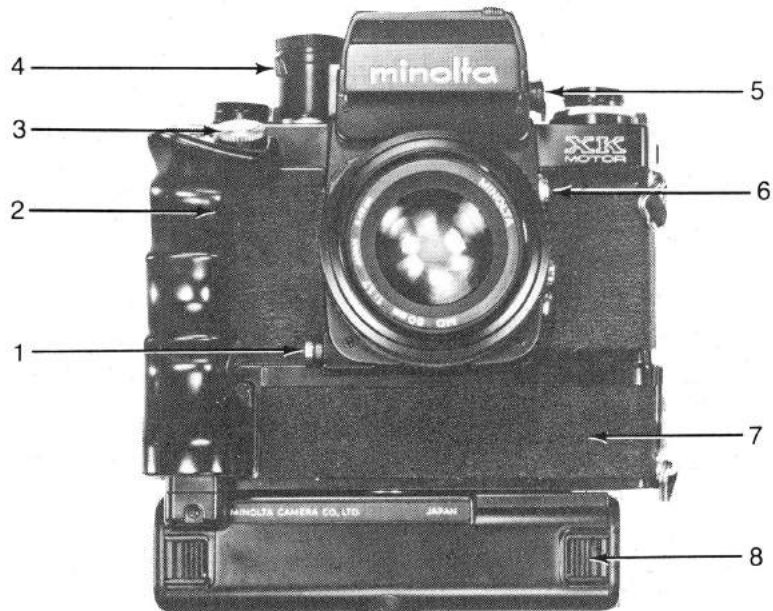
With your hand around the comfortable grip, your index finger falls on the shutter release for motor drive operation. Depress it 1.5mm and the action begins, up to 3.5 frames per second with automatic film advance, auto stop at the end of the roll, and auto rewind with the flick of a switch at the

bottom left of the camera back. To the right of this switch is the frame rate selector, and to its right the multiple exposure button. Film may be advanced manually, if desired, using the wind lever and manual shutter release.

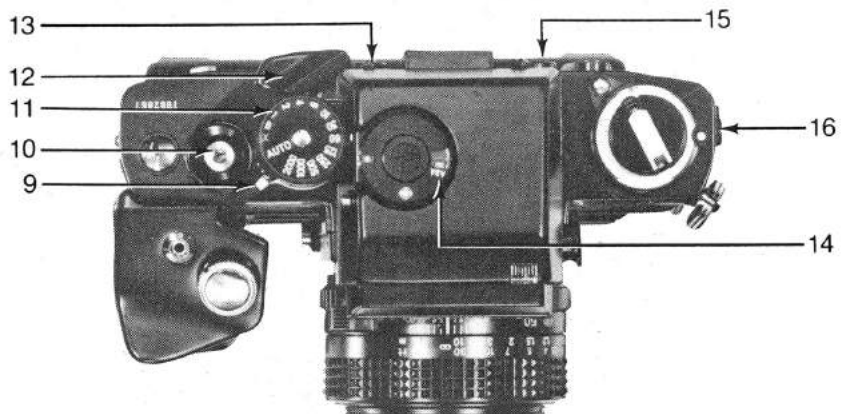
The interchangeable finder shows 98% of the area covered on film. Finders available for the XK Motor include the AE-S, Plain, High-Magnification, and Waist-Level.

Film advance stops automatically when the exposure-control battery is low, and at the end of each roll of film.

As part of a professional system, the XK Motor accepts a wide range of Minolta MD lenses and accessories.



1. Stop-down button. 2. Senswitch. 3. Operating button (motor drive). 4. Exposure-compensation adjustment. 5. Meter display range selector. 6. Lens-release button. 7. Motor drive housing. 8. Motor battery chamber. 9. 2-16 sec. shutter speed lever. 10. Manual shutter release. 11. Shutter-speed dial. 12. Wind lever. 13. Eyepiece blind lever. 14. ASA index dial. 15. Finder power switch. 16. Exposure battery check lever/indicator.



Nikon FE2

LENS: 50mm f/1.4 Nikkor in interchangeable AI-S bayonet mount, apertures to f/16, focusing to 18 in.

SHUTTER: Electronically-controlled Nikon-Copal titanium blade focal plane shutter with speeds from 8 sec. to 1/4000 sec. plus B, X sync at 1/250 sec., mechanical self-timer.

VIEWING: Non-interchangeable eye-level prism with split-image rangefinder, microprism collar, interchangeable full-area focusing screen.

OTHER FEATURES: 3-volt battery powers silicon photo diode circuit, diodes on either side of the eyepiece read center-

weighted area of focusing screen; ASA 12 to 4000; aperture-preferred auto-exposure compensation; under- and overexposure warning signals in finder; exposure memory lock; auto-exposure compensation dial; depth-of-field preview lever; shutter release lock; film box reminder slot; dedicated TTL flash hot shoe; multiple exposure provision; accepts motor winder, data back.

PRICE: \$680.50 with 50mm f/1.4 Nikkor lens; \$605 with 50mm f/1.8 Nikkor lens; \$809 with 55mm f/1.2 Nikkor lens; \$446 body only, \$21 more for black body.

MANUFACTURER: Nippon Kogaku K.K.,

Tokyo, Japan.

IMPORTER: Nikon Inc., Garden City, NY 11533.

PHYSICAL DIMENSIONS: 5⁷/₁₆ in. wide, 3¹/₂ in. high 3⁷/₁₆ in. deep.

WEIGHT: 1 lb. 12³/₁₆ oz.

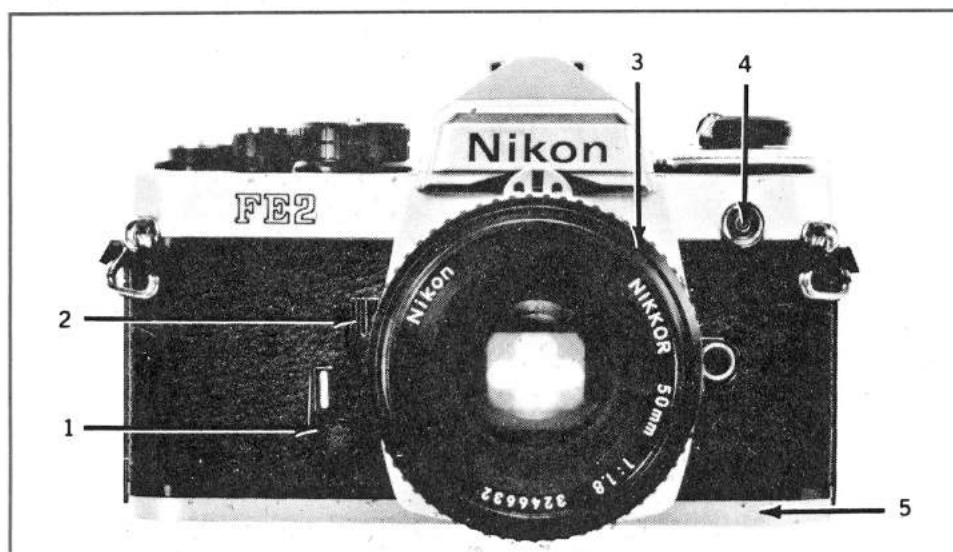
The Nikon FE2 probably has the longest and most direct ancestry of all Nikon cameras. Beginning in 1972 with the Nikkormat EL, the camera provided aperture-preferred auto exposure manual match pointer control with a full linear shutter speed scale. As it wended its way in various models it acquired winders, apertures visible in the finder and interchangeable screens while paring off quite a bit of weight. Many pros who find the LCD readout of the F3 off-putting feel the FE2 is their ideal of an automated camera, just as the FM2 is their choice for a manual, mechanical camera.

Like the latest-model FM2, the FE2 now sports a shutter capable of speeds up to 1/4000 sec. and a top flash sync speed of a very fast 1/250 sec., thanks to a design incorporating titanium blades. But unlike the mechanically controlled FM2 shutter, the FE2's is electronically governed—it's the same design as that of the Nikon FA.

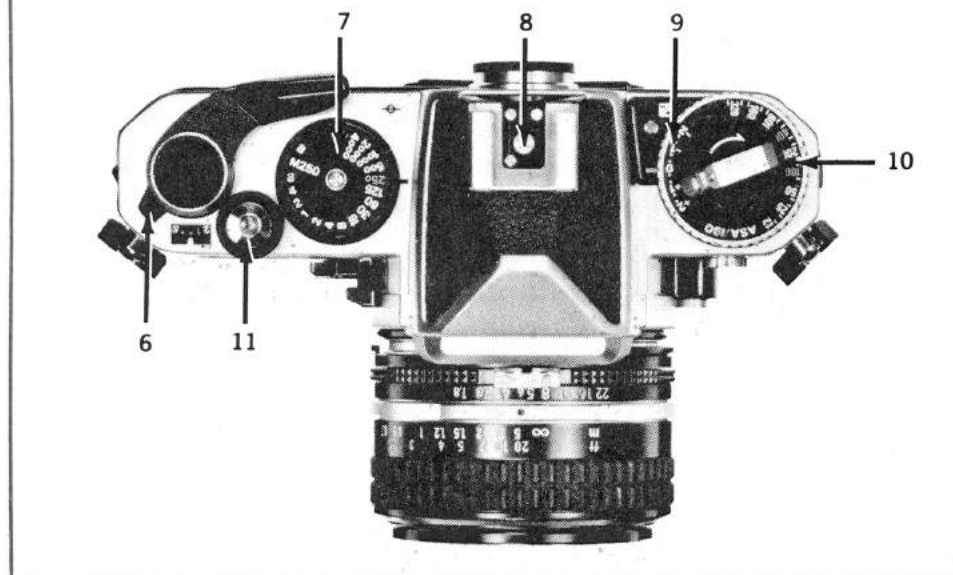
How does the FE2 differ from the previous FE? Besides the new superfast shutter, it has added unique vibration minimizers, TTL auto-flash measuring via a dedicated hot shoe, meter turn-on switch in the shutter release button, brighter focusing screens, high shutter speed film advance to frame 1, redesigned back safety catch, auto-exposure compensation warning in the viewfinder, improved ASA and auto exposure compensation dial plus reinforced rear film box end reminder slot.

We tested the FE2 vs. the FE as far as Nikon's claim of less vibration in the newer camera and found this to be perfectly true particularly at important slow hand-holdable speeds of 1/30 and 1/60 sec. For a complete test on the Nikon FE2 see "Modern Tests," October 1983, page 86.

In our field tests we found the Nikon FE2 lived up to our expectations. We were pleased to have the TTL flash automatically set the shutter speed to the 1/250 sync, yet we were also able to use speeds slower than 1/250 sec. for flash when we wanted to combine flash with existing light. A word about the camera's metering abilities. Nikon is very conservative in listing the FE2's auto exposure limitations, particularly in low light. For instance, it was stated that the camera's low light limit with ASA 400 film was 1/4 sec. at f/1.4. We found it would give us proper exposure way down to 8 sec. The FE2 handled and operated superbly in a manner suitable for an amateur or pro. While it may not have the ruggedness of the Nikon F3 or the multi-modes and sophisticated exposure correction system of the FA, it continues to offer something for even the hard user. Whether professional or amateur photographer, anyone who likes meter needles will find this a fine alternative.



1. Combined self-timer/exposure memory hold. 2. Depth of field preview lever. 3. AI or AI-S Nikkor or Nikon E lenses. 4. PC flash terminal. 5. Accepts 3.2 fps motor drive. 6. Multiple exposure lever. 7. Shutter speed dial with locking button. 8. Dedicated hot shoe for TTL auto flash. 9. Auto-exposure compensation dial. 10. ASA film index dial. 11. Shutter release/meter switch.



Nikon FA

LENS: 50mm f/1.4 Nikkor AI-S in interchangeable bayonet mount, apertures to f/16, focus to 18 in.

SHUTTER: Electronically-controlled Nikon-Copal titanium blade focal-plane with speeds from 1 to 1/4000 sec. plus mechanical 1/250 sec. and B, X sync. at 1/250 sec., mechanical self-timer.

VIEWING: Non-interchangeable eye-level prism with split-image rangefinder, microprism collar, full-area focusing, interchangeable screen.

OTHER FEATURES: 3-volt battery-powered silicon photo-diode circuit; segmented diodes on either side of eyepiece read either multi-pattern to correct exposure or center-weighted pattern of finder screen; ASA 12-3200; separate silicon photo-diode in mirror chamber measures light from film during exposure for TTL flash auto exposure; dual program, shutter speed or aperture-preferred auto-exposure modes plus metered manual; LCD finder display, aperture direct read-out, shutter speed window, low, high, incorrect setting, auto-exposure compensation, flash ready and O.K. finder indications; multiple exposure TTL flash provision via dedicated hot shoe; removable hand grip; locking release and meter turn on button; depth-of-field preview lever; built-in eyepiece blind; film box reminder slot; fast speed setting until frame 1; accepts motor drives, memo back.

PRICE: \$880.50 with 50mm f/1.4 AI-S Nikkor; \$805 with 50mm f/1.8 AI-S Nikkor, \$1,009 with 50mm f/1.2 AI-S Nikkor, \$646; body only, \$23 more for black finish.

MANUFACTURER: Nippon Kogaku KK, Toyko, Japan.

IMPORTER: Nikon Inc., Garden City, NY 11533.

PHYSICAL DIMENSIONS: 5 $\frac{1}{2}$ in. wide, 3 $\frac{5}{8}$ in. high, 3 $\frac{3}{4}$ in. deep.

WEIGHT: 1 lb. 14 $\frac{1}{2}$ oz.

With the FA, Nikon introduced the acronym AMP into photographic usage. Incorporating a highly comprehensive choice of exposure modes and Nikon's 1/4000 sec. high speed shutter with 1/250 sec. sync to minimize ghost images, the FA is the first SLR with a multi-patterned metering system (AMP) to analyze various areas of the picture and correct possible exposure errors automatically.

Alternatively, standard center-weighted metering is available in all modes. Only Nikon E and Nikkor AI-S lenses, distinguishable by colored minimum aperture markings, provide all mode and informational operations on the camera.

Two auto-exposure program modes (in which the camera selects both shutter speed and apertures) are available; they change automatically depending on lens focal length. Apertures of AI-S and E lenses below 135mm close and shutter speeds increase almost equally with light, while longer lenses reach fast speeds more swiftly.

In shutter-speed-preferred auto exposure (you select shutter speed and the camera

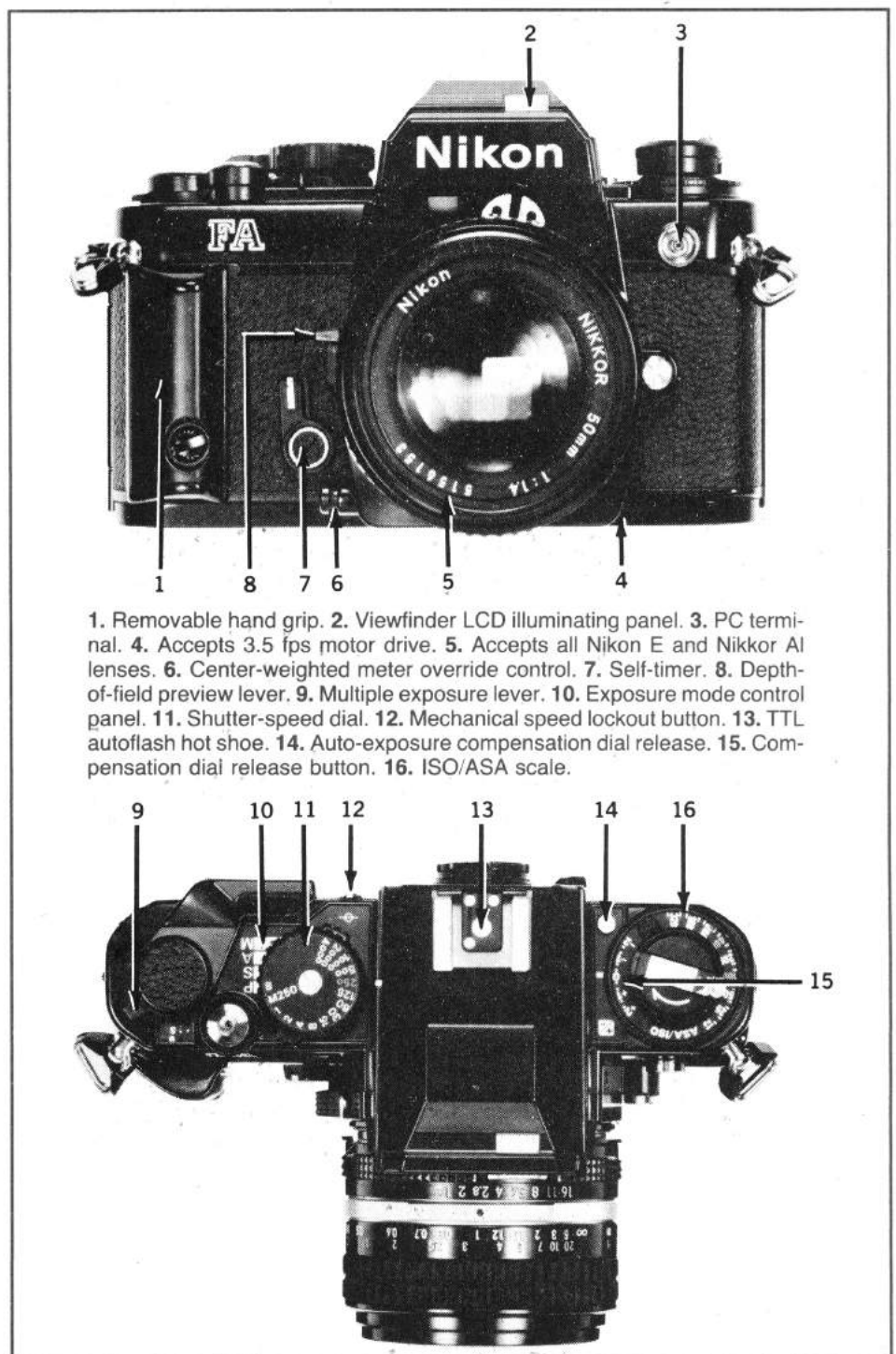
sets proper aperture), the meter circuit will automatically override the set shutter speed and change it if proper exposure cannot be obtained with user's setting.

Interchangeable screens provide about one stop more brightness than FE or FM2 screens. An additional silicon cell in the mirror chamber measures flash light from the film surface during the exposure to control standard Nikon dedicated flash automation in auto-exposure and manual modes. The FA accepts the same MD-11 and 12 motor drives as the FE, FE-2 and FM but also has its own MD-15 faster acting drive.

Two limitations should be noted. In pro-

gram mode there is no indication of the aperture used. Secondly, the finder LCD cannot be lit for viewing in poor light.

How well does the AMP system work? We found that it is needed in about 10% of picture taking situations—generally those in which backlight plays a part. In most of these, it provided increased exposure for a better picture. In a very few instances it did not. The amount of additional exposure, however, might not be as well chosen as a careful manual exposure would have been. Conclusion: it's well worthwhile for those who depend on auto exposure constantly, with little thought for exposure compensation.



1. Removable hand grip. 2. Viewfinder LCD illuminating panel. 3. PC terminal. 4. Accepts 3.5 fps motor drive. 5. Accepts all Nikon E and Nikkor AI lenses. 6. Center-weighted meter override control. 7. Self-timer. 8. Depth-of-field preview lever. 9. Multiple exposure lever. 10. Exposure mode control panel. 11. Shutter-speed dial. 12. Mechanical speed lockout button. 13. TTL autoflash hot shoe. 14. Auto-exposure compensation dial release. 15. Compensation dial release button. 16. ISO/ASA scale.

Nikon F3AF

LENS: 50mm f/1.4 Nikkor in interchangeable bayonet mount, apertures to f/22, focus to 18 in.

SHUTTER: Electronically-controlled quilted titanium metal foil focal plane with speeds from 8 to 1/2000 sec. plus B, X sync at 1/80 sec., electronic self-timer.

VIEWING: Interchangeable, eye-level prism with central auto-focusing circle, outer matte full focusing interchangeable screen.

OTHER FEATURES: Power-driven auto focus or focus indication with AF-Nikkor lenses, focus indication in finder with all other Nikon mount lenses. 3-volt battery

powers silicon photo diode circuit. Diode in mirror chamber measures center-weighted area of picture through lens for continuous light, and reflected from film for auto-exposure TTL electronic flash; aperture-preferred auto exposure; ASA 12 to 6400; LCD viewfinder panel shows shutter speed set, indicates manual operation, over- and underexposure; aperture direct readout window; LED indicates flash ready, improper flash setting and flash underexposure; metered manual override; auto-exposure compensation; memory hold button; multiple exposure provision, depth-of-field preview, mirror

lockup; provision for special dedicated TTL flash units; accepts accessory motor drive, data and bulk film backs; viewfinder illuminator; built-in eyepiece blind; filmbox reminder slot; setting of fast shutter speed for first frame positioning.

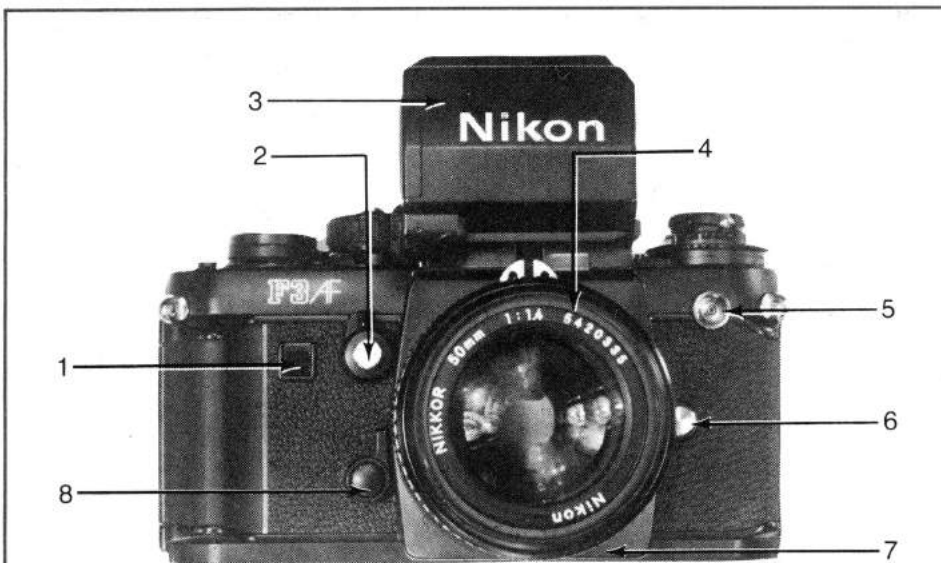
PRICE: \$1746, with 50mm f/1.4 Nikkor; \$1670.50 with 50mm f/1.8 Nikkor; \$1511.50, body only.

MANUFACTURER: Nippon Kogaku, K.K., Tokyo, Japan.

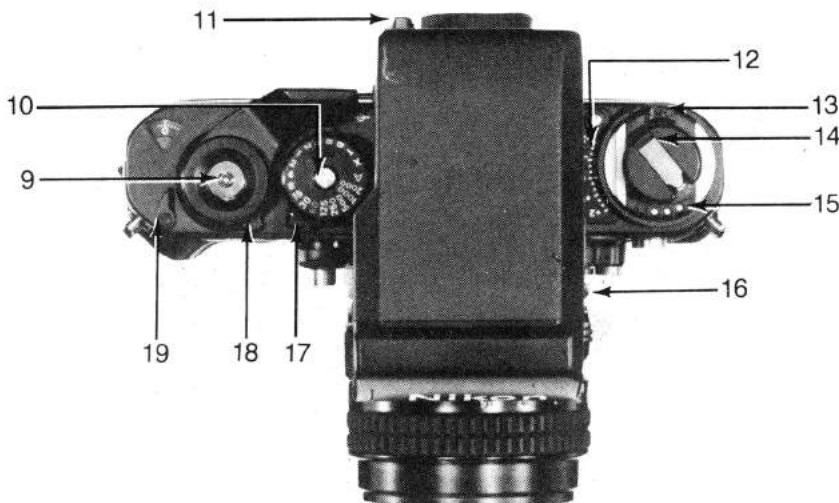
IMPORTER: Nikon Inc., Garden City, N.Y. 11533.

PHYSICAL DIMENSIONS: 5¾ in. wide, 4⅞ in. high, 4 in. deep.

WEIGHT: 2 lb. 11 oz.



1. Electronic self-timer warning LED. 2. Depth-of-field preview, mirror and lockup control. 3. AF-Finder DX-1. 4. Accepts AF-Nikkor and all Nikkor AI lenses. 5. Threaded PC-sync terminal. 6. Lens release button. 7. Accepts motor drive. 8. Exposure memory lock button/mechanical shutter release lever. 9. Electromagnetic shutter release. 10. Film-speed dial with auto-exposure lock. 11. Viewfinder-eyepiece blind lever. 12. Auto-exposure-compensation dial. 13. ASA film index setting window. 14. Accessory shoe accepts dedicated TTL flash unit. 15. Dedicated flash unit electrical contacts. 16. Prism finder release levers. 17. Self-timer actuating lever. 18. Meter actuating/shutter lock lever. 19. Multiple-exposure lever.



If proof be needed that camera makers constantly seek to better their major units look no further than the basic F3. Within the last year we discovered two unheralded improvements: a new mirror mechanism and the addition of a moisture proofing barrier against humidity in the LCD finder display.

While the standard Nikon F3 high-eyepoint camera is the most popular F3, the most advanced is certainly the Nikon F3 AF. Nikon conceived of its autofocus system as an aid to professionals. The F3 AF has all the features of the F3 but additionally features a slightly more bulky interchangeable prism with built-in Nikon-designed TTL image displacement detecting system powered by two AAA cells in the prism housing. When an AF lens is mounted (two are available at present, a 200mm f/3.5 AF-Nikkor and 80mm f/2.8 AF-Nikkor) and the camera's central circular focusing frame is aimed at the subject, a micro motor in each lens will drive the focusing system into sharp focus. In the finder, at the lower center edge, two red arrows pointing towards each other can be seen when the camera is in focus. When out of focus only one arrow is visible. If there is insufficient contrast or light for proper autofocus or focus indication, a red X appears.

While Nikon has not yet introduced further autofocus lenses for the F3AF, there is a new TC-16 AF Teleconverter which not only increases the focal length of the lens to which it is attached by a factor of 1.6X but also converts 15 Nikon and Nikkor lenses of f/2 or greater maximum aperture into autofocus lenses for the F3AF.

The F3AF will also function as a focus-confirmation SLR. With all non-AF mount Nikkors you focus manually on the matte surface of the screen but you use the red arrows as a guide to proper focus with your lens. Preliminary tests reveal the autofocus system worked to professional standards with lens having apertures of f/3.5 or larger in light levels greater than EV 4 at ASA 100.

The AF finder and its focusing screen can be removed and replaced with regular F3 screens and interchangeable finders. The F3 camera itself provides aperture-preferred auto exposure, manual override with an LCD panel in the finder indicating speed set and all warning signals. TTL auto flash is available with Nikon's flash units.

Olympus OM-4

LENS: 50mm f/1.4 Zuiko in interchangeable bayonet mount, apertures to f/16, focus to 18 in.

SHUTTER: Electronically-controlled cloth focal plane with speeds from 120 sec. to 1/2000 sec. (manual speeds from 1 sec.) plus B, 1/60 sec. X-sync., electronic self-timer with beep and LED.

VIEWING: Fixed eye-level prism with central split-image rangefinder, microprism collar, full-area interchangeable focusing screen.

OTHER FEATURES: 3-volt battery-powered silicon blue cell metering circuit. Dual concentric silicon cells in mirror chamber measure either center-weighted area or 3° central area spot from light transmitted through mirror, from the first shutter curtain or film during exposure; ASA 12 to 1600, TTL auto flash; aperture-preferred auto exposure with metered manual control; LCD linear shutter speed scale in finder shows average exposure, up to 8 spot readings, calculated average exposure for spots, exposure memory hold, highlight and shadow favoring exposure shifts, flash ready, O.K., over/under auto-exposure compensation finder warnings, full metered manual exposure control; built-in variable diopter eyepiece correction; film box end holder; accepts data back, auto winder, motor, bulk film back.

PRICE: \$855 with 50mm f/1.4 Zuiko; \$785 with 50mm f/1.8 Zuiko; \$1,020 with 50mm f/1.2 Zuiko, \$685 body only.

MANUFACTURER: Olympus Optical Co., Ltd., Tokyo, Japan.

IMPORTER: Olympus Corp., Woodbury, N.Y. 11797.

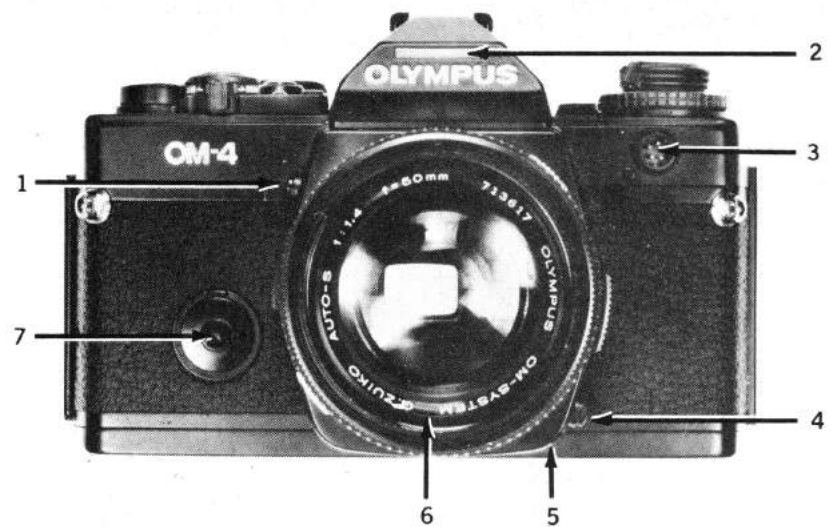
PHYSICAL DIMENSIONS: 5⁷/₁₆ in. wide, 3⁷/₁₆ in. high, 3³/₄ in. deep.

WEIGHT: 1 lb. 9¹/₂ oz.

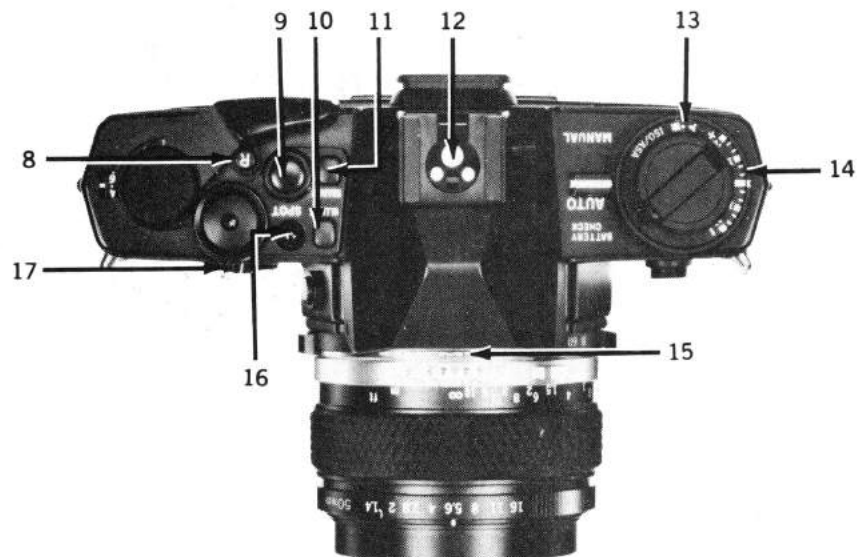
cator appears which will measure any second spot area you may wish to read. Push the spot button again and the camera reads the second spot whose diamond also becomes stationary. The camera computer calculates the average of the two spots and indicates it by moving the end of the dotted line to that position. You can make up to eight spot readings for any scene and the camera will average them for the proper exposure. Following exposure, the reading will be wiped out unless you push the memory lever to hold it for additional exposures. You can also clear the reading whenever you wish if you want to start over again. Should you wish to favor

either your highlights or shadow areas in auto exposure, press the appropriate button and the entire reading or the appropriate diamond shifts in the needed direction. Spot or center-weighted readings can be achieved in manual control when a center-the-line-between-the-arrows LCD panel appears.

The OM-4 provides variable diopter correction so eyepiece correction lenses won't be needed by most users and it has a permanent hot shoe as well as a push-on off camera flash terminal, both dedicated for TTL flash measurements. For those professionals desiring a manual, mechanical version of the OM-4, there's the new OM-3.



1. Viewfinder scale light button. 2. Finder scale illuminating panel. 3. TTL off-camera flash connecting terminal. 4. PC terminal. 5. Accepts 5 fps motor drive with auto rewind. 6. Uses standard mount Olympus lenses. 7. Electronic self-timer with beep and LED. 8. Rewind button. 9. Spot meter reading button. 10. Highlight preference button. 11. Shadow preference button. 12. Dedicated TTL flash hot shoe. 13. ASA index window. 14. Auto-exposure compensation dial. 15. Shutter-speed dial. 16. Memory hold warning LED. 17. Memory hold-clear control lever.



Soon after it appeared, we began to call the OM-4, "the thinking man's automatic" SLR. In unskilled hands, it's a nearly fool-proof OM-2 type aperture-preferred, center-weighted automatic; in skilled hands, this auto-setting, spot-reading, micro-computerized wonder is capable of dealing with the most difficult lighting situations.

Its electronically-controlled cloth focal plane shutter covers the range from 1/2000 sec. to two minute-long exposures (but only reads out to 1 sec.). Pushbutton triggered spot readings appear on the scale and are averaged and biased automatically as desired. The LCD linear shutter speed scale in the viewfinder shows center-weighted exposure or up to eight spot readings with a calculated average of these readings. The longer you use the camera, the more you appreciate the nuances of its design.

As you point the camera towards an object, in the picture area and press the spot button, the shutter-speed indicating line will move to the appropriate speed for the aperture you set and a diamond indicator will appear above the line at that point. The line ceases to move but a second diamond indi-

Olympus OM-3

LENS: 50mm f/1.8, f/1.4 or f/1.2 Zuiko in interchangeable bayonet mount, stops to f/16, focus to 18 in.

SHUTTER: Horizontal, rubberized cloth focal-plane with mechanically controlled speeds of 1-1/2000 sec. plus B, X sync at 1/60 sec. or slower, dedicated hot shoe, five-pin connector for T-series flash units, PC socket.

VIEWING: Non-interchangeable eye-level prism with central split-image rangefinder, microprism collar, matte outer area interchangeable screen.

OTHER FEATURES: 3-volt-battery powered, silicon photodiode metering circuit

with dual concentric cell in mirror chamber measures either center-weighted or 2% spot area from light transmitted through semi-silvered area of mirror for films ISO/ASA 6-3,200; LCD, match-index, linear display coupled to aperture and shutter-speed controls provides metered manual control for center-weighted, single spot, and multi-spot readings, plus highlight and shadow-favoring exposure shifts; ± 2 stop exposure compensation control settable in $\frac{1}{3}$ stop increments; LCD readouts for set shutter speed, exposure modes visible in finder; three-level battery-check LED; beeper for battery

check and spot readings; meter mode clear control; eyepiece dioptic correction from +1 to -3 diopters; 2 min. limiter for finder display, 10 sec. limiter for finder display illuminator; removable back, depth-of-field preview; provision for motor drives and winders.

PRICE: \$785 with 50mm f/1.8, \$855 with 50mm f/1.4, \$1020 with 50mm f/1.2; \$685, black body only.

MANUFACTURER: Olympus Optical Co., Ltd., Tokyo, Japan.

IMPORTER: Olympus Corp., Consumer Products Group, Woodbury, NY 11797.

PHYSICAL DIMENSIONS: 5 $\frac{5}{16}$ in. wide, 3 $\frac{1}{4}$ in. high, 3 $\frac{1}{8}$ in. deep (with f/1.8).

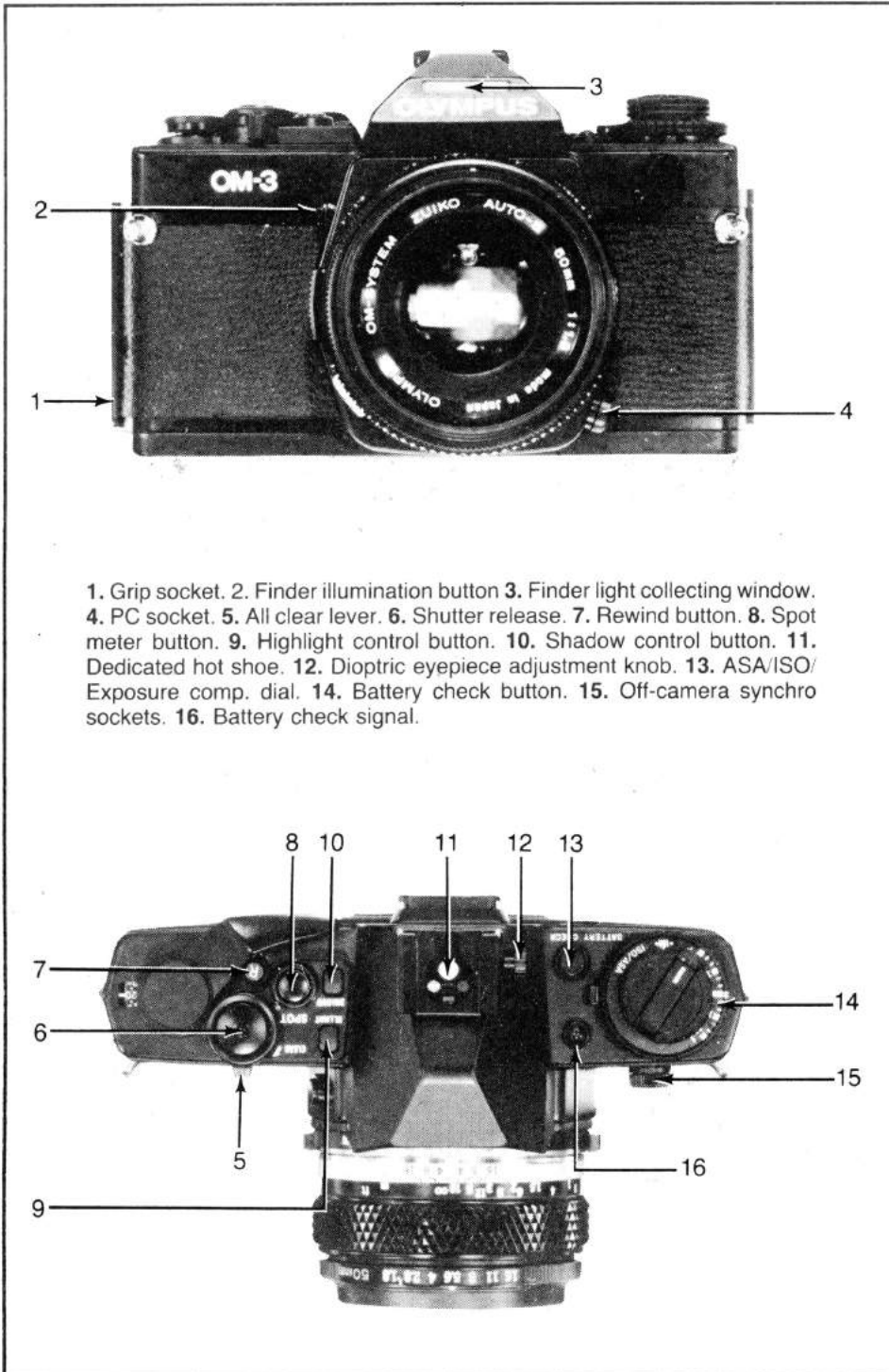
WEIGHT: 1 lb. 8 $\frac{13}{16}$ oz. with f/1.8.

The new Olympus OM-3 offers a unique combination of traditional and state-of-the-art features designed to appeal to pros and sophisticated amateurs. On the one hand, it's the only camera in its rather exclusive price class providing only manual, "match-needle" metering, plus a full range of manual, mechanical shutter speeds. On the other hand, its below-screen, LCD finder readouts include a horizontal, $\frac{1}{3}$ -stop-segmented metering bar, which extends and lengthens in response to light level, shutter speed, and aperture changes, a metering index with directional arrows and plus and minus signs, set-shutter-speed digits, and mode indications for the metering system. The latter include the word "Spot", which appears when you push the spot metering button to make single, or integrated multiple spot readings corresponding to the central 2% of the viewing area, "Hilite", which appears when you press the Highlight control button favoring accurate rendition of highlight areas in the subject, and "Shadow" which indicates that you've pressed the Shadow button to obtain a reading providing full shadow detail. To cancel any of the aforementioned metering modes, you push the all-clear lever on the shutter-release-button collar.

As befits a camera billed as a "pro's SLR" the OM-3 incorporates many of the detail refinements found in the top-of-the-line OM-4. These include a built-in finder info illuminator with automatic 10 sec. turn-off, cancelable beepers for mode functions, built-in dioptic correction for the finder eyepiece, and a special synchro socket for off-camera use of T-series Olympus flash units.

Although the OM-3's die-cast metal body is nearly identical in size to its mechanical predecessor, the OM-1, its body castings, wind mechanism, and other mechanical components have reportedly been strengthened and upgraded, and its body panels now have moisture-resistant seals. As expected, it's compatible with the Olympus Motor Drive 2, and all the latest data and bulk film backs.

Can an expensive, manual, mechanical SLR with a few notable electronic refinements succeed in a field dominated by sophisticated multi-mode automatics? That remains to be seen, but the response by advanced photogs has been enthusiastic.



1. Grip socket. 2. Finder illumination button. 3. Finder light collecting window. 4. PC socket. 5. All clear lever. 6. Shutter release. 7. Rewind button. 8. Spot meter button. 9. Highlight control button. 10. Shadow control button. 11. Dedicated hot shoe. 12. Dioptic eyepiece adjustment knob. 13. ASA/ISO/Exposure comp. dial. 14. Battery check button. 15. Off-camera synchro sockets. 16. Battery check signal.

Pentax LX

LENS: 50mm f/1.4 Pentax-A in interchangeable Pentax KA bayonet, apertures to f/22, focus to 18 in.

SHUTTER: Electro-mechanical titanium focal-plane with auto-exposure speeds from 125 sec. to 1/2000 sec. controlled electronically; manual speeds controlled mechanically from 1/75 sec. to 1/2000 sec. plus B, FP, X sync. at 1/75 sec. mechanical self-timer.

VIEWING: Interchangeable eye-level prism with central split-image rangefinder, micro-prism collar, full-focusing interchangeable screen.

OTHER FEATURES: 3-volt battery powers silicon photo-diode metering circuit; single cell in mirror chamber reads center-weighted exposure from first shutter curtain and/or film for both continuous light and TTL electronic flash measurement; ASA 6-3200, aperture-preferred auto exposure, auto-exposure compensation ± 2 f/stops; built-in eyepiece diopter correction; color-coded LED viewfinder exposure control with auto-exposure compensation warning, overexposure, flash ready and O.K. warning signals; shutter speeds and aperture visible; shutter release and shutter dial locks; film box reminder slot; mirror lockup; depth-of-field preview; provision for multiple exposures; provision for accessory motor drive, winder, data backs, bulk film magazines, hand grips, interchangeable strap fastener.

PRICE: \$918 with 50mm f/1.4; \$873 with 50mm f/1.7; \$1053 with 50mm f/1.2 Pentax-A lens.

MANUFACTURER: Asahi Optical Co., Tokyo, Japan.

IMPORTER: Pentax Corporation, Englewood, CO 80012.

PHYSICAL DIMENSIONS: 5 $\frac{7}{8}$ in. wide, 3 $\frac{3}{16}$ in. high, 3 $\frac{1}{16}$ in. deep.

WEIGHT: 1 lb. 12 $\frac{3}{16}$ oz.

While Pentax has been busy introducing more automated, lower-in-the-line cameras for amateurs, it has done little recently to promote this pro camera. Yet the LX remains a top contender in its field.

The LX's auto-exposure range is huge, from 125 sec. to 1/2000 sec., and it is the only electronically-controlled SLR to offer a near full range of mechanical speeds from X (1/75 sec.) to 1/2000 that operate even if the batteries fail or are absent. Another welcome feature is through-lens auto flash metering using the AF-200T, AF-280T and AF400T Pentax flash units. The LX, while not strictly waterproof or water-resistant, has grommets and special gasketing to help it resist dirt and water entry.

The standard FA-1 viewfinder is exceptionally bright, as are the color-coded, yellow, red and green LEDs which indicate danger signals, hand-holdable speeds and speeds that require a tripod or other support. Thanks to a highly visible blue shutter-speed scale pointer, match-needle and diode manual operation is easily accomplished.

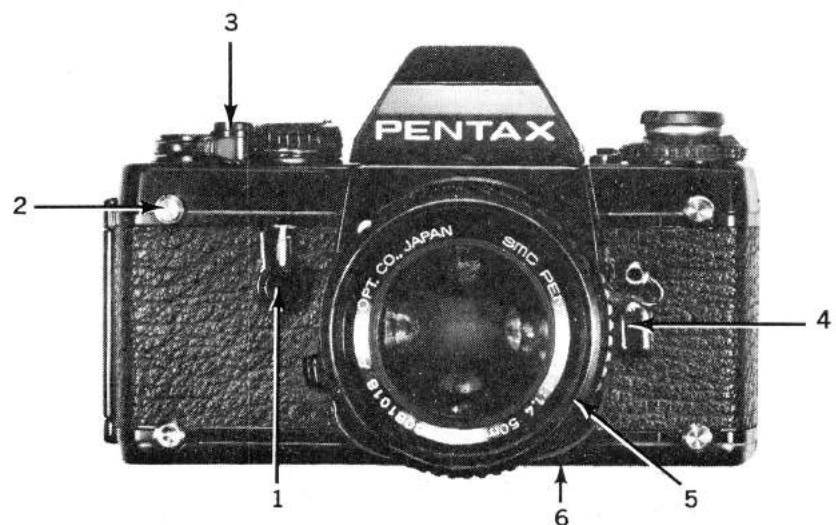
The LX provides through-the-lens, off-the-film auto flash control via a hot shoe and body terminal. Few SLRs offering both prism and screen change can provide as much finder information as the Pentax LX. Most unusual is the inclusion of a fully dedicated sync hot shoe atop the interchangeable prism. A comprehensive series of sports, high magnification and variable-angle finders is available.

Controls on the LX are extremely well placed, and the camera also uses the white needle multi-slotted takeup spool of the ME and MX models, providing exceptionally easy loading. The LX was the first camera available in the U.S. to have built-in variable

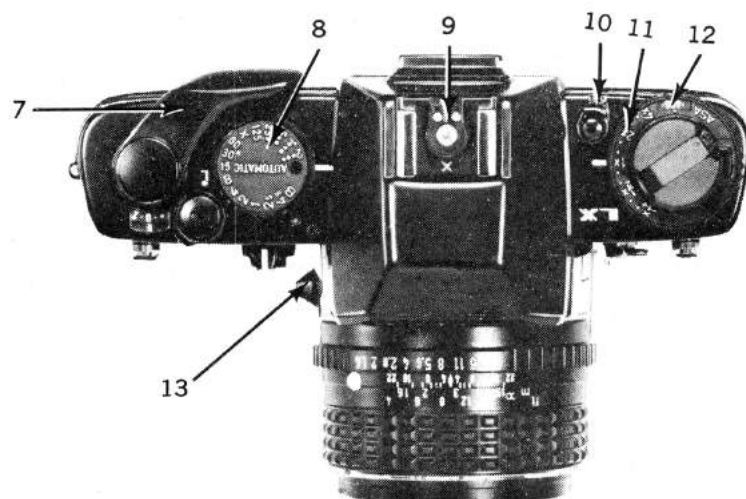
eyepiece diopter correction, a splendid addition for eyeglass wearers.

The winder LX with four AA cells handles speeds up to 2 fps at its C or continuous setting and is the only winder at this writing with automatic motorized film rewind (36 exposures in less than 8 sec.). The Motor Drive LX also allows motorized rewind but operates up to 5 fps with AA batteries or nicad pack.

Recently Pentax began delivering LXs with the new KA mount lenses. While these offer no more features to LX users than the K lenses, they do allow owners to mount them on the Super Program and Program Plus models for full, all program use.



1. Combined self-timer/preview/mirror lockup lever.
2. Carrying strap/hand grip lug.
3. Shutter release with lock.
4. FP, X and dedicated autoflash terminals.
5. Pentax KA bayonet-mount lens.
6. Provision for accessory motor or winder with rewind.



7. Film and shutter wind lever.
8. Shutter-speed dial with auto exposure lock button.
9. Hot sync shoe accepts dedicated flash unit.
10. Prism finder release lever.
11. Auto-exposure compensation dial.
12. ASA film index window.
13. Lens lock release.

Pentax Super Program

LENS: 50mm f/1.4 SMC Pentax-A in interchangeable Pentax KA bayonet mount, apertures to f/22, focus to 18 in.

SHUTTER: Electronically-controlled Seiko MFC-E3 metal-blade focal plane shutter with speeds from 15 to 1/2000 sec. plus B, 1/125 sec. X sync, electronic self-timer with beeper.

VIEWING: Non-interchangeable eye-level prism; standard screen has central split-image rangefinder, microprism collar, full-area focusing.

OTHER FEATURES: 3-volt battery power gallium photo-diode metering circuit, two diodes on either side of eyepiece read

center-weighted area of focusing screen; ASA 6-3200; separate silicon photo-diode in mirror chamber measures light from film for TTL auto flash; program exposure, shutter speed preferred, aperture-preferred and manual modes with full metering, auto-exposure compensation; two LCD panels in finder indicate shutter speed, aperture, manual readings, warning signals, flash ready and O.K.; built-in low light LCD illuminator, shutter speed LCD panel atop camera; film wind warning signals; electromagnetic shutter release with lock; depth of field preview lever; battery check warning; film box

memo holder; interchangeable front and integral rear finger holds; dedicated hot shoe; accepts motor winder, data back, wireless remote.

PRICE: \$521 with 50mm f/1.4 SMC Pentax-A; \$476 with 50mm f/1.7 SMC Pentax-A; \$376, body only.

MANUFACTURER: Asahi Optical Co., Tokyo, Japan.

IMPORTER: Pentax Corp., Englewood, CO. 80012

PHYSICAL DIMENSIONS: 5 in. wide, 3 in. high, 3½ in. deep.

WEIGHT: 1lb. 9¾ oz.

While other cameras have now joined the Super Program in providing multi-exposure modes, this camera still supplies far more information in more places on the camera than does any other 35mm SLR.

The Pentax Super Program offers program exposure (from 1 sec., at full aperture to 1/2000 at f/22), in which the camera selects both shutter speed and aperture, shutter speed-preferred (allowing the camera to set the aperture when you select the shutter speed) and aperture-preferred (where you set the lens opening and the camera sets the shutter speed). Moreover, thanks to a silicon cell on the wall of the mirror chamber pointing towards the film surface, you have through-lens auto flash, which provides auto exposure for all apertures in the aperture-preferred or manual mode using one of the four available Pentax flash units.

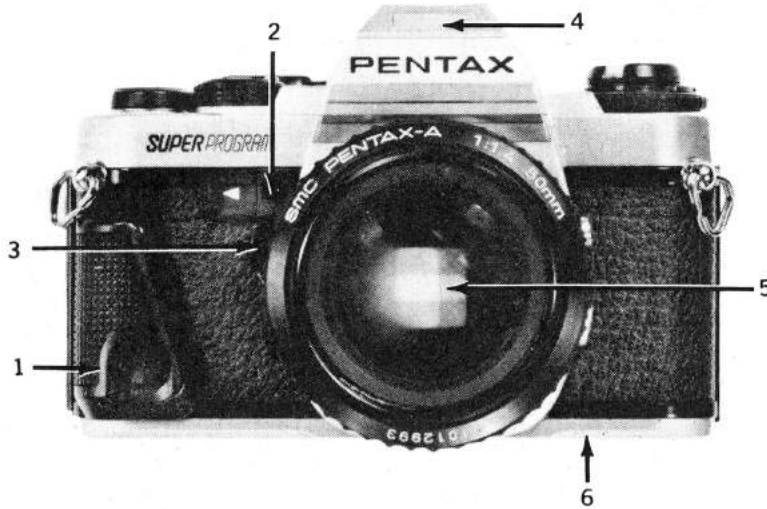
The two LCD panels within the viewfinder at the bottom of the picture area show shutter speeds and apertures, respectively. In program mode, a P appears before the speed and the aperture is shown additionally. In shutter-speed preference, both speed and apertures can be seen, but in aperture-preferred auto exposure, only the shutter speed appears (although you can read off the aperture from the lens itself). The panels indicate auto exposure, compensation, flash ready and O.K., manual exposure control and battery change warning. The finder panels can be illuminated by a small bulb. The LCD panel atop the camera body shows the shutter speed set in all modes, has a black bar shutter wind indicator, and indicates low battery power, under and over exposure and incorrect exposure settings.

Program and shutter-speed preferred modes are only available with the new Pentax-KA mount lenses. With other K mount lenses you have aperture preference and manual mode only, although you do get TTL automatic flash.

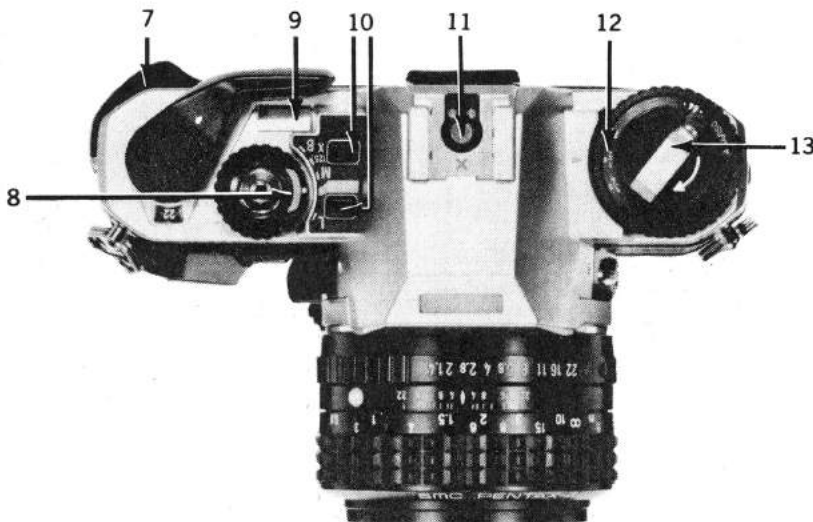
The Super Program retains the two-button manual shutter-speed setting system of the ME Super but the LCD display makes it very easy to use.

Kudos go to the easy-to-load multi-needle takeup spool, visible and audible self-timer, and overall operational convenience.

For Pentax aficionados seeking a less featured camera (at a correspondingly slightly lower price) the Pentax Super Program now has a kid brother, the Program Plus.



1. Hand grip. 2. Self-timer. 3. Preview lever. 4. Illuminating window. 5. New Pentax KA mount lens. 6. Accepts 3.5 fps motor drive. 7. Rear hand-grip. 8. Shutter auto-lock button. 9. LCD shutter-speed & warning panel. 10. Manual shutter-speed select buttons. 11. Dedicated hot shoe for TTL flash. 12. Exposure compensation dial. 13. Film speed dial.



Ricoh XR-P

LENS: 50mm f/1.7 Rikenon P in R-K (modified K) mount, stops to f/16 (f/22 in program), with focus to 23 in.

SHUTTER: Copal CMS-EM metal blade with manual speeds from 4 sec. to $\frac{1}{2000}$ sec. plus B, auto from 16 sec., timing by ceramic element, $\frac{1}{425}$ sec. flash sync., electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with central diagonal split-image rangefinder, microprism collar; full-area focusing; mode, exposure lock and exposure compensation indicators; set and camera selected aperture, shutter speed; overexposure, underexposure, low battery warnings, flash ready and OK. Low light illuminator. Screens interchangeable at service center.

OTHER FEATURES: Action, depth and normal programs; shutter bias AE (see text); aperture priority AE; match needle manual; TTL flash; 3 special TV modes; SPD cell in finder for ambient light measurement; 2nd SPD cell in mirror chamber reads off film for flash; compensation ± 2 stops in $\frac{1}{3}$ stop increments; exposure lock, double and multiple exposure control; program charts on back; film box end reminder slot; auxiliary left hand shutter release; built-in intervalometer for 2, 15, or 60 sec.; audible tone with turn-off switch; PC contact, provision for auto winder, motor drive, and data back.

PRICE: Body: \$499 with 50mm f/1.7.

MANUFACTURER: Ricoh Company, Ltd., Tokyo, Japan

IMPORTER: Ricoh Corporation, West Caldwell, NJ 07006.

PHYSICAL DIMENSIONS: $5\frac{7}{8}$ in. wide, $3\frac{7}{16}$ in. high, $3\frac{3}{8}$ in. deep.

WEIGHT: 1 lb. $7\frac{9}{16}$ oz.

It's difficult to make a camera simple enough for a novice to use, yet sophisticated enough to satisfy an advanced amateur, and even professional photographer.

Ricoh's first program camera may just do this. The XR-P lets you choose between three exposure programs (in which the camera selects both the shutter-speed and aperture). Printed in the center of the film-box end holder are three color coded graphs of the exposure programs, to help you decide which program to use. If you're shooting action, turn the program selector to the blue square labeled "PA" for "Program-Action". The camera will set the shutter speed and f/stop, choosing faster shutter speeds with wider apertures compared to the other programs. If you want to maintain depth of field, turn the selector to the red square "PD" for "Program-Depth". Now the camera will set exposure to minimize aperture.

Just look in the viewfinder to see what settings the XR-P will use. An LCD needle will point to the shutter speed set, while LCD numerals will light to indicate the f/stop.

For aperture-preferred automation, set the desired aperture, turn the shutter-speed dial to "A", and the camera will set the shutter-speed. Orange speeds in the finder warn of

speeds too slow for hand-holding.

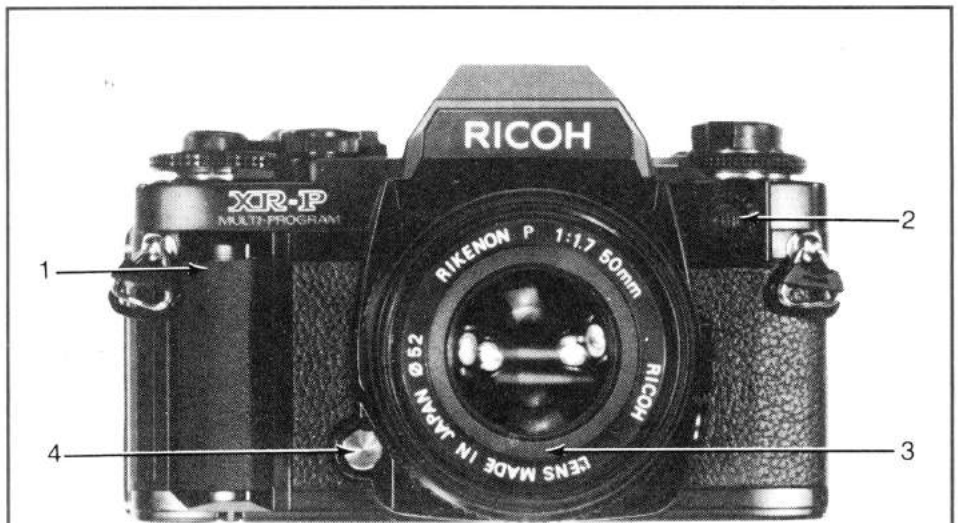
With aperture set to "P", set the speed, for a new type of auto-exposure mode, which Ricoh has named "Shutter Bias AE". Set the slowest shutter speed you want; the camera's computer checks the program (whichever one the program selector is set to) to see if it would set a faster shutter-speed. If a faster speed is in order, the camera sets it. If the maximum aperture isn't wide enough, the camera will set a slower speed, which will flash in the finder to warn you.

For more control, you can use exposure compensation, or just aim the camera at the most important part of the scene and press

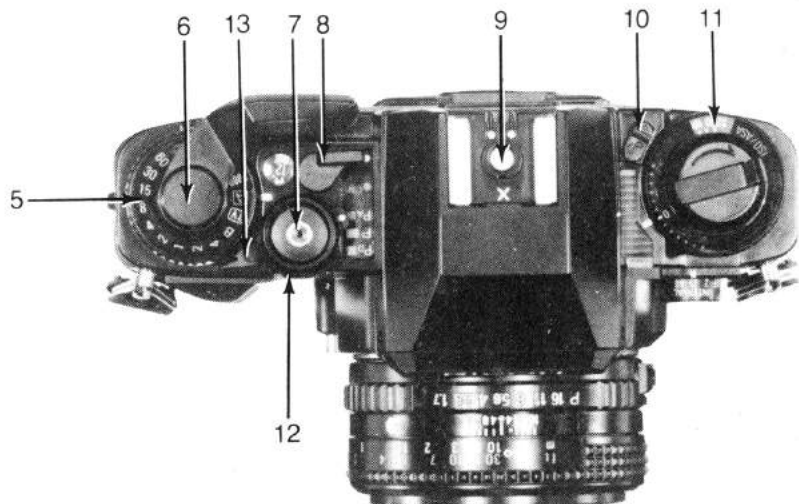
the AE lock button.

When you set both the aperture and shutter-speed, a flashing bar in the finder displays the shutter speed you've set. A solid bar shows you the proper setting. Change either shutter speed or aperture until these coincide (the flashing stops), and you've set the right exposure. Bracketing is easy.

The self-timer setting ring is unique. Turn the ring to "10" and it's a conventional, cancelable, 10 sec. electronic self-timer. Turn it to "0" and the self-timer functions as a left hand shutter release. With the dial on "2", "15", or "60" [sec], the XR-P will fire at the set interval (with winder).



1. Removable anatomical grip. 2. Combination self-timer/intervalometer/left-hand shutter release. 3. Lens in K-R bayonet mount. 4. Lens release button. 5. Shutter-speed dial. 6. Film advance lever. 7. Shutter release. 8. On/off switch. 9. Hot-shoe with coupling for special coupling for through-lens metering flash. 9. Hot-shoe with coupling for special coupling for through-lens metering flash. 10. Audible sound on/off switch. 11. ASA setting/exposure compensation dial. 12. Program selector. 13. Multiple exposure.



Rollei SL3003

LENS: 50mm f/1.4 Rollei-HFT* Planar in interchangeable Rollei bayonet mount, stops to f/16, focusing to 18 in.

SHUTTER: Rollei electronically-controlled metal-blade focal-plane with speeds from 16 sec. to 1/2000 plus B, X sync, electronic self-timer.

VIEWING: Eye-level and waist-level viewing with folding hood and magnifier, interchangeable focusing screen with diagonal split-image rangefinder in microprism circle, full focusing screen.

OTHER FEATURES: Snap-on, five nicad battery module powers camera and motor. Two silicon photo-diode cells read

central split prism area of viewing screen for aperture-preferred auto exposure, separate cell within mirror chamber reads from film surface for auto flash exposure, built-in 4-fps motor drive. Interchangeable film magazines and 36- to 72-exposure universal 35mm film inserts with ASA/DIN exposure input dials coupling with metering system, provision for multiple exposures. LED numerals indicate shutter speeds, apertures, under- and overexposure warning, low battery warning, flash ready, and sufficient exposure signals all visible in viewfinder, variable-diopter finder, auto-exposure compensa-

tion, exposure memory hold, full manual override, film box holder on each magazine, improper operation warning light, right-, left-hand, and top shutter releases. Provision for remote control operation.

PRICE: To be announced.

MANUFACTURER: Rollei Fototechnic, Braunschweig, West Germany.

IMPORTER: Rollei Division, Berkey Marketing Companies, Woodside, NY 11377.

PHYSICAL DIMENSIONS: 3½ in. wide, 4¾ in. high, 4¾ in. deep.

WEIGHT: 2 lb., 14¼ oz.

Rollei's modular, interchangeable film-back-equipped 35mm SLR, the SL 2000F, has been joined by an improved and slightly modified new brother, the 3003. Major changes are a well-thought out, strap-equipped handle attached to the top of the camera body. The right hand slides under the handle, with the thumb underneath the body for support. Your index finger now makes exposures through a third, top-mounted microswitch release while thumb and forefinger can change the shutter speeds on the top mounted dial. Highest shutter speed is now 1/2000 sec., and displays have been modified accordingly. Changes made to the finder system include a less obtrusive gray rectangle that demarks the metering area of the central spot reading system. The hood and magnifier of the built-in right angle finder and its focusing magnifier have been reworked for easier use.

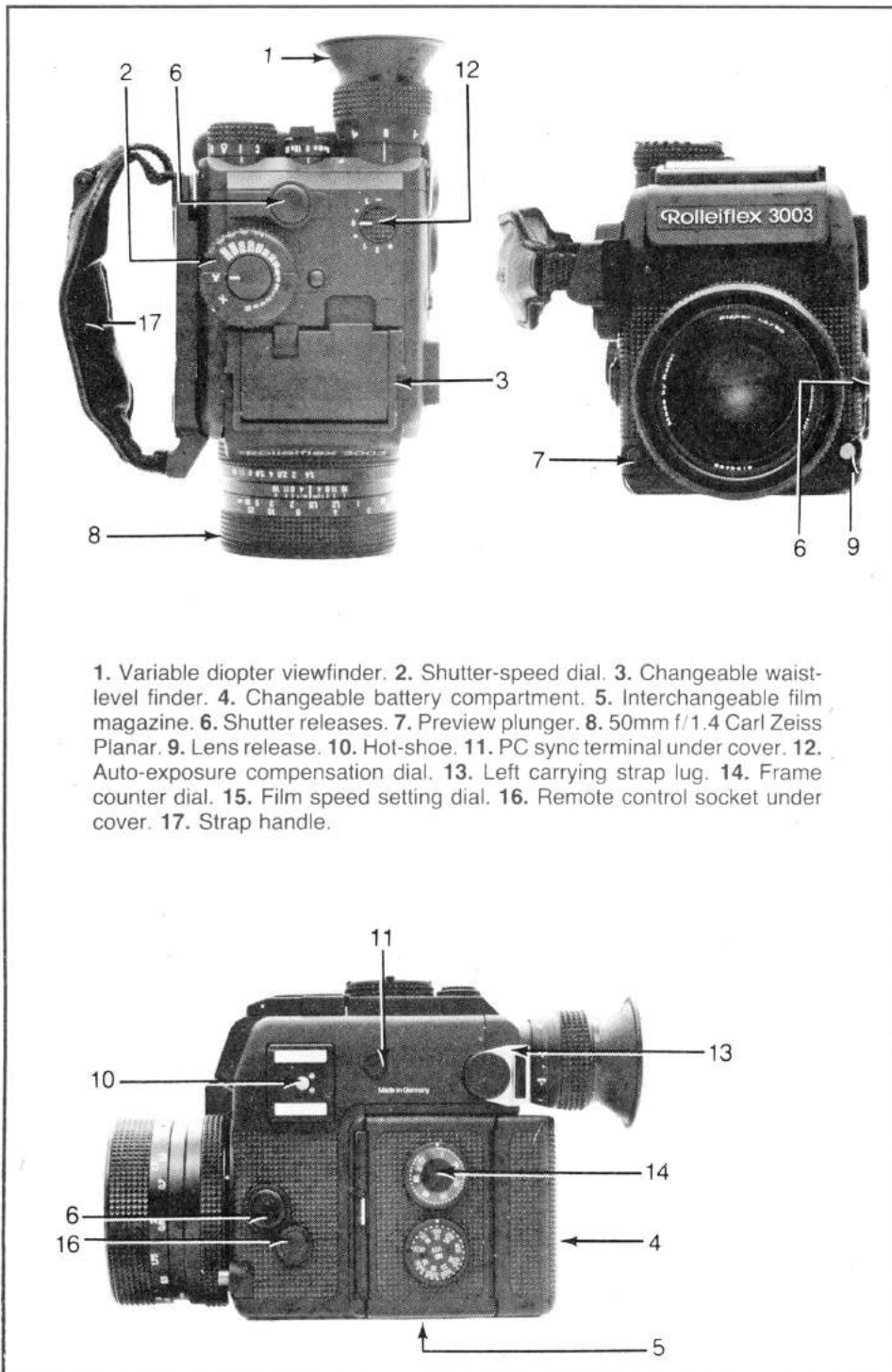
Snap-on battery inserts for the magazines are now supplied with permanently installed high capacity nicads and a charger is now included with the camera.

That the radically different Rollei is now in its second model demonstrates its manufacturer's commitment to quality. A crop of new accessories and lenses are also available.

Rollei now produces the only advanced SLR bodies entirely made in Germany; and offers a full line of Zeiss lenses ranging from 16 to 1000mm. Unchanged are the high-speed 3 frames per sec. built-in motor drive, the sophisticated 35mm magazines taking up to 72 exposure rolls, and the easily readable LED-illuminated aperture and shutter speed indications visible in both finders. The husky power supply provided by the snap-on rapid recharging power packs provide for long-running confidence. Through-the-lens flash capability has been enhanced by new flash units from manufacturers now adaptable to Rollei's SCA 356 module and C-70 adapter and a new Rollei ring light.

Like the SL2000, the 3003 seems a bit bulky but, with the new grip, it handles and balances much more comfortably. The new refinements add increased comfort and convenience to a formidably versatile modular system SLR.

New introductions have upped the line of Carl Zeiss lenses for the 3003 and 2000F to 15, ranging from the 15mm f/3.5 to the 1000mm f/8 Tele-Tessar. Fourteen Rolleinar lenses ranging from 14 to 500mm round out the line.



1. Variable diopter viewfinder. 2. Shutter-speed dial. 3. Changeable waist-level finder. 4. Changeable battery compartment. 5. Interchangeable film magazine. 6. Shutter releases. 7. Preview plunger. 8. 50mm f/1.4 Carl Zeiss Planar. 9. Lens release. 10. Hot-shoe. 11. PC sync terminal under cover. 12. Auto-exposure compensation dial. 13. Left carrying strap lug. 14. Frame counter dial. 15. Film speed setting dial. 16. Remote control socket under cover. 17. Strap handle.

Sigma SA-1

LENS: 35-70mm f/2.8-4 Sigma Zoom-Master in interchangeable Pentax K bayonet mount, stops to f/22, focus to 20 in.
SHUTTER: Copal CMS-EM electronically-controlled metal-blade focal-plane with speeds from 16 (auto) or 8 (manual) to 1/1000 sec. plus B, X sync, electronic self-timer.

VIEWING: Non-interchangeable eye-level prism with central split-image range-finder, microprism collar, full-focusing screen.

OTHER FEATURES: Two 1.5-volt silver-oxide or one 3-volt lithium battery powered silicon blue cell circuit with single cell measuring center-weighted area of focusing screen; aperture-preferred auto exposure for ISO/ASA 12-3200; full manual override; ± 2 f/stop auto-exposure compensation; exposure memory hold button; electromagnetic shutter release; depth-of-field preview lever; provision for auto winder, dedicated flash units.

PRICE: \$589.

MANUFACTURER: Sigma Corporation, Tokyo, Japan

IMPORTER: Sigma Corp. of America, Hauppauge, NY 11788.

PHYSICAL DIMENSIONS: 5 $\frac{3}{8}$ in. wide, 3 $\frac{3}{8}$ in. high, 4 $\frac{7}{16}$ in. deep.

WEIGHT: 1 lb. 14 oz.

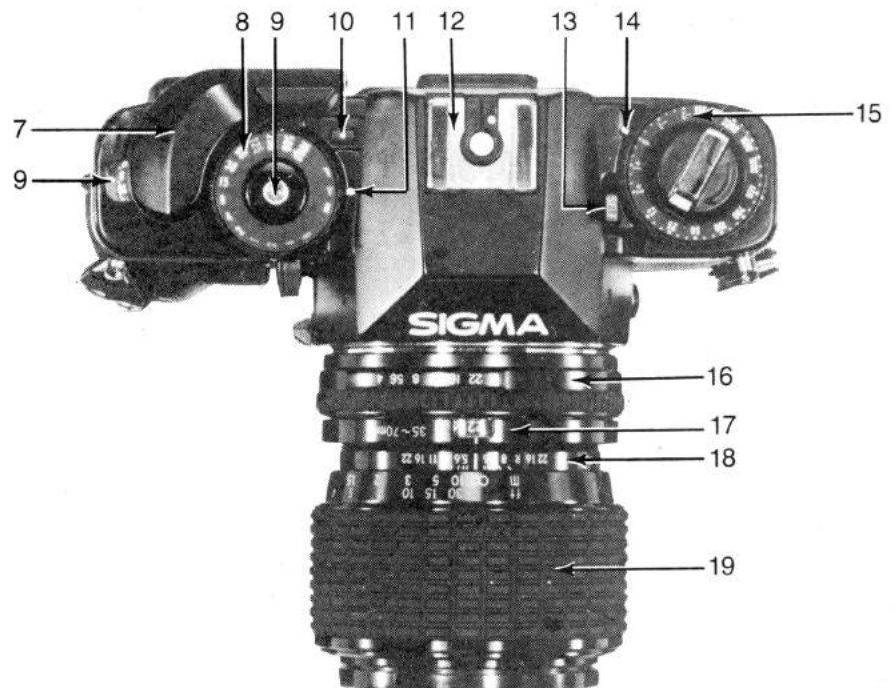
photographer's fingers to fall within easy reach of both the meter activator (2) and memory hold (3) buttons. The latter has been commendably redesigned and relocated by Sigma from a button on the side of the lens mount to a switch neatly placed in the center of the front grip—a good move. These placements, along with the location of the spring-loaded depth-of-field preview lever (5) at the top of the front next to the lens mount housing, add to the Sigma's one-handed operating potential, permitting all of the essential functions to be carried out without your having to remove your eye from the back of the viewfinder eyepiece.

Likewise, the large (15/16 in. diameter) shutter speed dial (8) juts forward of the body just enough to permit fast, effortless settings, aided by the deep knurling of its rim.

Inside the finder you'll see an LCD bar placed vertically on the right-hand side, as in the Ricoh RX-7. The LCD displays shutter speeds and mode information, while along the bottom a small window shows the aperture in use. The Ricoh's diagonal split-image rangefinder has been replaced by a more conventional horizontal split and, more significantly, the prism angle has been narrowed, resulting in a brighter overall view and reducing split-image blackout.



1. Lens lock release lever.
2. Meter activating switch.
3. Auto exposure memory hold switch/hand grip.
4. Self-timer LED.
5. Depth-of-field preview lever.
6. Frame counter.
7. Film advance lever.
8. Shutter speed dial.
9. Electromagnetic shutter release.
10. Auto exposure mode lock release button.
11. Shutter speed index.
12. Dedicated hot shoe.
13. Self-timer.
14. Auto exposure compensation index.
15. ISO/ASA auto exposure compensation scales.
16. Aperture control ring.
17. Aperture window.
18. Depth-of-field scale.
19. Footage scale and combined zooming/focusing control ring.



After many years as a prime manufacturer of lenses, Sigma has realized a long-deferred dream with the production of a camera to go along with its stock in trade—that vast array of optics. This new 35mm SLR also supports another long-cherished Sigma theory, the use of a zoom as the normal lens. The resulting SA-1 loosely resembles the Ricoh XR 7 (Sigma actually uses some Ricoh parts, which it bought from that company) equipped with a "normal" 35-70mm f/2.8-4 lens in the popular and easily obtainable K-mount originated by Pentax. Sigma has made some worthwhile changes on this solid, relatively simple aperture-preferred auto SLR. Among them are a pair of grips—front and back—that, in addition to the usual function of improving general holding capabilities, permit one-handed operation (except for focusing) of the SA-1 when used in tandem with its compact zoom lens.

We found the back grip to be of limited use for rapid fire shooting as its position is rather low on the body and the thumb must be kept at the ready, nestling against the rapid-wind lever. However, with the accessory Sigma Auto Winder SA in use, or when more deliberate shooting is in order, you can rest your thumb on the rubberized, trapezoidal grip for a good, steady hold. Incidentally, the large, intelligently contoured wind lever needs but 135° to complete its throw and comes to rest a generous (nearly 1/2 in.) distance from the body so that rapid-fire manual operation is easily accomplished.

The front grip (3), a rounded bulge at the body's edge, consistently provides the proper finger purchase and support. We particularly like the fact that its placement allows the

Yashica FX-D

LENS: 50mm f/2 Yashica ML in interchangeable Contax-Yashica bayonet mount, stops to f/16, focusing to 20 in.

SHUTTER: Electronically-controlled Copal CMS metal blade, focal-plane with speeds from 11 to 1/1000 sec. (from 1 sec. on manual) plus B, X sync., electronic self-timer with beeper.

VIEWING: Non-interchangeable eye-level prism with central rangefinder, micro-prism collar, full-focusing screen.

OTHER FEATURES: Battery-powered silicon photo-diode (SPD) reading a center-weighted area of the viewing screen for aperture-preferred (you set aperture,

camera sets shutter speed) auto exposure; auto exposure compensation dial; manual exposure override; auto exposure memory hold; electro-magnetic shutter release; LEDs indicate shutter speed; green flash ready mark in viewfinder; LEDs and audible self-timer indicator; film box reminder slot; provision for dedicated flash and auto winder; audible overexposure warning.

PRICE: \$344 with 50mm f/2, \$374 with f/1.7, \$424 with f/1.4, \$559 with 55mm f/1.2; chrome body only, \$249; black body, \$10 additional.

MANUFACTURER: Kyocera Corporation,

Japan.

IMPORTER: Yashica Inc., a division of Kyocera International Inc., Paramus, N.J. 07652.

PHYSICAL DIMENSIONS: 5¼ in. wide, 3⅜ in. high, 3¼ in. deep.

WEIGHT: 1 lb. 7⅞ oz.

When Contax and Yashica decided to pool their talents, the result was not just a new and innovative series of premium Contax cameras. There also have been benefits for Yashica, of which the FX-D is an outstanding example. Basically a twin of the Contax 139 (minus the Zeiss lens, depth-of-field preview, off-the-film flash and other goodies), it is a budget alternative to the high-priced spread.

Be it known that the Yashica FX-D is in our judgment a splendidly made, highly capable camera at a remarkable bargain price. Its body, shutter mechanism, finder information, precision of manufacture, and finish are virtually indistinguishable from what you'll find on the Contax 139. (It even takes the Contax 139 winder.) Only some of the controls have been reshaped or relocated slightly.

The camera feels "right" in the hand. Its soft, leatherish covering (again like the Contax 139) allows you to get a secure grip.

The finder is good and bright (although a shade darker than the 139). To the right of the finder area is a vertical shutter-speed scale with bright red light-emitting diodes next to each speed. As the center-weighted silicon cell meter selects a speed for whatever aperture you set, the correct diode (or two diodes if the speed is between) will light. The metering is also available for manual operation. The shutter speed you set blinks while the suggested speed remains steady as a reminder—an easily controllable system.

The FX-D has an exposure memory hold (1), auto exposure compensation (9) and provision for an accessory, fully dedicated Yashica flash (7). A lightning symbol appears in the viewfinder when the flash has recycled and is ready to fire. The exposure memory hold (1) is located conveniently right beside the lens on the right side of the camera (from picture-taking position).

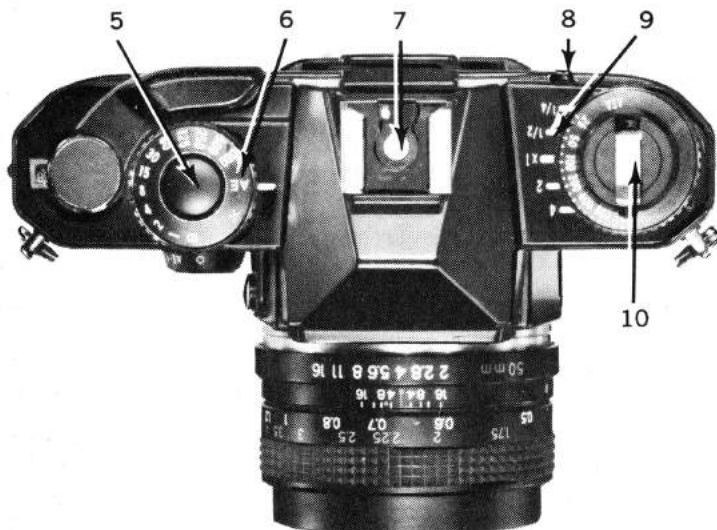
The FX-D does have two features absent on the 139. There is an audible beep self-timer and also an audible over-exposure warning signal.

Just how much lens quality did we find was lost in substituting the 50mm f/2 Yashica ML for the 50mm f/1.7 Zeiss Planar of the 139? In checking resolutions the Planar received 4 excellents, 9 very goods, 1 good. The Yashica scored 3 excellents, 1 very good, 4 goods, and 6 acceptables—good enough for anyone except the most persnickity.

Incidentally, the FX-D would make a great second body for anyone owning a Contax camera. Should you spend \$100 more for a Contax 139? It depends on you personally and what you are willing to give up to save the money. In any case, the FX-D offers a low priced alternative capable of using many Contax accessories, making for a competent, very versatile system.



1. Exposure check button with memory lock lever. 2. Accepts Contax 139 Auto-winder. 3. Self-timer LED indicator. 4. Yashica-Contax bayonet lens mount. 5. Electro-magnetic shutter release button. 6. Aperture-preferred auto exposure dial position with manual speeds. 7. Hot sync shoe for dedicated flash. 8. Electro-magnetic remote release socket. 9. Auto exposure compensation scale. 10. ASA film speed index dial.



Nikon FM2

LENS: 50mm f/1.4 Nikkor in interchangeable bayonet mount, apertures to f/22, focus to 18 in.

SHUTTER: Nikon-Copal titanium blade focal plane with speeds from 1 to 1/4000 sec., plus B, X sync at 1/250 sec., mechanical self-timer.

VIEWING: Non-interchangeable eye-level prism with central split-image rangefinder, microprism collar, full-area focusing interchangeable screen.

OTHER FEATURES: 3-volt battery powers silicon photodiode (SPD) metering circuit; diodes on either side of the eyepiece read center-weighted area of focusing screen; shutter speeds, apertures, metering LEDs visible in the finder; ASA 12 to 6400; multiple-exposure provision; dedicated hot shoe; self-timer; shutter release lock, depth-of-field preview; film box reminder slot; accepts motor drive. **PRICE:** \$478 with 50mm f/1.8 lens; \$598.50 with 50mm f/1.4 lens; \$364, body only; \$16 additional for black body.

MANUFACTURER: Nippon Kogaku K.K., Tokyo, Japan.

IMPORTER: Nikon Inc., Garden City, NY
PHYSICAL DIMENSIONS: 5½ in. wide, 3¾ in. high, 3¾ in. deep.

WEIGHT: 1 lb. 10½ oz.

The least sophisticated in features and construction of all Nikons, the manual, mechanically operating FM2 nevertheless incorporates an advanced high speed blade shutter. However, this isn't as much a contradiction as it may seem, since many professionals still prefer manual mechanical cameras and can well use the higher sync and top speed of the FM2.

The replacement of the Nikon FM by the more versatile FM2 in 1982 showed Nikon's continued dedication to the basic mechanical camera for those who prefer it. In replacing the FM Nikon gave the FM2 the first of its new super fast titanium blade shutters, offering speeds to 1/4000 sec. with an advantageous 1/200 sec. flash sync speed designed to minimize ghost images caused by existing continuous light. The top sync speed now has been upped to 1/250 sec. The high-speed design should prove useful not only for stopping subject action but also for providing proper exposure when the new super high speed color films are used in bright light.

Other features include: interchangeable focusing screens using the same system and screens as on the Nikon FE2, LED readout in the finder with the LEDs themselves forming the + and - signs, meter turns on for 30 sec. with slight shutter button pressure, shutter release lock via pressed-in wind lever, convenient multiple-exposure provision (requiring one hand rather than two), large slotted film box memo holder, contoured rapid-wind lever, metal rewind shaft and dedicated hot shoe with flash warning light in the finder.

To use the metering system, press the shutter release button slightly, then turn the shutter speed dial or lens aperture to light the central red 0 to the right of the finder picture

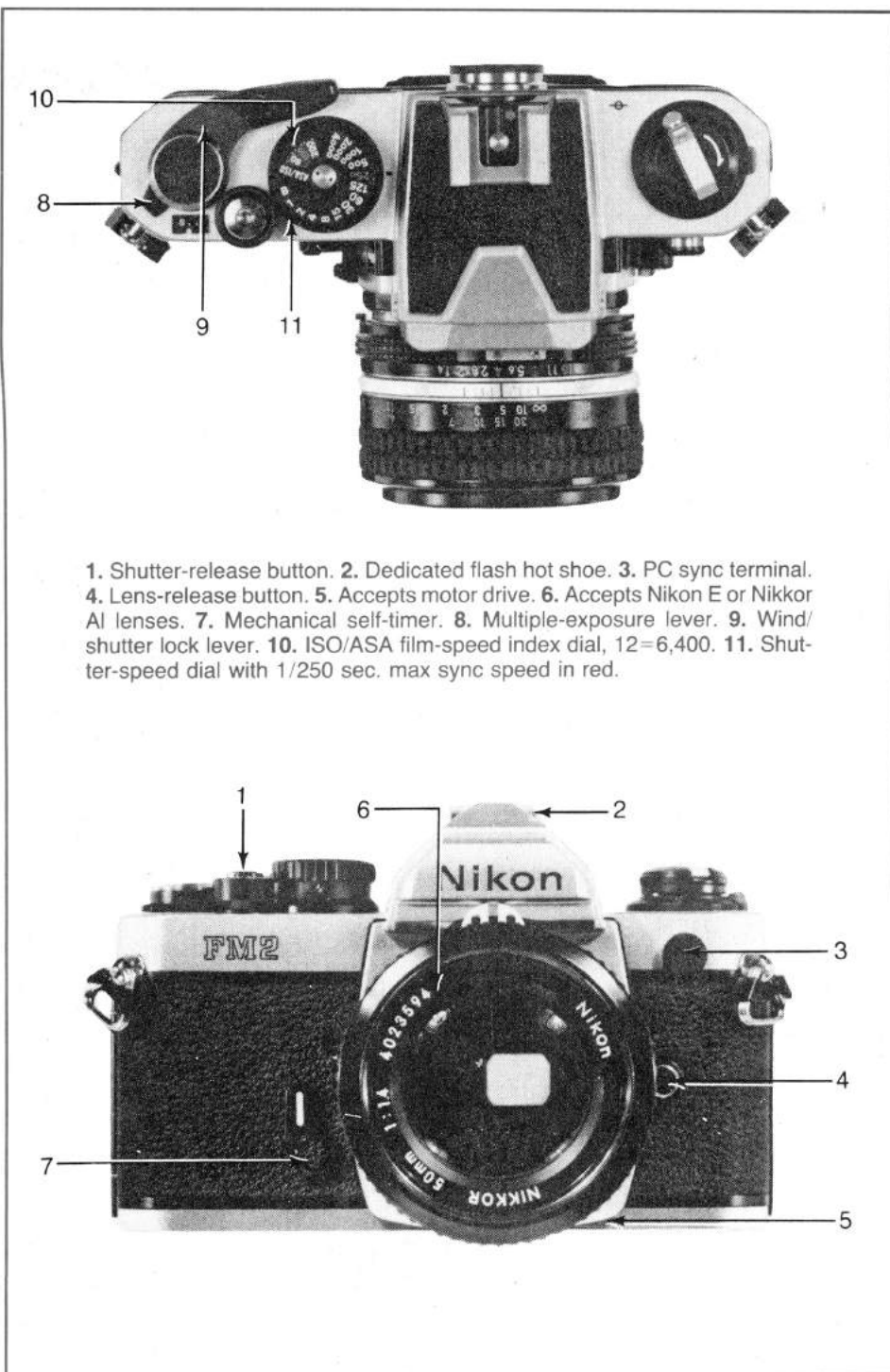
area. Both 0 and + light if exposure is over between 1/5 and 1 f/stop, and both 0 and - light if exposure is under 1/5 to 1 stop. If + or - alone light, it indicates that exposure is over or under by more than one stop.

Shutter speed set is indicated by translucent numerals on a disc at left in the finder, and apertures appear in a top center window reflected from the scale on the lens mount. We judged the finder to be extremely bright, clear and contrasty. The K-screen (although not as bright as the new K2 in the Nikon FE2 and FA) has a large and easy-to-use split image rangefinder for lenses of f/5.6 or larger apertures. (Should you wish to use the new,

even brighter screens of the FE2 and FA, you can but you must compensate).

The accessory Motor Drive MD-12 provides single frame shooting or continuous firing at a maximum rate of 3.5 frames per second (when the shutter speed is set between 1/125 sec. and 1/4000 sec.) It is powered by eight AA cells. The FM2's dedicated hot shoe accepts Nikon's series of dedicated flash units. The finder's flash ready light indicates when the units are ready to fire.

The FM2 continues to be the overwhelming choice of photographers seeking the highest quality manual, mechanically operating 35mm SLR.



1. Shutter-release button. 2. Dedicated flash hot shoe. 3. PC sync terminal. 4. Lens-release button. 5. Accepts motor drive. 6. Accepts Nikon E or Nikkor AI lenses. 7. Mechanical self-timer. 8. Multiple-exposure lever. 9. Wind/shutter lock lever. 10. ISO/ASA film-speed index dial, 12=6,400. 11. Shutter-speed dial with 1/250 sec. max sync speed in red.

Olympus OM-2S Program

LENS: 50mm f/1.8, f/1.4, or f/1.2 Zuiko in interchangeable bayonet mount, stops to f/16, focus to 18 in.

SHUTTER: Electronically controlled, rubberized cloth focal plane with speeds of 60-1/1000 sec. plus B; mechanical 1/60 sec. flash sync speed.

VIEWING: Non-interchangeable eye-level prism with interchangeable central split-image, microprism collar, matte outer area standard screen.

OTHER FEATURES: Silicon photodiode (SPD) cell aimed at film plane provides off-the-film-plane (OTF) center-weighted averaging measurement in programmed

exposure mode and aperture preferred auto exposure mode; TTL spot metering in manual mode for films ISO/ASA 12-3200; multi-mode LCD finder display with 2 min. limiter has built-in illuminator with 10 sec. limiter; battery checker with three-level display LED and sound alarm automatically locks camera when batteries weak; electronic self-timer; removable back with memo holder accepts interchangeable bulk film and data backs.

PRICE: \$480 with 50mm f/1.8, \$550 with 50mm f/1.4, \$715 with 50mm f/1.2; body only, \$380.

MANUFACTURER: Olympus Optical Co.

Ltd., Tokyo, Japan.

IMPORTER: Olympus Corp., Consumer Products Group, Woodbury, NY.

PHYSICAL DIMENSIONS: 5-5/16 in. wide, 3 1/4 in. high, 3-1/8 in. deep (w/f/1.8).

WEIGHT: 1 lb. 8-13/16 oz. with f/1.8.

What's long been rumored has arrived: an Olympus SLR with a full program exposure system, in which the camera's metering system sets both the shutter speed and aperture. Called the OM-2S Program, it's designed for serious amateurs and pros as well as for tyros.

Although the camera bears a "2" in its name, it's far more a relative of the latest, all black OM-4. The 4 and the 2S share metal body casting, cloth focal-plane shutter, features, and control positions, as well as approximate weight and size.

The mode selector lever features settings for program, auto exposure (aperture preferred) and manual operation. In program mode the shutter speed set is visible in the finder as an LCD (liquid crystal display) similar to that in the OM-4 but arrayed vertically on the left-hand side of the picture area.

An LCD line of dashes, each equal to 1/3 of an f/stop, indicates the shutter speeds from 1 sec. to 1/1000 sec. (although speeds can be set as low as 1 min. or, in our tests, 2 min.) The program auto exposure provides full lens opening to 1/60 sec., above which shutter speed and aperture increase equally. Auto exposure aperture set is not displayed.

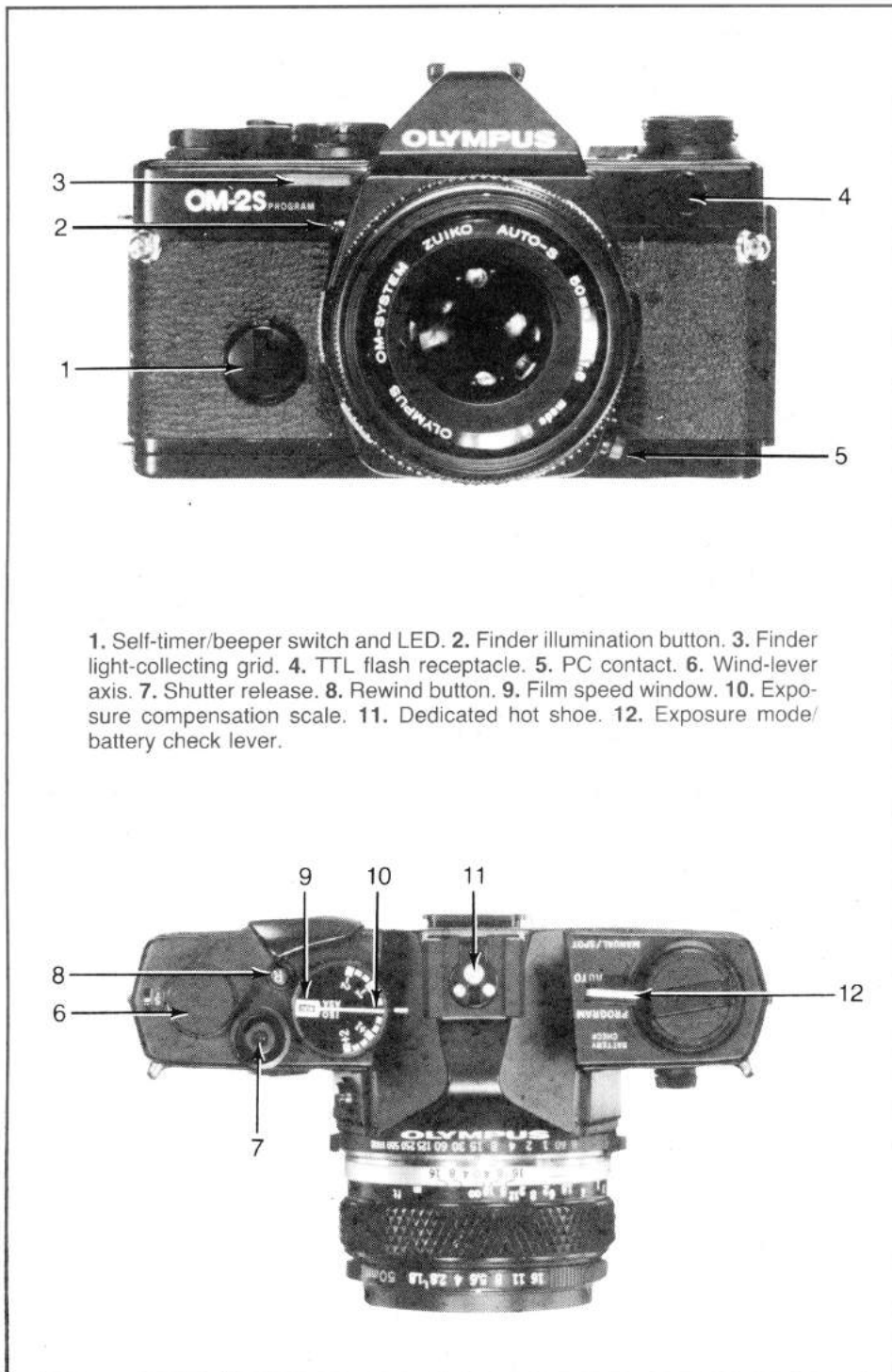
The finder also has under- and over-exposure flash warning signals, a green flash confirmation and O.K. signal, a schematic of the lens diaphragm plus arrows and audible warning signal indicating you have not set the lens properly for program mode and should close it down, and auto-exposure compensation markings.

The exposure system uses a secondary mirror behind the main mirror to refer exposure readings to the metering system prior to exposure but makes its actual camera settings (following release) from the first shutter curtain and/or the film itself. It can therefore provide exposure adjustments while the shutter is operating, even taking into account ambient light.

When the camera is switched to aperture-preferred auto exposure, it operates just as other automatic Olympus cameras. However, auto flash exposure is off the film surface using the standard Olympus, OM-4 configured dedicated flash from either the hot shoe or the multi-pin flash terminal on the body.

In manual mode, the metering system operates much like the OM-4's spot metering, while providing about a single 3° center spot reading through the secondary mirror behind the rapid return mirror (off-the-film metering is not in effect). In the finder, the segmented shutter-speed line is seen but with a centering point and arrows showing over- and under-exposure.

We plan to test this fascinating and innovative SLR as soon as we can get our hands on a production model.



1. Self-timer/beeper switch and LED. 2. Finder illumination button. 3. Finder light-collecting grid. 4. TTL flash receptacle. 5. PC contact. 6. Wind-lever axis. 7. Shutter release. 8. Rewind button. 9. Film speed window. 10. Exposure compensation scale. 11. Dedicated hot shoe. 12. Exposure mode/battery check lever.

Contax T35

LENS: 38mm f/2.8 Carl Zeiss Sonnar T* in non-interchangeable mount, apertures from f/16, minimum focusing to 3 ft., 3 in.

VIEWING: Optical viewfinder combined with central coincident rangefinder, self-timer warning lamp, four LEDs indicate approximate shutter speed, overexposure warning and flash-ready indicator for T14 flash.

SHUTTER: Electromagnetic leaf shutter in lens with automatic speeds from 8 to 1/500 sec., X sync with dedicated flash at speeds under 1/125 sec., electronic self-timer.

OTHER FEATURES: SPD-cell meter on front of lens for aperture-priority auto exposure from EV 0 to EV 17, ASA 25 to 1000, powered by two 1.5 V batteries; backlight compensation button for +1.5 EV; 120 degree film advance stroke; LCD frame counter registers to 79; side-mounted T-14 Auto dedicated flash exposure controlled by on-camera SPD cell at all apertures.

PRICE: \$560 with 38mm f/2.8 Carl Zeiss Sonnar T* lens and T14 Auto flash.

MANUFACTURER: Yashica Co., Ltd., Okaya, Japan.

IMPORTER: Yashica Inc., Paramus, NJ. 07652.

PHYSICAL DIMENSIONS: 3¹³/₁₆ in. wide, 2⁵/₈ in. high, 1⁵/₁₆ in. deep (folded).
WEIGHT: 9¹/₂ oz.

A combination of folding camera tradition, contemporary electronics and a luxurious upscale design, the Contax T is a compact 35mm rangefinder remarkable for the number of features it crams into a small, pocketable shape. Developed jointly by Yashica, Carl Zeiss and the Porsche Design Group, the Contax T looks sleek and stylish with a silver finish and dark gray rubberized grip and film advance lever. To achieve optical performance equal to the design, a retractable, five-element Zeiss lens completes the package. Of course, a multitude of features like this comes only at a price.

Looking through the viewfinder, you see frame-line "corners" indicating the picture area, a central yellow diamond for superimposed rangefinder focusing and, at the right, a shutter speed scale next to four LEDs—three to indicate the approximate shutter speed and one to warn of overexposure. If you put the camera in the self-timer mode, a red warning lamp lights at top center in the finder to remind you.

When you pick up the camera, the lens is retracted behind a folding cover. Push a small button embedded in the rubberized material next to it and it opens slightly. Now pull down and the lens pops out and locks into position. After selecting an aperture by turning a tiny, slightly ribbed ring close to the camera body, raise the viewfinder to your eye and depress the shutter release slightly. A red LED will glow between two shutter speeds, on the vertical scale at right, roughly indicating the speed selected by the camera's aperture-preferred automatic exposure

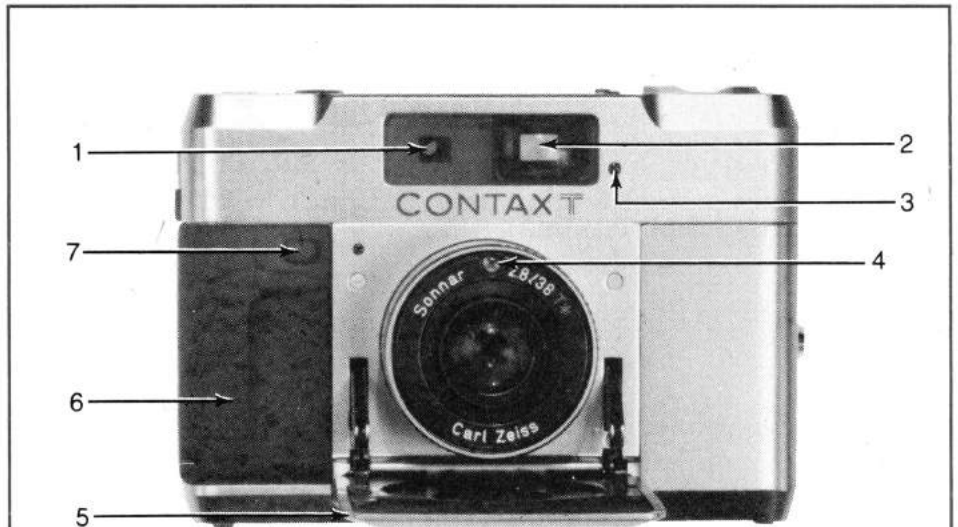
system. Focusing is achieved by turning yet another tiny ring on the lens to align the super-imposed images in the viewfinder's central diamond.

The aperture ring, which features full click-stops, and the focusing ring, marked in meters, are the main flaws in the otherwise elegant Porsche Design Group's handiwork. They're best manipulated (with medium to large size hands) by pressing both forefingers against the knurled areas of the rings on either side of the lens barrel.

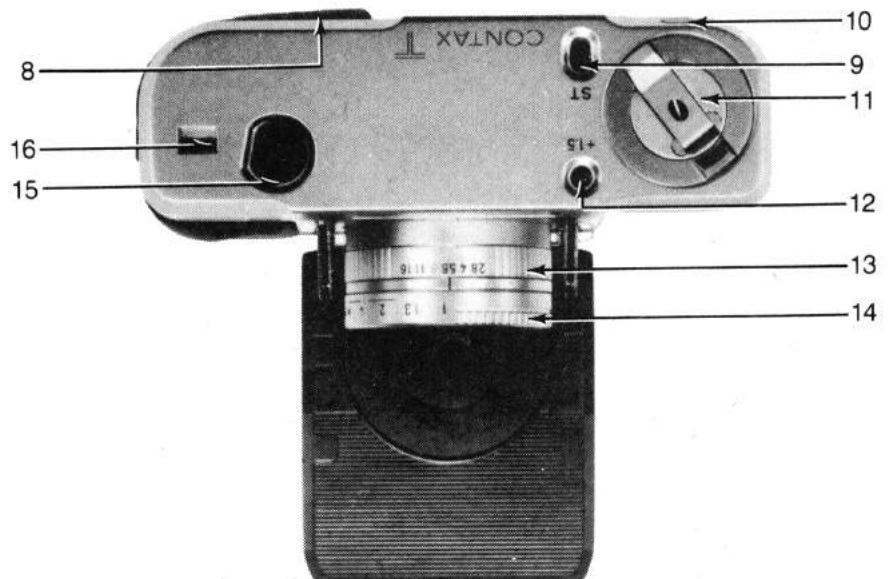
Atop the Contax T, an LCD window to the right of the shutter release displays the frame number—up to 79—automatically. (The

counter resets when the camera is opened via a locking switch on the bottom plate.) On the top left, a button marked "+1.5" provides backlight compensation, and a small sliding switch activates the self-timer. Film speed, from ASA 25 to 1000, is displayed in a window on the camera back, just below the rewind knob. Pressing a button below the ASA window while turning the rewind knob allows you to reset the film speed.

A dedicated compact electronic flash, the T14 Auto, is packaged with the camera, and it attaches to the Contax T, via a thumbwheel screw, on the camera's left side. Exposure is automatically controlled by SPD cell.



1. Rangefinder window. 2. Viewfinder. 3. Self-timer LED. 4. SPD sensor. 5. Folding front cover. 6. Integral rubberized grip. 7. Front cover release button. 8. Film advance lever. 9. Self-timer switch. 10. Film speed window. 11. Rewind crank. 12. Backlight compensation button. 13. Aperture ring. 14. Focusing ring. 15. Shutter release. 16. LCD frame counter.



Leica M6

LENS: 50mm f/1.4 Summilux or 50mm f/2 Summicron in interchangeable bayonet mount, apertures to f/16, focus to 28 in. (with f/2).

VIEWING: Combined optical range-view finder with auto-parallax-compensating bright frames for 28, 35, 50, 75, 90, and 135mm lenses.

SHUTTER: Mechanically-controlled cloth focal plane with speeds of 1-1/1000 sec., plus B, MX sync.

OTHER FEATURES: Internal selective metering system with centered LED indicators reads through all lenses. Viewfind-

er framelines automatically positioned when appropriate Leitz lenses are mounted, socket under removable base-plate accepts electric motor winder, fixed quick-loading take-up spool, removable hinged back section, manual finder-frame selector lever, hot shoe.

PRICE: To be announced.

MANUFACTURER: Ernst Leitz, Wetzlar Ltd., Midland, Canada.

IMPORTER: E. Leitz, Rockleigh, NJ 07647

PHYSICAL DIMENSIONS: 5 5/8 in. wide, 3 in. high, 3 in. deep.

WEIGHT: 1 lb., 10 1/4 oz.

Leitz' logic is inescapable. Rumors notwithstanding, the new M6 camera, introduced recently at the 1984 Photokina was the same unshakably steadfast all-mechanical M4 at heart. The revolution is, however, on the inside and almost invisible on the surface. A totally new selective light metering system has been tucked into the camera without increasing its size and with a gain in weight of only 1/2 oz., far less than that of the accessory MR meter. A lens-equipped and filtered silicon photo diode in the top of the body meters a slightly off-center 12mm diameter white disk on the shutter curtain, reading 13% of the film area. The area read at the subject varies with lens focal length and is a centered area about 2/3 of the height of the short dimension of the finder frame in use. Two LED signals are balanced in brightness by changing the diaphragm or shutter speed settings while a film speed setting dial on the rear hinged plate inputs ASA/ISO settings from 6 to 6400. The working range with an f/1 lens at ASA/ISO 100 ranges from 1 sec. at f/1 to 1/1000 at f/32. Power is supplied by two type 76 silver oxide batteries or one 3-volt lithium. A press of the shutter release turns on the meter which turns off 10 sec. after the shutter is released.

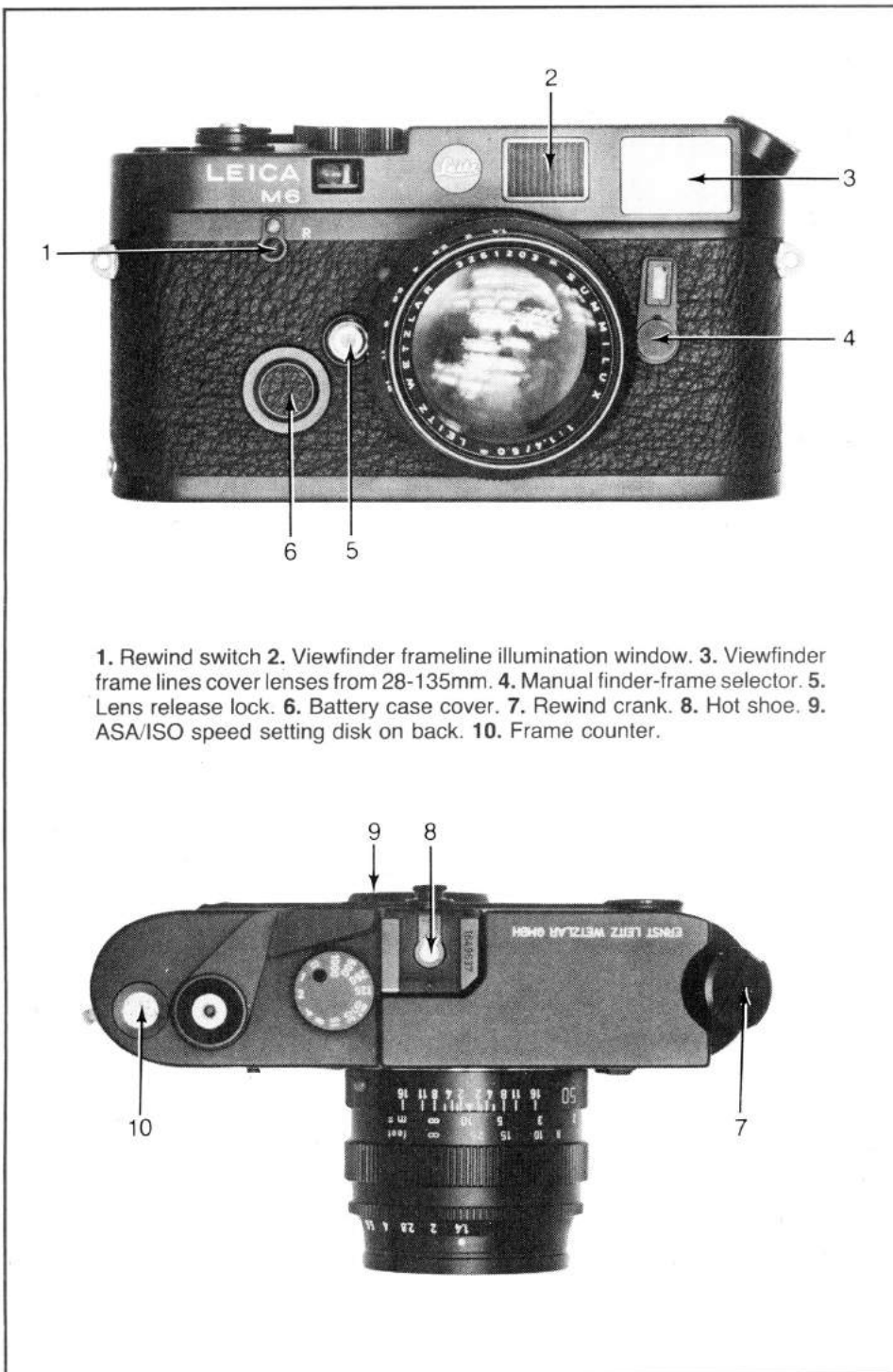
Other features are the same as those of the M4-P, which will stay in production. Six finder frames cover the lens range from 28 to 135mm. The Leica Winder has been slightly redesigned to facilitate battery changes and provide an integral tripod socket. The frame rate remains at 2 fps and the operation is consistently very silent.

Missing are the PC connection for M-type flashbulbs though the new hot shoe should please many. Regrettable, perhaps, is the lack of TTL flash automation and viewfinder aperture and speed indications, but the addition of the latter would have increased the size of the body at least to the size of the long discontinued M-5. Early Leitz 21 and 28mm finder wide-angles will block the reading path of the meter, but will operate normally otherwise as there is no longer any mechanically pivoting sensor.

Interestingly, the M-6 now bears the legend "made in Germany" on the top plate [although the traditional Leitz logo in script has disappeared]. According to Leitz representatives, final assembly is now being done in Wetzlar using a mix of Leitz-Canada and German-made components.

While the M-6 lacks some of the bells and whistles of its competition, the new and practical realization of its selective metering system at a price said to be equivalent to that of the M-4 plus the MR meter should endear it to Leica aficionados worldwide.

Leica lovers will appreciate the M-6 because it has changed so little. The legendary smoothness and quietness of the shutter and wind mechanism and the ultra-bright and contrasty range flash viewfinder remain unchanged; the standard for rangefinder cameras of any sort.



1. Rewind switch 2. Viewfinder frameline illumination window. 3. Viewfinder frame lines cover lenses from 28-135mm. 4. Manual finder-frame selector. 5. Lens release lock. 6. Battery case cover. 7. Rewind crank. 8. Hot shoe. 9. ASA/ISO speed setting disk on back. 10. Frame counter.

Bronica ETRS

LENS: 75mm f/2.8 Zenzanon MC in interchangeable bayonet mount, stops to f/22, focus to 2 ft.

SHUTTER: Electronically-controlled Seiko No. 0 in each lens, with speeds of 8 to 1/500 sec. plus T, X sync at all speeds, FP to 1/125 sec.

VIEWING: Interchangeable waist-level, prism, rotating and metering finders; interchangeable standard (central split-image, microprism, fine-focusing collar) full-focusing screen.

OTHER FEATURES: Accepts interchangeable film backs for 120, 220, 35mm, Polaroid packs; interchangeable AE-II aperture-preferred prism finder; rapid-wind grip; motor drive.

PRICE: \$1,126 with 75mm f/2.8 Zenzanon, waist-level finder, 120 film back; \$1,576 with AE-4; AE-II finder, \$599.

MANUFACTURER: Zenza Bronica Industries, Inc., Tokyo, Japan.

IMPORTER: G.M.I. Photographic Inc., Farmingdale, NY 11735.

PHYSICAL DIMENSIONS: 4⁵/₁₆ in. wide, 4³/₁₆ in. high, 6³/₁₆ in. deep.

WEIGHT: 2 lb. 15¹/₂ oz.

Minor face lifting changes, including a relocation of the lens release and a redesigned magazine latch following a body restyled with tough polycarbonate plastic body panels have produced a lighter, more grippable body design. The ETRS and its 6×6 and 6×7 cm. format brothers share many common operating and design features: modular body, magazine, and hood construction, and stepless electronic control of each lens' Seiko shutter (from 8 full sec. to 1/500 sec.). Adding the ETRS' fully automatic AE-II prism finder provides stepless aperture-preferred exposure automation (speeds above 1/60 sec. flashed with red LEDs and slow speeds with yellow). You can even shoot 35mm film with the interchangeable E-type film back (\$225 with 24×36mm insert); a "wide screen" 24×54mm insert is available. The new focusing screens are scribed for 35.

Slide the AE-II finder on, set your ASA film speed (25-3200) and press body release (1) (gently) or LED display button (4) to see the automatically-chosen shutter speed in the finder. Combination battery check and shutter open LED indicator is now located in the finder. The Bronica ETRS can almost simulate a 35mm camera in terms of handling when you add the vertical Speed Grip, a right-handed, lateral two-stroke film-winder lever accessory with hot shoe on top. You can now add on a modular motor drive (\$429) instead. This accessory can remotely advance film, trip the shutter and return the mirror at up to 1 fps. It slides onto the tripod plate, connecting to the winding shaft.

Camera body improvements now include gold-plated electrical contacts at the ground-glass for AE (automatic exposure) operation, redesigned neck strap rings, and a three-position switch on the shutter release for normal use, locked for motor and hand grip operation, and power off setting. A rapid-wind

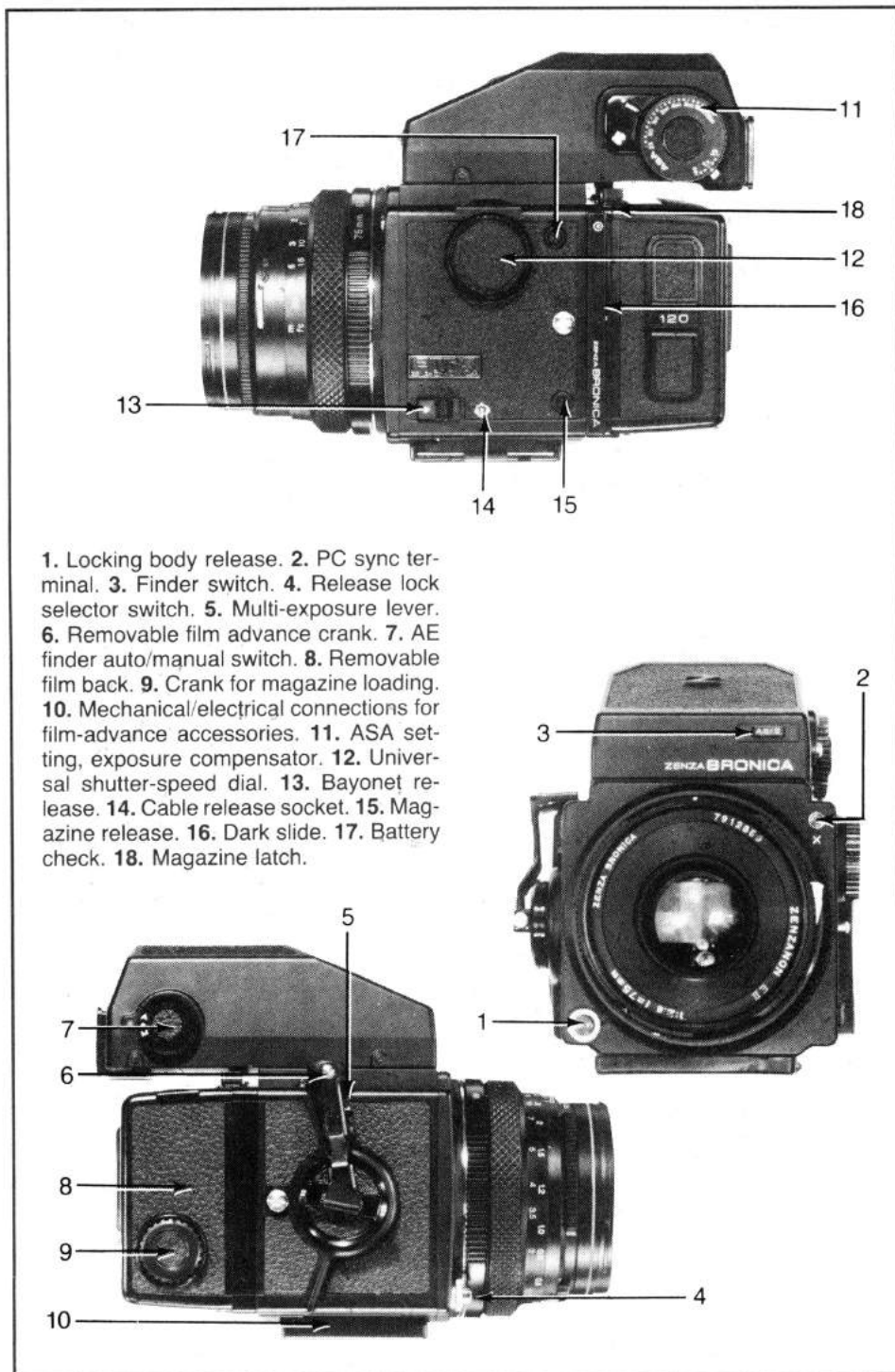
crank is used to advance film in the absence of a mounted motor or grip.

Each lens (they presently range from a 40mm f/4 Zenzanon to a 500mm f/8 Zenzanon) incorporates its own five-bladed electronically-timed Seiko No. 0 shutter providing speeds of 8 to 1/500 sec. plus T on battery power, in addition to a single mechanically-timed speed of 1/500 sec. The 105mm f/3.5, 200mm f/4.5, and a 500mm f/8 Zenzanon round out the system's optics. A new six-element 75mm f/2.8 normal lens is now standard equipment.

At the back end is an interchangeable film magazine. Slide the dark slide in (matching

the dot-in-circle symbol) and then press button (15) to swing the magazine up and off the camera body. Open the back and you are greeted by a particularly easy-to-load film insert. There are separate 120 and 220 backs, a 70mm magazine, the aforementioned 35mm E-type back for Kodachrome lovers and those wanting high-speed flash sync for 35mm, and a Polaroid adapter.

The ETRS' wide range of lenses, well-conceived accessory line-up, comfortable and convenient Speed Grip, automatic exposure option and dual-format capabilities add up to a comfortable, competent medium-format camera of the greatest versatility.



1. Locking body release. 2. PC sync terminal. 3. Finder switch. 4. Release lock selector switch. 5. Multi-exposure lever. 6. Removable film advance crank. 7. AE finder auto/manual switch. 8. Removable film back. 9. Crank for magazine loading. 10. Mechanical/electrical connections for film-advance accessories. 11. ASA setting, exposure compensator. 12. Universal shutter-speed dial. 13. Bayonet release. 14. Cable release socket. 15. Magazine release. 16. Dark slide. 17. Battery check. 18. Magazine latch.

Bronica GS-1

LENS: 100mm f/3.5 Zenzanon-PG interchangeable bayonet mount, stops to f/22, focusing to 2 ft., 5½ in.

SHUTTER: Electronically-controlled Seiko #0 leaf type in each lens, with speeds from 16 to 1/500 sec. plus B and T, X-sync at all speeds.

VIEWING: Interchangeable waist-level finder or eye-level prism with interchangeable focusing screens; standard screen has full-focusing matte surface.

OTHER FEATURES: Interchangeable 120/220 or 35mm backs permit format sizes of 6×7 cm, 2½ in. square, 6×4.5cm, 24×36mm (standard 35mm) 24×69mm

(super-wide 35mm); filmbacks incorporate film-speed dials to key ISO/ASA into attached AE prism finders; film-wind crank simultaneously cocks shutter, advances film, brings mirror into viewing position; AE Prism Finder G incorporates silicon meter cells, provides through lens, aperture-priority, center-weighted auto exposure with shutter set on "A", displays set shutter speed, EV difference from correct exposure in manual metering mode plus shutter-release warning, flash ready LEDs, has 16 sec. AE lock; with Speed Grip and dedicated flash attached, camera provides auto flash with

off-the-film flash metering; electromagnetic shutter release; provision for multiple exposures; mirror lock lever; battery check.

PRICE: \$1810 with 100mm f/3.5 lens, waist-level finder and 120/220 roll-film back; AE prism finder, \$735.

MANUFACTURER: Zenza Bronica Industries, Inc. Tokyo, Japan.

IMPORTER: G.M.I. Photographic, Inc. Farmingdale, NY 11735

PHYSICAL DIMENSIONS: 4¾ in. wide, 4⅞ in. high, 7⅞ in. deep.

WEIGHT: 4 lbs. ½ oz.

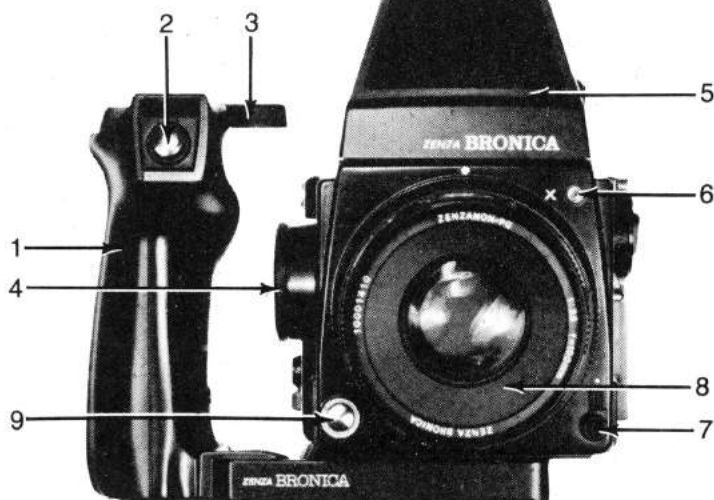
The Bronica GS-1 resembles a classic, leaf shutter 2¼ SLR, but it's one model that's clearly been engineered for hand-held shooting. By dispensing with the complexity and additional weight of a revolving back and offering such well thought out accessories as Speed Grip (with top-mounted, 35mm-style, two-stroke wind lever), and a coupled meter prism, Bronicas engineers have created a thoroughly modern 6×7cm SLR that's equally at home in the field or in the studio.

The GS-1 features a fully modular design with an electronically-controlled leaf shutter in each lens and automatic keying in of film speeds by setting the ASA dial on each interchangeable film magazine. Information is transferred to and from the mounted meter prism via an array of ten gold-plated contacts directly in front of the interchangeable focusing screen, but it surpasses other SLRs in offering an integral, seven-segment LED display for previewing the set shutter speed even when the standard waist-level finder is used. In addition, the GS-1 offers an unparalleled range of interchangeable backs, from standard 35mm up to full-format 6×7cm.

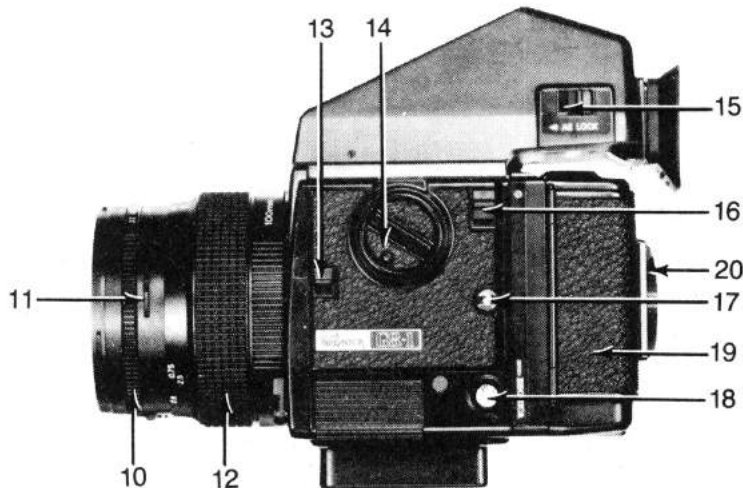
In order to engineer all these significant and useful features into a relatively compact and lightweight body (for a 6×7cm SLR) something had to go, and that something was a revolving back and its attendant finder-masking system. With the waist-level finder and 6×7cm magazine fitted, the GS-1 is effectively a "horizontal-only" camera, but there are several ways out of this dilemma. You can fit either a 6×6cm (2¼ in. square) or a vertical-format 6×4.5cm film back, thereby side-stepping the issue, or you can mount a plain or AE prism finder and the Speed Grip, which will let you view, focus, frame, and shoot in either orientation with a minimum of physical contortions.

The GS-1 is also the first camera in its class to feature off-the-film flash metering. Since there is no dedicated hot shoe built into the body, you've got to mount the Speed Grip to get one. The Speed Grip transfers flash exposure information from an in-body flash sensor to its top-mounted hot shoe via seven gold-plated prongs that mate with contacts on the camera body bottom.

Given its ergonomic design, wide choice of films and formats, and up-to-date electronics, the GS-1 is a formidable medium-format alternative. We'll have more to say about it when we finish putting it through our tests.



1. Speed Grip G. 2. Shutter release. 3. Wind lever 4. Film-wind crank. 5. AE Prism Finder G. 6. Flash sync Socket. 7. Mirror lock-up lever. 8. Standard 100mm f/3.5 lens. 9. Body shutter release. 10. Aperture ring. 11. Depth-of-field preview lever. 12. Focusing ring. 13. Lens-release button. 14. Shutter-speed dial. 15. AE lock button. 16. Main power switch. 17. Neckstrap lug. 18. Film back release button. 19. Interchangeable film back. 20. Auto-keying ASA dial.



Bronica SQ-A

LENS: 80 f/2.8 Zenzanon-S in interchangeable bayonet mount, apertures to f/22, focusing to 2 ft., 7 1/2 in.

SHUTTER: Electronically-controlled Seiko #0 leaf type in each lens with speeds of 8-1/500 sec. plus T, mechanically-controlled 1/500 sec. speed usable without battery power.

VIEWING: Interchangeable waist-level finder with light-excluding hood, built-in magnifier, user-interchangeable viewing screen; standard screen has central split-image rangefinder surrounded by microprism collar, full-focusing matte outer area with vertical and horizontal orientation lines.

OTHER FEATURES: Interchangeable 120, 220 and 35mm film magazines incorporate ASA 25-3200 dials and electric contacts for automatically keying film speed into optional SPD AE Prism Finder S, providing aperture-preferred auto-exposure or manual metering; contacts on the back of each lens, in camera body, and above front of finder screen relay set shutter speed and metering information; built-in mechanical interlocks prevent lens removal without cocking shutter, film magazine removal without inserting dark slide, shutter-cocking without film in magazine; LED outside screen area in finder lights as exposure is completed or when battery check button is pushed; multiple-exposure control; spring-loaded depth-of-field preview lever on each lens; shutter-release and mirror locks.

PRICE: \$1,415 with 80mm f/2.8 lens, waist-level finder, 120 or 220 back. 35mm film back, \$258.

MANUFACTURER: Zenza Bronica Industries, Inc., Tokyo, Japan.

IMPORTER: G.M.I. Photographic, Inc., Farmingdale, NY 11735.

PHYSICAL DIMENSIONS: 4 3/4 in. wide, 4 1/4 in. high, 7 1/2 in. deep.

WEIGHT: 3 lb. 4 1/4 oz. with normal lens.

The Bronica SQ-A, like its predecessor, has established an enviable record for reliability and durability in professional use—a direct result of its simpler, more rugged, electronic control systems. What distinguishes the SQ-A from the previous SQ are a pair of additional gold-plated contacts (there are now 10) in front of the finder screen. These allow aperture-preferred auto-exposure or manual metering with the AE Prism Finder S. Also, there's a dual-mode mirror lock-up which lets you lock the mirror up for one shot, or leave it up for shooting sequences. A companion, motorized version of the SQ-A, dubbed the SQ-Am, has an integral motor and battery-containing right-hand grip providing 3-shot-per-2 sec. firepower. An alternative 35mm back fits both models.

In its general layout, the Bronica SQ-A is undeniably similar to the Hasselblad 500 C/M or, for that matter, the Bronica ETRS, which can be viewed as a scaled-down and electrified version of same. It centers around a boxy main body section to which lenses bay-

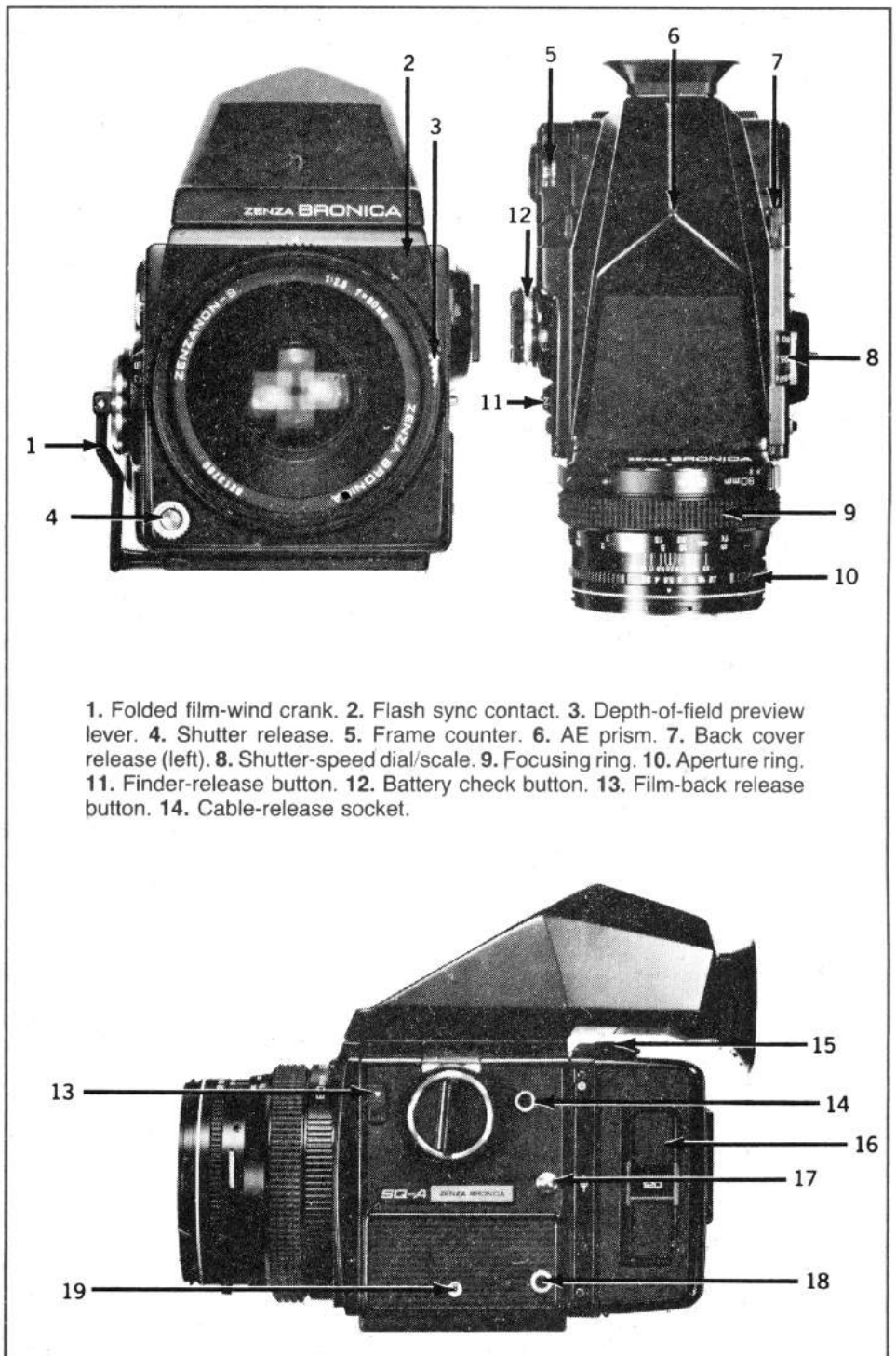
onet in at the front, film magazines snap on at the back, and viewing hoods and finders slide and click in place on top. However, there are many important differences which make the SQ-A more convenient.

When you align the raised red dot on the lens with the orange dot above the camera lens mount, insert the lens, and turn it counterclockwise until it clicks in position, the six contacts on the back of the lens mate with the spring-loaded contacts in the body. This enables the electronic shutter releasing and timing signals originating in the camera's electronic circuitry to control the action of each inter-lens shutter and to provide auto

exposure or match-diode metering with one of the optional meter finders in place.

The view through the Bronica's finder is one of the brightest and most contrasty we've seen on any 2 1/4 square SLR. It is brilliant to the corners, and its central focusing aids, a split-image rangefinder surrounded by a thickish microprism collar, are large enough to be really useful.

In addition to its technically astute and well executed design, we're pleased to report that the Bronica SQ-A is a camera that handles exceptionally well in the field, particularly when fitted with the optional Speed Grip S that's got a 35mm-style wind lever on top.



1. Folded film-wind crank. 2. Flash sync contact. 3. Depth-of-field preview lever. 4. Shutter release. 5. Frame counter. 6. AE prism. 7. Back cover release (left). 8. Shutter-speed dial/scale. 9. Focusing ring. 10. Aperture ring. 11. Finder-release button. 12. Battery check button. 13. Film-back release button. 14. Cable-release socket.

Hasselblad 2000FC/W

LENS: 80mm f/2.8 multi-coated Zeiss Planar in interchangeable bayonet mount, stops to f/22, focus to 2 ft.

SHUTTER: Electronically-timed horizontal metal focal-plane with speeds from 1 to 1/2000 sec. plus B, X sync at 1/90 sec., provision for multiple exposures.

VIEWING: Interchangeable waist-level finder with full-focusing Fresnel screen.

OTHER FEATURES: Automatic diaphragm, rapid-return mirror; 2 1/4 x 2 1/4, 2 1/4 x 1 5/8, 1 5/8 x 1 5/8 in. format interchangeable roll-film backs; depth-of-field preview; rapid-wind crank; interchangeable finders and viewing screens.

PRICE: Approx. \$2400 with 80mm lens.
MANUFACTURER: Victor Hasselblad, Ab, Göteborg, Sweden.

IMPORTER: Victor Hasselblad, Inc., Fairfield, N.J. 07006.

PHYSICAL DIMENSIONS: 4 1/4 in. wide, 4 in. high, 7 in. deep.

WEIGHT: 2 lb. 3 1/2 oz.

The "W" suffix in this new model's designation stands for "winder", marking this as the first Hasselblad that accepts a removable. 1.3 fps, 6 volt, nicad-powered winder, providing up to a claimed 1000 shots per charge. Not visible are extensively re-

designed mechanical and electronic systems permitting C or CF series lenses with internal leaf shutters to operate on the FCW without battery power, and a focal-plane shutter that (with winder mounted) automatically recocks itself in addition to retracting out of the way when a film magazine is removed. The remainder of the camera's features hew closely to the recently discontinued 2000 FC and are a highly efficient combination of tradition and electronics, taking full advantage of current technology while retaining full system compatibility.

Hasselblad has kept its latest camera and lenses to a simple-to-understand pattern. The Hasselblad is virtually identical in form, size and operation to the professionally tried-and-true 500 C/M (which, as a sister camera, continues to be the mainstay of the line), but inside, it now has a remarkably vibrationless, horizontally running, electronically controlled titanium focal-plane shutter that proved to be commendably accurate in our tests.

In addition, the FCW incorporates an instant-return mirror with non-return and lockup options, and a button permitting multiple exposures. Owners can use the present Hasselblad leaf-shutter lenses and bypass the focal-plane shutter, thus providing full electronic flash sync to 1/500 sec., or they can bypass the Compur leaf shutter by leaving it on B and use the electronically-controlled focal-plane shutter.

The shutter-speed ring is now at the rear of the mounted lens, next to the aperture-set ring. Both can be locked together for LVS operation, but the lock is far more convenient than previously. The new shutter provides X sync at 1/90 sec., intermediate speeds, and prevents an electronic flash unit from firing if a faster speed is set.

Is simply getting a four-times-faster high speed of 1/2000 sec. the only reason for the new model? Certainly not. By eliminating the need for the leaf shutter in each lens, and providing a focal-plane shutter, Hasselblad is now able to offer another F (for focal-plane) Zeiss lens line with larger maximum apertures and closer focusing, previously made impossible by the constrictions of the leaf shutter. For instance, the standard 80mm f/2.8 Zeiss Planar lens focuses to 2 ft. instead of the leaf-shutter 80's 3 ft. All F-series lenses feature rubberized-grid focusing rings at the front in place of the hard-to-grasp rear rings on most leaf-shutter lenses. Obviously, a wide variety of non-standard shutterless lenses can also be adapted to the camera.

Especially important to long-time Hasselblad users is the FCW's compatibility. Beside accepting every one of Hasselblad's 500-series Compur-shutter lenses, it will also take all of its film magazines and holders (with the sole exception of the Model 80 Polaroid back—the FCW uses its own Model 100), and the complete array of Hasselblad's top-mounted viewing accessories, including an uncoupled SPD meter prism.

Perhaps the 2000 FCW's greatest achievement is that it enhances a great system while retaining its timeless virtues.



1. Film magazine lock. 2. Removable waist-level finder. 3. Aperture/shutter speed coupler. 4. Shutter-speed ring tab. 5. Depth-of-field preview. 6. Film-advance crank. 7. Shutter release. 8. Lens-release lock. 9. Film-positioning/removal crank. 10. Exposure counter. 11. Film-advance/shutter cocking verification windows. 12. Neckstrap lug.

Hasselblad ELX

LENS: 80mm f/2.8 Zeiss Planar T* in interchangeable bayonet mount, stops to f/22 focus to 3¼ ft.

SHUTTER: Prontor CF mechanical leaf type in each interchangeable lens with speeds from 1-1/500 sec. plus B, T setting via locking release on body, X sync at all timed speeds.

VIEWING: Interchangeable waist-level finder with full-focusing Fresnel screen.

OTHER FEATURES: Integral motor in base, powered by 6v rechargeable nicad battery provides automatic film advance at 1.1 fps; 6-pin receptacle provides battery charge, remote control, and intervalometer capability; automatic diaphragm; 2¼ × 2¼, 2¼ × 1-5/8, 1-5/8 × 1-5/8 in.-format interchangeable roll-film backs; interchangeable finders and viewing screens; SPD meter cell in left-hand wall of mirror box points at film center, providing center-weighted off-the-film (OTF) flash automation for SCA-300-system flash units via 6-pin receptacle on body.

PRICE: Unavailable at press time.

MANUFACTURER: Victor Hasselblad, Ab, Göteborg, Sweden.

IMPORTER: Victor Hasselblad, Inc., Fairfield, NJ 07006.

PHYSICAL DIMENSIONS: 37/8 in. wide, 513/16 in. high, 77/16 in. deep with 80mm f/2.8 lens and 120 film magazine.

WEIGHT: 4 lbs. 10 oz. (as above).

The Hasselblad 500ELX is the latest member of Hasselblad's distinguished series of 2¼ square SLRs with integral motor drive. Closely based on the previous and now discontinued Hasselblad 500 EL/M, the ELX has added several worthwhile features which will enhance the camera's convenience and versatility. The most important of these is a built-in SPD autoflash sensor which reads the amount of light reflected from the film during exposure and adjusts the flash output accordingly, providing correctly exposed flash pictures at virtually any aperture or shutter speed for films ASA/ISO 15-1000. The ELX uses the well established European SCA-300 system and is thus operable with a wide range of different brands of flash unit, all of which will provide readylight and flash confirmation signals in the viewfinder by means of an LED which lights up for the former and flashes for the latter.

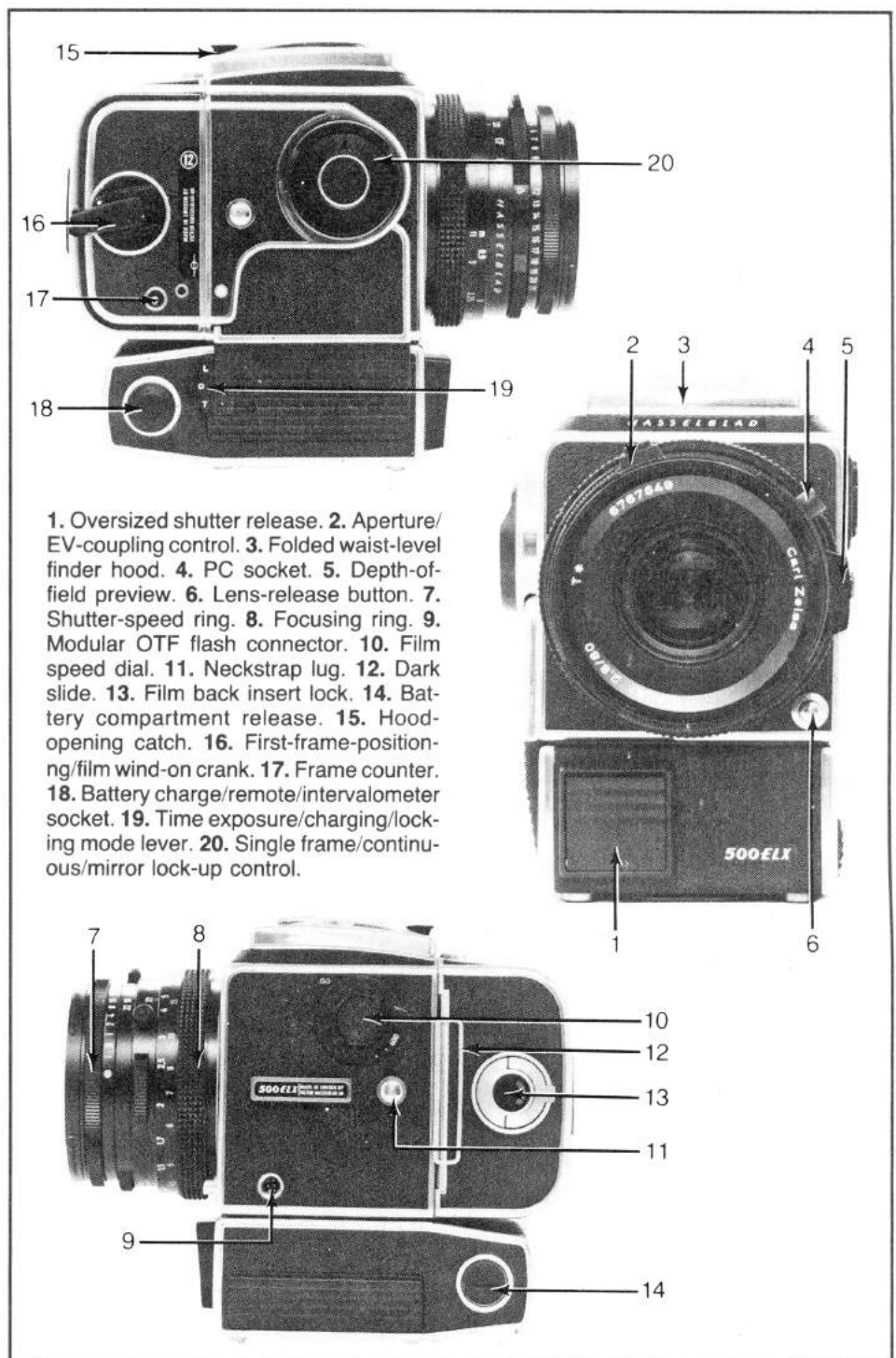
The most obvious external change is the large "NASA-type" shutter-release on the front that was pioneered on Hasselblad's many "U.S. space mission" cameras. Although it obviously facilitates picture taking with gloved hands and such, it's easily removable and replaceable with a conventional release by those who prefer the latter. A less obvious external change is the revised viewing hood which will henceforth be standard equipment on all Hasselblad models. Unlike the previous hood which had to be carefully folded one side at a time, the new hood has hinged sides and can be literally folded shut with one hand. It also has a large, easily interchangeable eyepiece.

The ELX's internal changes are more subtle. In order to eliminate the finder vignetting that was one of the few questionable characteristics of leaf shutter Hasselblads, the ELX's mirror has been lengthened slightly to provide a uniformly bright viewing and focusing image. However, to achieve this seemingly minor improvement, the entire mirror-actuating mechanism had to be revamped. Instead of flipping straight up the instant the shutter release is pressed, the ELX's mirror moves up and back in a complex "S-pattern" movement. It is a tribute to Hasselblad's mechanical engineers that the mirror's mo-

tion seems as swift and well-damped as it was in the EL/M.

Finally, Hasselblad has just introduced a radically new "Optofibre" focusing screen consisting of coherent bundles of fiber optics. This optional accessory enhances the ELX's already bright and contrasty viewing image to a remarkable degree and it will, of course, fit all late-model Hasselblads.

In keeping with Hasselblad's traditional policy of non-obsolescence, all top-mounted, front-mounted, and back-mounted accessories for the ELX are fully interchangeable among current and previous 500-models.



Mamiya 645 Super

LENS: 80mm f2.8 Mamiya Sekor C in interchangeable bayonet mount, stops to f/22, focus to 2 1/4 ft.

SHUTTER: Horizontal travel electronically-controlled cloth focal-plane with speeds from 4 to 1/1000 sec. plus B, X sync at 1/60 sec., FP at all speeds, special setting for coupling through-lens meter prism.

VIEWING: Interchangeable prism and waist-level finders. Standard screen has 45° split-image rangefinder, fine-focusing collar and full-focusing outer area.

OTHER FEATURES: Multiple-exposure provision, mirror lockup, shutter-release

button at front, X-sync hot shoe, film-identification clip, shutter-lock button, rapid-wind crank, optional variable-angle crank, depth-of-field preview, delayed-shutter-release; interchangeable film back accepts 120 or 220 film, Polaroid back, aperture-preferred spot/average auto exposure with accessory AE prism finder.

PRICE: Not available at press time.

MANUFACTURER: Mamiya Camera Co., Tokyo, Japan.

IMPORTER: Mamiya Div., Berkey Marketing, Woodside, N.Y.

PHYSICAL DIMENSIONS: Approx. 4 in.

wide, 5 3/4 in. high, 6 1/4 in. deep.
WEIGHT: Approx. 3 1/2 lb.

After a decade of staunch service in the 4.5 x 6cm roll-film format, the Mamiya M645 has received a considerable overhaul to make it more conducive to working pros and serious amateurs. Major improvements include quick-change film magazines rather than the former film inserts, an assortment of optional film winding devices (including a variable angle crank, a 35mm-style wind lever and a motor winder) plus a shutter dial aside the finder which conveniently faces the photographer. The new model should be in stores by the fall of 1985.

Current users of the M645 1000S will undoubtedly be glad to know that most lenses and other front-mounted accessories work on the new Mamiya without modification. But the redesigned top of the M645 (tentatively called the M645 Super) will not accept current finders, prisms and viewing screens.

This "ideal format" camera that employs 120 or 220 roll film (and will also have 35mm roll film holders and inserts) seems quite adept at portraits, landscapes or any subject where fine detail is important but view camera bulk would be impractical.

The newest features will add immeasurably to support this concept of mobility and fast operation that also provides a negative or transparency larger than 35mm.

Production models of the new M645 Super will be housed in a light but tough polycarbonate body. The same material will be used for the magazines.

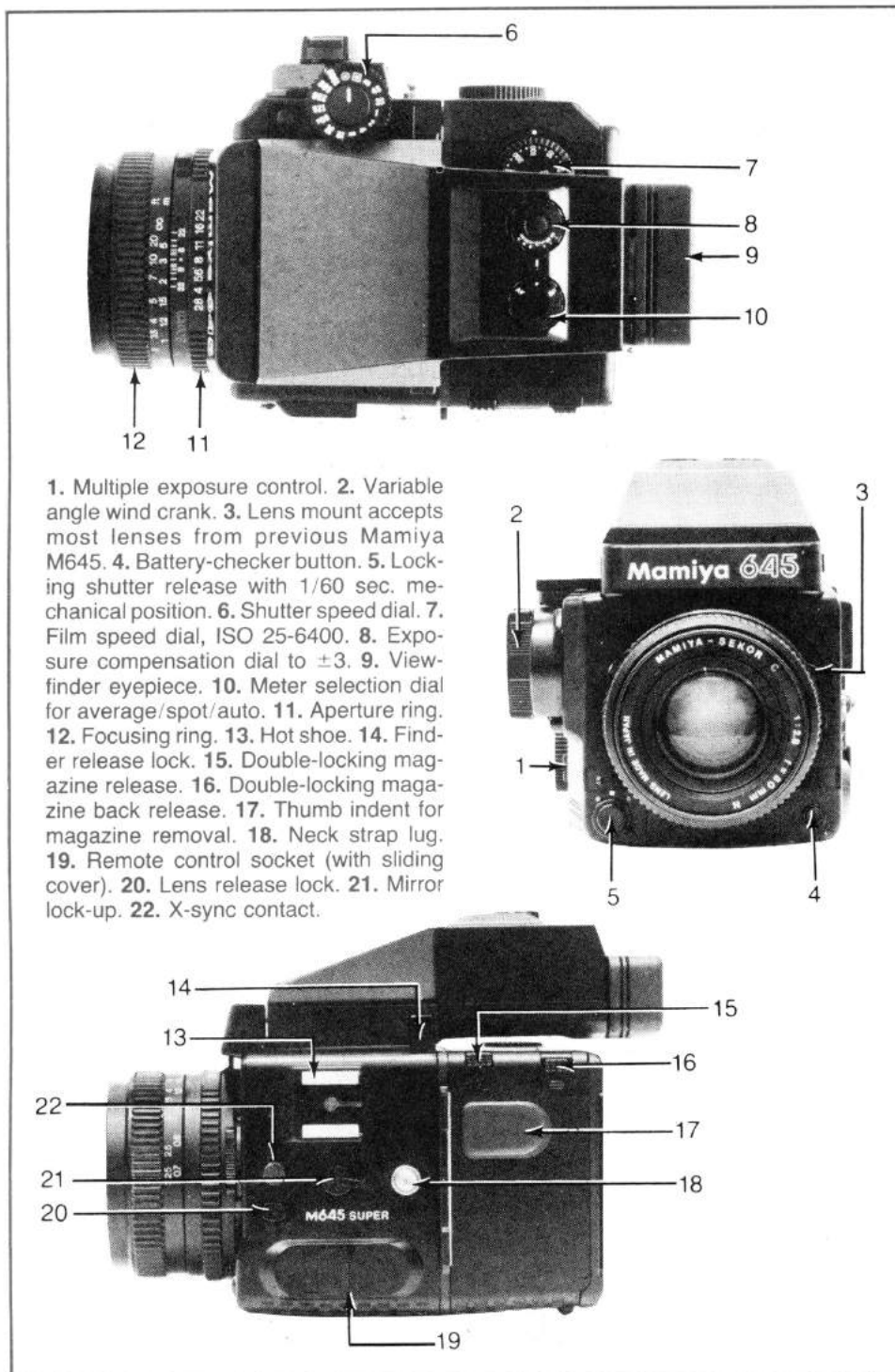
The moving coil electronically-controlled shutter has been changed from vertical to horizontal travel with an increase in speeds from 4 to 1/1000 sec. plus B and mechanical flash sync at 1/60 sec. (Film speeds range from ISO 25-6400.) Add the motor grip and film can be advanced 1 1/2 frames per sec. A variable angle crank included in the prototype provided smooth and rather quick action to the next frame. One revolution of the crank is required until it clicks in and stops exactly where it started.

Among some of the other noteworthy improvements are electric contacts adjacent to the screen for a coupled AE prism finder. There is centered-weighted through-lens exposure metering that switches from average to spot depending upon the illumination that falls on fast-acting silicon cells.

Shutter shock, while moderately present in the previous model, is all but eliminated due to the new instant-return mirror which incorporates an air damper shock absorber and lock-up provision. The new shutter still uses a moving coil unit rather than an electromagnet to restrain the second shutter curtain, thus minimizing battery drain.

The M645 has 18 lenses. They range from a 24mm f/4 to a 500mm f/8 and all have automatic diaphragms.

Accessories include an automatic bellows and slide copier, revolving adapter for easier tripod shooting, infrared or wired remote control and the choice of five focusing screens.



Mamiya RZ67 Pro S

LENS: Interchangeable 110mm f/2.8 Mamiya-Sekor Z with stops to f/32, focusing down to 21 in.

SHUTTER: Electronically-controlled Seiko #1 between-lens leaf shutter in each lens, with speeds from 8 to 1/400 sec., plus B and T, MX sync.

VIEWING: Interchangeable waist-level finder with light-excluding hood, built-in magnifier; user-interchangeable viewing screens; standard screen has central fine matte spot surrounded by full-focusing, fine-Fresnel-pattern outer area; automatic finder masking system indicates picture area for vertical or horizontal orientation of revolving back.

OTHER FEATURES: Interchangeable 120 and 220 film magazines incorporate ASA 25-6400 dials and electric contacts for automatically keying film speeds into optional match-diode-metering PD Prism Finder and other meterized finders; arrays of contacts on back of each lens, in camera body and adjacent to focusing screen relay shutter speed, aperture and other information among camera controls, interlens shutters, interchangeable backs and optional meter prisms to provide through-lens match-diode and aperture-preferred metering options; film-advance signal and dark slide warning in finder; built-in mechanical interlocks prevent lens removal without cocking shutter, film magazine removal without inserting dark slide; multi-function lever on side of body selects multi-exposure setting, releases revolving back for vertical or horizontal framing; combined film wind/shutter cocking lever on right-hand side of body advances film to next frame in single 114° stroke; focus lock; shutter-release lock; accepts Mamiya RB67 lenses and finders directly, RB67 film holders by means of G Adapter RZ, electronic, two-channel remote release, motor winder, Polaroid back.

PRICE: \$1,980 with 120 roll-film back and 110mm f/2.8 Z; \$2,045 with 90mm f/3.5 Z; \$2,045 with 127mm f/3.8 Z.

MANUFACTURER: Mamiya Camera Co., Tokyo, Japan.

IMPORTER: Prof. Products Div., Berkey Marketing Co., 2520 B.Q.E. West, Woodside, NY 11377.

PHYSICAL DIMENSIONS: 5 1/2 in. wide, 5 1/4 in. high, 8 1/2 in. deep.

WEIGHT: 5 lb. 4 1/2 oz. with 110mm lens.

Now that Mamiya has overcome its financial vicissitudes and found new U.S. distribution, the brilliantly innovative RZ67 is in a strong position to take over the reign of its protean forebear, the RB67. The streamlined body with its improved handling features and electronic refinements is a pleasure to use.

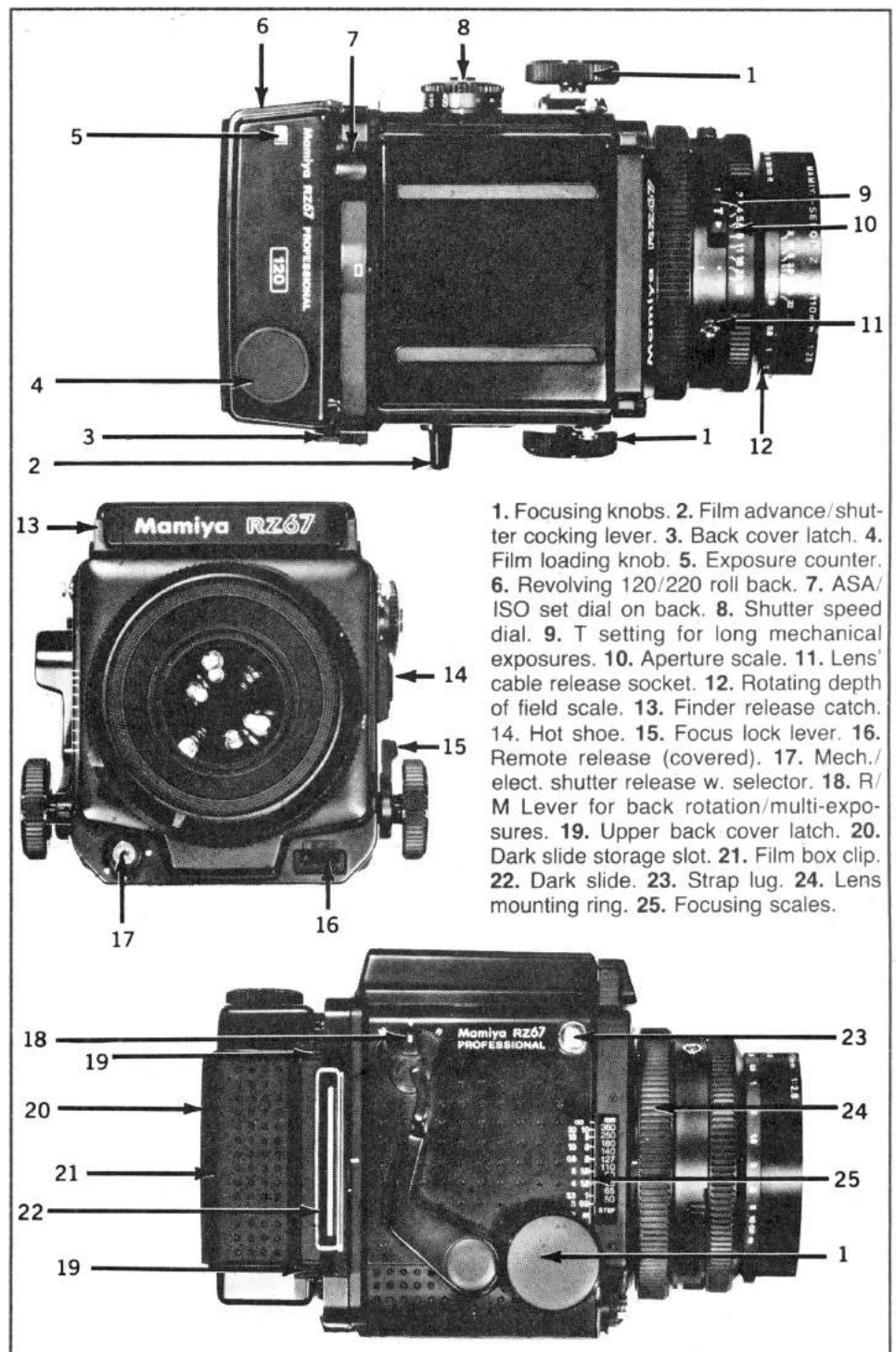
In general Mamiya has followed a conservative, nonobsolescent design philosophy with respect to the RZ's mechanical components. For example, top-mounted accessories such as finders and meter prisms snap on pretty much as before, and most old and

new top-mounted accessories will fit either RZ or RB. And while the lens mount throat has been considerably widened (by 7mm) on the RZ to enable the optical designers to come up with faster lenses with improved overall sharpness and evenness of illumination, RB lenses will fit and function perfectly on the RZ, albeit without coupling electronically to its meter finders.

Nor has the back end been forgotten—RB roll film magazines will mount on the RZ by means of a simple adapter dubbed the G Adapter RZ. However, the complex adapter system needed to mount both ordinary and specialized film holders on the RB has been

replaced by a much simpler system.

When actually taking pictures, the RZ67's ergonomically correct layout is a pleasure. The major controls—aperture ring and shutter-speed dial—are easily visible by glancing down, and the separation of function is admirable, with either hand usable for focusing. The focusing screen, while noticeably brighter than the RB67's, is also commendably contrasty and subject details snap into focus in a most reassuring manner. Complementing the excellent control placement is the RZ's overall balance and feel, which can only be described as excellent for a comprehensive and competent 6 × 7cm SLR.



1. Focusing knobs. 2. Film advance/shutter cocking lever. 3. Back cover latch. 4. Film loading knob. 5. Exposure counter. 6. Revolving 120/220 roll back. 7. ASA/ISO set dial on back. 8. Shutter speed dial. 9. T setting for long mechanical exposures. 10. Aperture scale. 11. Lens' cable release socket. 12. Rotating depth of field scale. 13. Finder release catch. 14. Hot shoe. 15. Focus lock lever. 16. Remote release (covered). 17. Mech./elect. shutter release w. selector. 18. R/M Lever for back rotation/multi-exposures. 19. Upper back cover latch. 20. Dark slide storage slot. 21. Film box clip. 22. Dark slide. 23. Strap lug. 24. Lens mounting ring. 25. Focusing scales.

Pentax 6X7

LENS: Interchangeable bayonet-mount 105mm f/2.4 Super-Multi-Coated Takumar with stops to f/22, focus to 3½ ft.

SHUTTER: Electronically-controlled rubberized cloth focal-plane with speeds from 1 to 1/1000 sec. plus B, provision for T, FP and X sync.

VIEWING: Interchangeable eye-level pentaprism with microprism, fine-focusing collar, full-focusing screen, service-center interchangeable screens.

OTHER FEATURES: Battery check; mirror-reset button; provision for 120 and 220 film and accessory through-lens GPD metering prism; depth-of-field preview;

mirror lock.

PRICE: \$610, body only; 105mm f/2.4, \$377; TTL pentaprism finder, \$340.

MANUFACTURER: Asahi Optical Co., Ltd., Tokyo, Japan.

IMPORTER: Pentax Corp., Englewood, CO 80112.

PHYSICAL DIMENSIONS: 7¼ in. wide, 4¾ in. high, 6 in. deep.

WEIGHT: 4 lb. 7 oz.

In a world of small-format 35mm cameras and large-format view cameras, the center still holds in the form of medium-format roll-film cameras, of which the Pentax 6 × 7 is a

stalwart and efficient example. Although it has a bit more bulk than the average 2¼ square camera and the recently popular 6 × 4.5 cm breed, it gives up nothing to the competition in terms of handling. It's modeled on a 35mm design, with easy hand-holdability, eye-level viewing (with pentaprism), rapid-wind film advance and a choice of 120 or 220 films. There's also a f/2.4 105mm normal lens that's pretty speedy for this size camera, which gives you transparencies or negatives in 2½ × 2¾ in. "ideal" format.

In its latest form, the Pentax 6 × 7 has added such refinements as a mirror lock-up (7) which must be activated after each exposure and a low-battery-voltage signal. For a camera this size, its balance can only be described as superb. It would be hard to improve the Pentax's ability when hand-held in poor lighting conditions. The meter prism couples with the shutter-speed dial (10) and indicates the light reading via a match-needle system. You select the shutter speed first and adjust the lens aperture to line up the needle in the finder. Amazingly, the meter prism is no bigger or heavier than a conventional prism. The optical system delivers a life-size 1:1 viewing image. The Pentax's bright, fine-lined Fresnel focusing screen with central microprism surrounded by a fine-focusing collar is equal to the task of accurate focusing on a wide range of subjects.

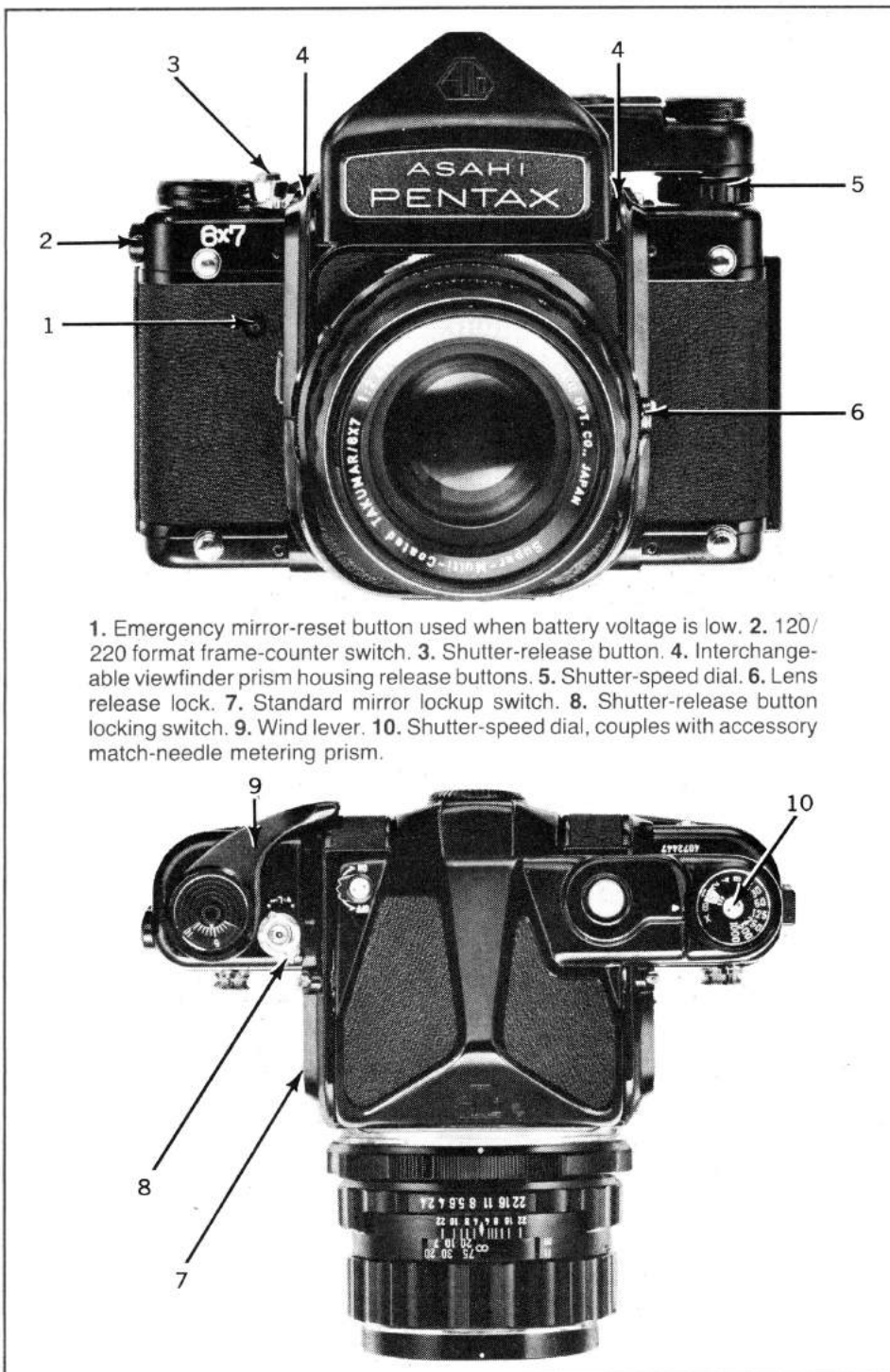
Do not expect the view through the prism finder to equal in brightness that of a 35mm SLR. It doesn't, but it's very usable and clear. We found the surrounding wide fine-focusing collar to be extremely efficient and easy to use—as was the entire outer picture area. If you wear eyeglasses, you should see almost the entire area of the finder screen.

The 6 × 7's single-stroke advance lever (9) is modeled in shape on the Pentax's 35mm SLR models. The shutter release (3) is well-placed and operated smoothly and predictably during field tests.

Though the Pentax has a large instant-return mirror, its action is well damped and the camera as a result is quite steady, unlike many 2¼ SLRs which are virtually unusable, hand-held, below 1/60 sec. Shutter noise was at the obviously audible level, typical of most 2¼ SLRs. Resolution tests prove the Pentax's film plane flatness is superior to most 2¼ SLRs we've tested.

The Pentax 6 × 7 shutter is an electronically controlled, cloth focal plane unit which gets its power from an Eveready 544 silver-oxide battery. It proved to be exceptionally accurate over its entire range of 1-1/1000 sec.—a remarkable achievement given the size of the mechanism.

To keep the size down, the Pentax engineers have opted for a pentaprism which covers only 85% of the picture area. Should you demand to see 100% of the image, you can always press the two little buttons (4) on either side of the pentaprism, lift it out, and substitute a waist-level finder. All its 18 lenses, including a macro lens and telephoto lenses up to the 1000mm f/7 Reflex-Takumar, feature a three-lug bayonet mount.



1. Emergency mirror-reset button used when battery voltage is low. 2. 120/220 format frame-counter switch. 3. Shutter-release button. 4. Interchangeable viewfinder prism housing release buttons. 5. Shutter-speed dial. 6. Lens release lock. 7. Standard mirror lockup switch. 8. Shutter-release button locking switch. 9. Wind lever. 10. Shutter-speed dial, couples with accessory match-needle metering prism.

Pentax 645

LENS: 75mm f/2.8 SMC Pentax-A in interchangeable bayonet mount, stops to f/22, focus to 23 1/2 in.

SHUTTER: Vertical travel electronically-controlled cloth focal plane with speeds from 15 to 1/1000 sec. plus B, X sync. at 1/60 sec., 1/60 sec. mechanical speed.

VIEWING: Non-interchangeable eye-level prism with split-image rangefinder, micro prism collar, full focusing, non-interchangeable screen.

OTHER FEATURES: Six AA cells power continuous and single exposure auto-wind for shutter speed preferred, aperture preferred, program and manual exposures, TTL and program flash and continuous light measurement with gallium photo diode reading TTL flash from the film surface, shutter speeds, apertures, frame number, ± 3 EV exposure compensation, over, under exposure and out of exposure range warnings visible as LCDs on top of camera, as LEDs in viewfinder; exposure ready and confirmation signal in finder, dedicated TTL hot shoe, variable diopter finder -5 to +2 diopters, manual wind provision, multiple exposure control, interchangeable film holders for 120, 220 roll film and 70mm, lithium battery powered exposure data memory, film box memo holder, removable grip with electric release, LCD panel light, multiple exposure provision.

PRICE: \$1,125; \$1,458.00 with standard 75mm f/2.8 lens.

MANUFACTURER: Asahi Optical Co., Tokyo, Japan.

IMPORTER: Pentax Corp., Englewood, CO, 80112.

PHYSICAL DIMENSIONS: 5 5/8 in. wide, 4 1/4 in. high, 4 5/8 in. deep.

WEIGHT: 3 lbs. 13 oz. (with grip, 75mm lens and batteries).

There are still very few 35mm SLRs with aperture-preferred, shutter-preferred and program auto exposure complete with TTL flash measurement and none yet with built-in motor wind. Incredibly, here is a 4.5 x 6 cm (1 5/8 x 2 1/4 in.) SLR with all those features, the Pentax 645, which works as easily and quickly as a state-of-the-art multiple mode motorized 35mm.

The view through the finder is large and bright, easily focused even by the near-sighted or far sighted, thanks to the variable diopter correction. The camera LEDs in the finder provide excellent information succinctly as do the LCDs atop the camera. The push button shift controls to change exposure modes, film speeds and exposure corrections do take some getting used to if you're accustomed to regular mechanical controls. Still traditional 35mm type operating procedures, with the camera resting in your left hand, your left thumb and forefinger used for focusing while the right hand grasps the handgrip and right forefinger presses the shutter release, works nicely. You can make 15 pictures using the 120 roll film back (provided), 30 with the accessory 220 roll film back and 90

with the accessory 70mm back all at motorized speeds up to 1.5 pictures per second.

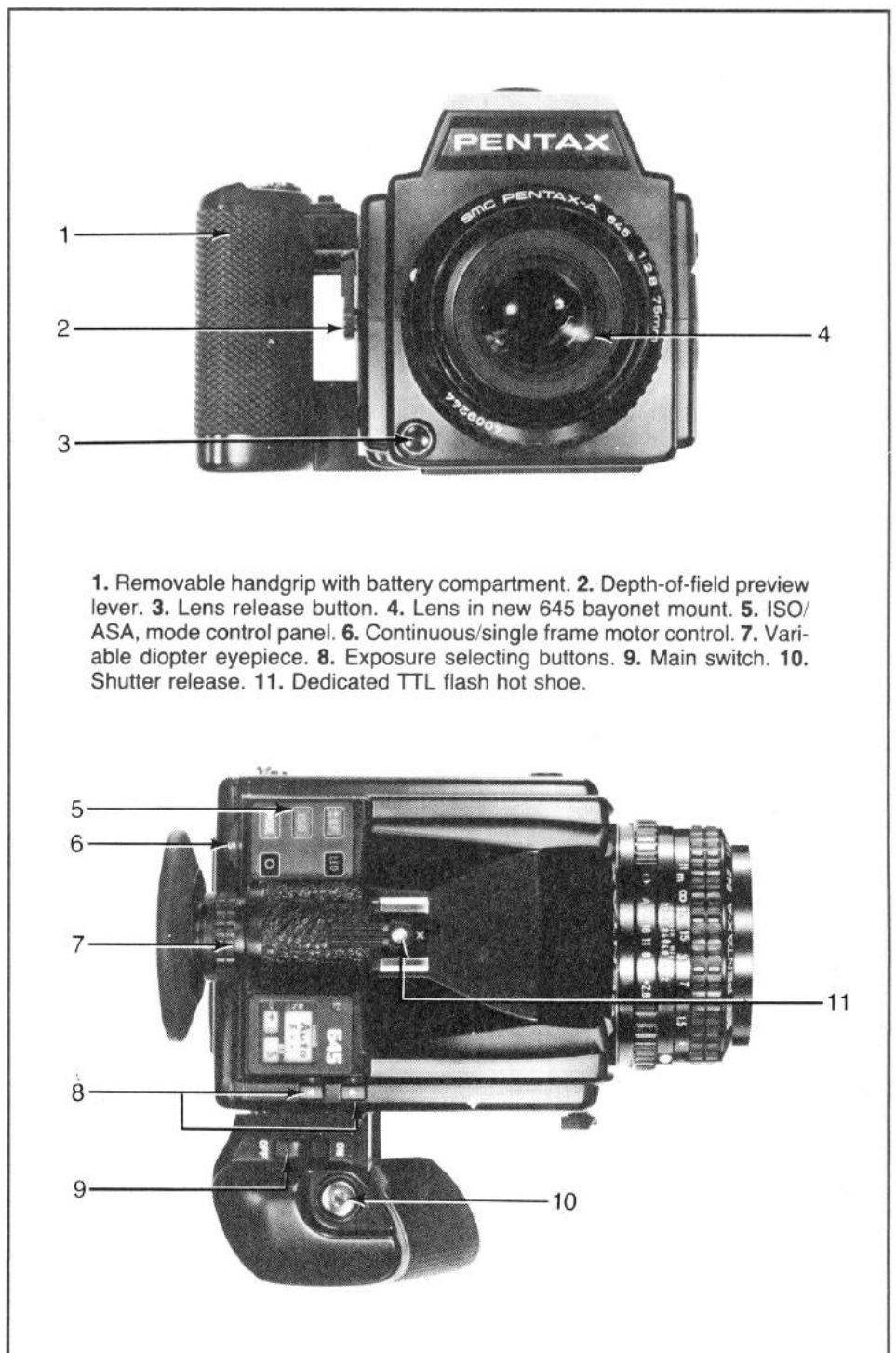
The camera uses a new Pentax 645A lens mount with electronic contacts. However, lenses from the Pentax's 6 x 7 can also be fitted and operated in aperture priority, metered manual and TTL flash but with full auto diaphragm operation. Pentax's initial lens offering for the 645 includes 45mm f/2.8 (both with and without leaf shutters for flash sync at all speeds) 150mm f/3.5 and an 80-160mm f/4.5 zoom.

Full TTL flash operation is possible with all Pentax flash units already available having that feature for Pentax 35mm SLR cameras.

At present the list contains three, ranging from a modest direct flash to a powerful head and handle flash unit.

While alkaline energy batteries are advised, nicads can also be used and manganese in an emergency although the total number of rolls per battery will be less.

Pentax's decision to go all out for the most compact design possible eliminating interchangeable finders and backs is certainly a bold one. But the resulting camera may indeed appeal for the first time to 35mm camera owners previously thinking the 4.5 x 6 cameras with full automation and motors were rather awkward and bulky.



Rollei 6006

LENS: 80mm f/2.8 Planar in interchangeable bayonet mount, apertures to f/22, focus to 3 ft.

SHUTTER: Electronically-controlled inter-lens leaf shutter (in each lens) with speeds of 30 secs. to 1/500 sec. plus B, X sync at all speeds.

VIEWING: Interchangeable waist-level finder with built-in sports finder, micro-prism collar, full focusing Fresnel outer area with grid lines.

OTHER FEATURES: Three large area silicon cells behind spectral response compensating semi-silvered, instant return mirror read lower center-weighted area at

working aperture, providing fully automatic shutter-preferred exposure control (you set the shutter, camera determines aperture) with over-, under-exposure, flash ready, and auto check, beyond meter-range warning and low battery power LED indicator adjacent to finder; manual override. Automatic compensation for extraneous light entering finder. ASA settings 25-6400. Combined depth-of-field preview/exposure hold is coupled to camera-selected aperture readout on each lens, mode selector on body permits single frame or 1.5fps. sequences. Removable, interchangeable magazine

backs with built-in dark slides for 120/220 films, 6 × 6 and 6 × 4.5 formats. Interchangeable, pre-loadable film cartridges drop into backs. Automatic wind-on and first frame positioning, automatic roll-up after last exposure. Fourteen contact socket on body accepts electronic cable release/mirror lock, intervalometer, infrared remote release, etc. Internal off-the-film metering via separate silicon sensor for TTL auto-flash via SCA 300 module. All circuitry powered by slide-in fast charge nicad battery.

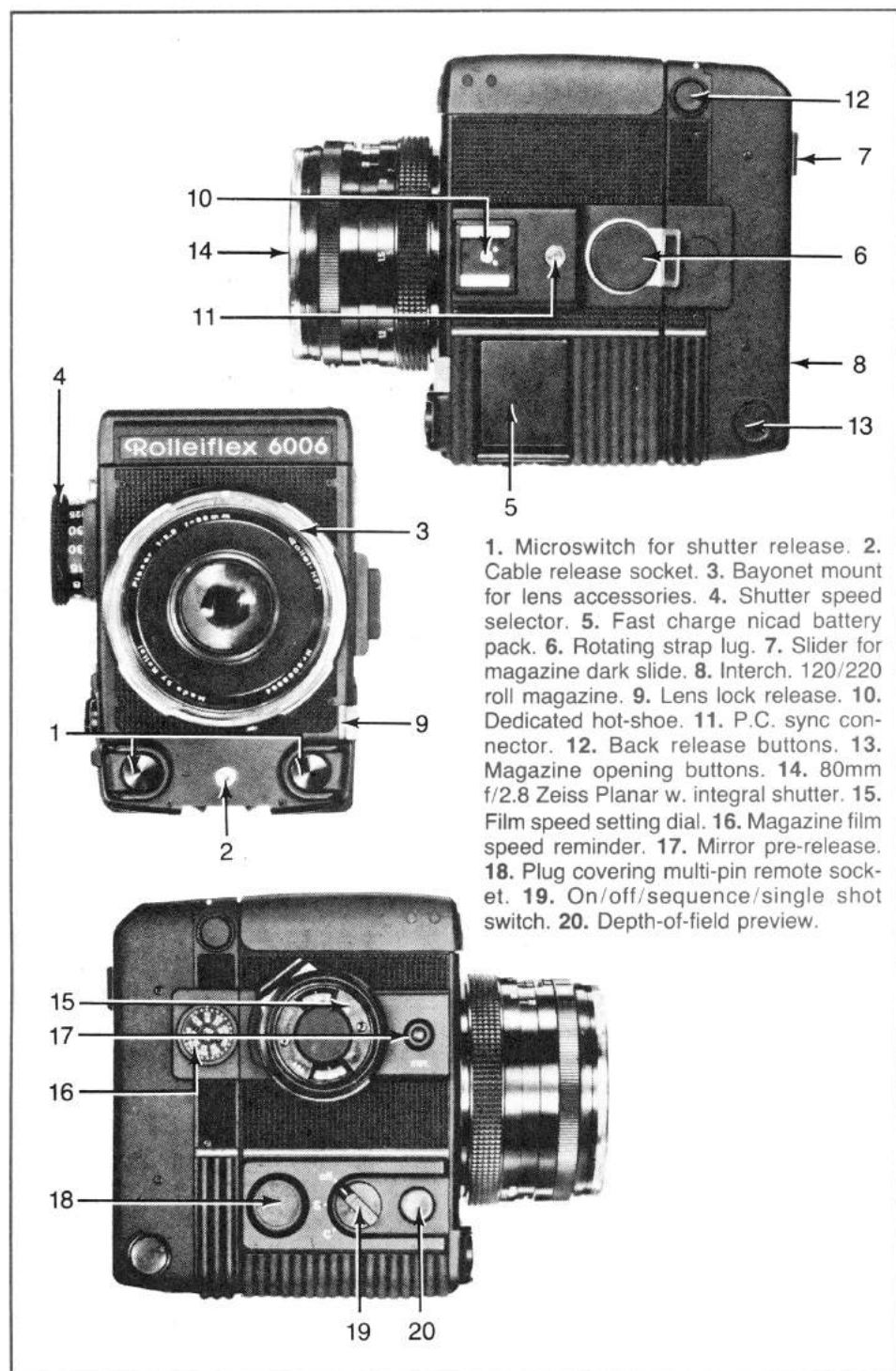
PRICE: \$1,875, body only; \$2,850 with 80mm f/2.8 Planar lens.

MANUFACTURER: Rollei Fototechnik GmbH, Braunschweig, West Germany.

IMPORTER: Rollei Division, Berkey Marketing Co., Woodside, NY 11377.

PHYSICAL DIMENSIONS: 4.4 in. wide, 6.7 in. high, 5.4 in. deep.

WEIGHT: 4 lbs. 8 oz.



1. Microswitch for shutter release.
2. Cable release socket.
3. Bayonet mount for lens accessories.
4. Shutter speed selector.
5. Fast charge nicad battery pack.
6. Rotating strap lug.
7. Slider for magazine dark slide.
8. Interch. 120/220 roll magazine.
9. Lens lock release.
10. Dedicated hot-shoe.
11. P.C. sync connector.
12. Back release buttons.
13. Magazine opening buttons.
14. 80mm f/2.8 Zeiss Planar w. integral shutter.
15. Film speed setting dial.
16. Magazine film speed reminder.
17. Mirror pre-release.
18. Plug covering multi-pin remote socket.
19. On/off/sequence/single shot switch.
20. Depth-of-field preview.

The totally-integrated, all-electronic Rollei 6006 still represents a unique solution to medium-format SLR design problems. Its built-in motor, shutter-preferred exposure automation and electronically-controlled behind-the-lens shutter place it in the forefront of cameras of its type. Advanced electronics permit independent control of film advance/mirror operation and shutter cocking.

The 6006 completes the design picture by adding the long-sought interchangeable back system along with through-the-lens, off-the-film plane automatic flash, on-body mirror lockup control, new and improved control locations and a non-skid body covering.

Heart of the new magazines is a built-in rollerblind-like darkslide that rolls out of the way inside the back of the holder, at the same time locking the back securely in place. The ingenious reversible, pre-loadable plastic film carriers can be popped into the new magazines as in the old SLX back.

Set the shutter speed desired on the body-mounted dial and it is electronically-transferred to the shutter. Three photocells read the exposure and set the linear motor driven lens diaphragm. There are no mechanical connections between body and shutter or diaphragm—a 10 contact circuit does the job.

Load film in the flip-over cartridge, insert it in the back, press one of the dual shutter releases and the first frame is automatically positioned. Up to 1.5 frames per sec. can be fired, or, with accessories, up to 10 multiple exposures per sec. can be made on a single frame. The center-weighted metering system is fast-acting and accurate.

Both the 6006 and the SLX share the same stable of Carl Zeiss lenses ranging from 40 to 350mm. New are a Rollei-made R2X Teleconverter, a Schneider 55mm PC Super-Angulon, 140-280mm, 75-150 zooms.

If you need a fast-loading, easy handling, remotely controllable medium format camera for studio or field use, you will find few to compare with this neatly executed integrated package.

Rollei SL66E

LENS: 80mm f/2.8 Zeiss Planar in interchangeable bayonet mount, stops to f/22, focusing to 6 1/2 in. from front of lens.

SHUTTER: Cloth focal-plane, speeds from 1 to 1/1000 sec. plus B, X, and FP sync.

VIEWING: Interchangeable waist-level finder with full-focusing screen, central microprism grid.

OTHER FEATURES: Through-the-lens manual metering; OTF automatic flash control; quick return mirror; depth-of-field preview lever; interchangeable film backs couple with exposure metering system inputting preset film speeds, provide for 12 or 25 exp. rolls; sliding, tilting movement for depth-of-field control; bayonet mount; end of film reminder.

PRICE: \$3240 with 80mm Planar, magazine; body only, \$1950.

MANUFACTURER: Rollei Fototechnic, Braunschweig, West Germany.

IMPORTER: Rollei Division, Berkey Marketing Co., Woodside, NY 11377.

PHYSICAL DIMENSIONS: 5 1/8 in. wide, 4 3/8 in. high, 6 3/4 in. deep.

WEIGHT: 4 lb. 6 oz.

Rollei's SL66E is a monument to the virtues of evolution. Its mechanics are closely based on the venerable SL66 but its redesigned body has three large-area silicon cells behind its mirror (for TTL metering) and a 4th for TTL auto flash control. An LED array surrounding the focusing screen provides matched diode manual metering.

Redesigned interchangeable 120/220 magazines in 6x6 and 4.5x6 sizes and a Polaroid pack back have ASA setting indexes which couple directly to the camera's colored, matched-diode, full-aperture metering system, automatically entering film speed changes as they're set. Metering system works with accessory hoods, prisms, and interchangeable screens without change. Correction factors for close-ups, etc. can be added through a new exposure override setting dial on the top of the lens mount.

Unchanged are the SL66's easy-loading backs and the camera's many convenience features. The lens mount's 8° rise/fall and tilt movement, for increased depth of field, smooth rubberized cloth focal plane shutter, instant return mirror with lock-up and pneumatic dampening, and Zeiss-made lens line remain the same. Focusing is extremely accurate because of the precise rack and pinion drive and convenient body-mounted focusing knob (which holds four separate, easily read focusing scales for lenses from 50 to 250mm). The long lens travel permits closeups to 6 1/2 in. from the lens with the 80mm lens mounted normally—even closer with shorter lenses or reverse mounting. Optics from 50 to 120mm can be reverse mounted for extreme-close up work.

The standard focusing is a brilliant Fresnel screen, with 16mm microprism in the center. Removable frames and six different focusing screens are offered. The hood itself can be exchanged for an accessory 45° prism finder.

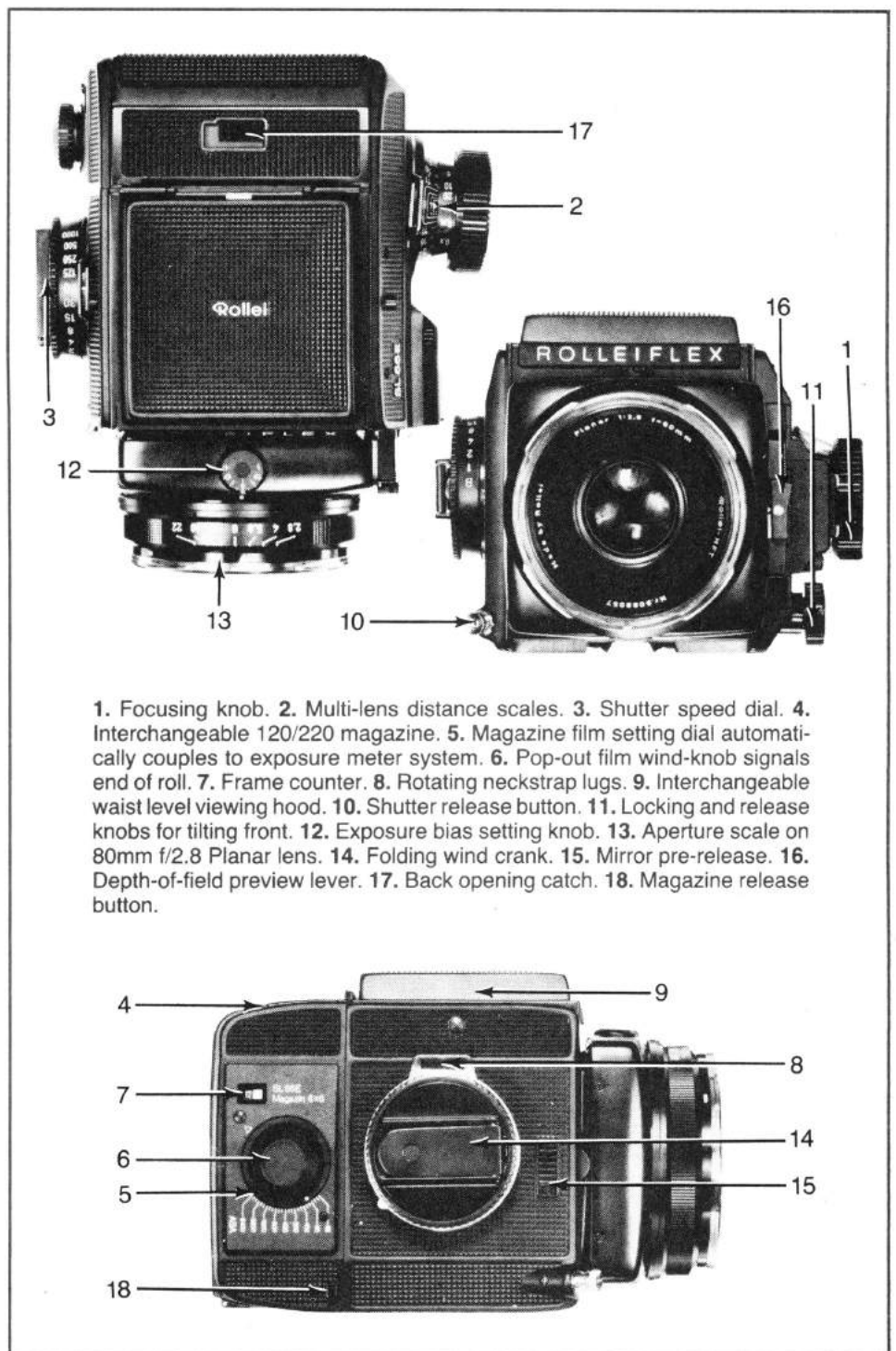
TTL metering functions without change with all finders and focusing screens.

Lenses currently offered range from the 30mm f/3.5 F-Distagon to the 1000mm f/8 Tele-Tessar along with a special shutter-equipped 80mm f/4 Distagon and a 150mm f/4 Sonnar for flash sync work at speeds higher than the 1/30th sec. usable with the camera's focal plane shutter. Optics from 80 to 250mm take bayonet-mounting series VI filters, have automatic diaphragms and 1/2-stop clicked diaphragm settings, and permit open aperture metering. Longer lenses and the Luminar macro lenses meter stopped down. Its convenient mirror pre-release,

locking depth-of-field preview lever, extraordinary close-up capacity, and tilting lens mount make the SL66 an exemplary medium format SLR for precise work. The focal-plane shutter is nearly vibration-free and permits use of special optics for scientific work.

Most controls are well-placed for quick handling and the camera's easy to grip rubber covered body makes for secure holding and quick-shooting. The double-action film crank's in the classic Rollei TLR tradition, and the film backs load quite easily.

All in all the SL 66E's optical and mechanical versatility makes it a complementary camera to Rollei's other 2 1/4 SLRs.



1. Focusing knob. 2. Multi-lens distance scales. 3. Shutter speed dial. 4. Interchangeable 120/220 magazine. 5. Magazine film setting dial automatically couples to exposure meter system. 6. Pop-out film wind-knob signals end of roll. 7. Frame counter. 8. Rotating neckstrap lugs. 9. Interchangeable waist level viewing hood. 10. Shutter release button. 11. Locking and release knobs for tilting front. 12. Exposure bias setting knob. 13. Aperture scale on 80mm f/2.8 Planar lens. 14. Folding wind crank. 15. Mirror pre-release. 16. Depth-of-field preview lever. 17. Back opening catch. 18. Magazine release button.

Mamiya C330 Pro S

LENS: 80mm f/2.8 Mamiya-Sekor, stops to f/32, focus to 7 in.

SHUTTER: Seikosa-S between-lens with speeds from 1 to 1/500 sec. plus B, MX sync in each lens set.

VIEWING: Interchangeable waist-level finder with user exchangeable full-focusing screens, TLR system.

OTHER FEATURES: Combined film-advance and shutter-cocking crank; provision for intentional double exposures; semi-automatic film loading; 120-220 back; auto parallax-compensation selector; focusing-knob lock.

PRICE: \$795 with 80mm f/2.8; body, \$495.

MANUFACTURER: Mamiya Camera Co., Tokyo, Japan.

IMPORTER: Prof. Products Div., Berkey Marketing Co., 2520 B.Q.E. West, Woodside, NY 11377.

PHYSICAL DIMENSIONS: 4¹³/₁₆ in. wide, 6⁵/₈ in. high, 4¹/₂ in. deep.

WEIGHT: 3 lb. 11¹⁵/₁₆ oz.

With the demise of Rollei's TLRs, Mamiya and Yashica are pretty much the source for the useful, ruggedly simple, medium format twin-lens reflexes still the mainstay of many magazine, studio, and wedding photographers. Mamiya's C330 Pro S and 220c are

currently the only TLRs available with interchangeable lenses. The deluxe C330F, with its brighter focusing image, still takes the whole range of Mamiya interchangeable optics from 65mm to 250mm.

This camera combines the versatility of an interchangeable-lens camera with the small size and convenient operation of twin-lens reflexes. Features include rack-and-pinion focusing, interchangeable finders and camera backs, combined shutter cocking and film advance, provision for intentional double exposures, auto-resetting frame counter and focusing-knob lock.

The C330s is extraordinarily rugged, providing a sturdy base for closeup and long-lens work with compact lens units. Parallax correction and exposure factor corrections are indicated at a glance by a moving red pointer that's visible in the finder while in shooting position.

There's even a choice of shutter releases—one on the right side (10) where it's always been, and one at the front of the base (11). Should you purchase the accessory pistol grip, there's an additional trigger release built into it.

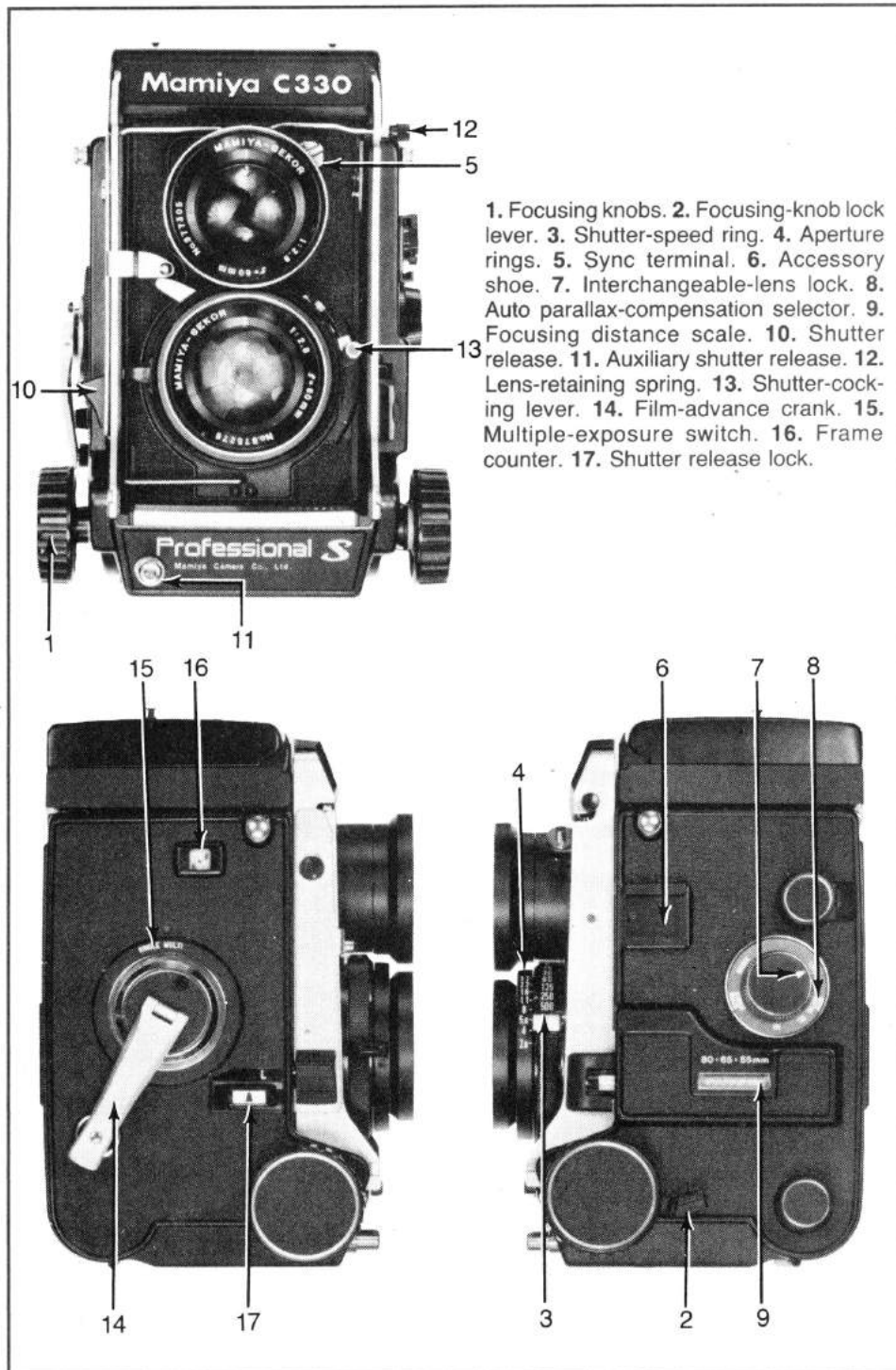
The film-advance crank (14), geared into the lens' shutter-cocking mechanism (13), requires only one forward stroke. There's no back swing as with the earlier C33. When you turn the crank you activate a coupling that depresses the shutter-cocking lever. While double-exposure prevention is thus built into the camera, you can bypass it if you choose. You turn a setting ring (15) on the right side of the camera from the roll-film setting to the sheet or multi-exposure setting. You can then cock the shutter manually and fire it without advancing the film. The switch remains at the multi-exposure mode until it is reset to the roll-film setting.

The automatic parallax compensation and effective-aperture indicators work for all lenses except the wide angle. To set the camera for automatic parallax indication you turn a ring (8) on the left side of the camera to the focal length you wish to use. As you rack out the bellows, an inch-long horizontal indicator needle appears at the top of the viewing screen. Anything above the needle is out of the picture area. All you need do to prevent chopping off a head, or omitting an important area, is raise the camera until the top of the subject you wish to include is below the indicator after you focus. The indicator also points to a scale of exposure-increase factors on the left side of the ground glass.

The depth-of-field scale is in the form of a hexagonal-shaped rod on the left of the camera, covering all lenses from the 55mm f/4.5 to the 250mm f/6.3 lens.

The lightweight Porrofinder gives an unreversed, eye-level view of the subject without the weight of a full prism finder. Waist-level, Porrofinder, prism and metering finders are interchangeable.

The moderately priced 220c takes the full range of optics, substituting a knob film advance, sacrificing one body release and the multi-exposure switch—for \$270 less.



Yashica Mat 124-G

LENS: 80mm f/3.5 Yashinon taking and 80mm f/2.8 viewing, stops to f/32, focusing to 3.3 ft.

SHUTTER: Copal SV between-lens leaf with speeds from 1 to 1/500 sec. plus B, MX sync, self-timer.

VIEWING: Waist-level with central fine-focusing spot, full-focusing screen, auxiliary eye-level sports finder.

OTHER FEATURES: Combined shutter-cock/film-advance crank, semi-automatic film loading with auto frame counter, double-exposure prevention, built-in CdS exposure meter (ASA 25 to 440) coupled to lens and shutter-control wheels, accepts 120 and 220 roll film.

PRICE: \$225

MANUFACTURER: Kyocera Corporation, Japan.

IMPORTER: Yashica, Inc. a division of Kyocera International Inc., Paramus, NJ.

PHYSICAL DIMENSIONS: 4 in. wide, 5 3/4 in. high, 4 in. deep.

WEIGHT: 2 lb. 5 1/2 oz.

Hold on there twin-lens reflex fans. If you still long for a no-frills, upright box that delivers a comfortable, reassuringly big, square negative on 120 roll film, look to Yashica. This venerable Japanese camera company is still turning out its Mat-124 G, the last and most advanced of what once was a full lineup of traditional twin-lens reflexes. While still holding true to the finder-with-reverse-oriented-image concept of the TLR, Yashica has managed to endow this last-of-the-line model with enough modern features to enable it to keep pace with the existing group of 2 1/4 single-lens reflex cameras.

The Mat-124G bears some seemingly primitive features, such as waist-level viewing, but make no mistake—it has all the modern features possible in a non-interchangeable-lens TLR. Most useful of these is a CdS match-needle exposure meter (5).

The meter first appeared on Yashica's Model 12 camera, was repeated on the Model 24 (for the long 220 roll film) and carried forward to the present 124G which incorporates both the 120 and 220 roll-film sizes. Naturally, a few modifications were necessary to accommodate both film lengths, and these modifications were in turn modified on the G model. Externally, the G is noted for its sleek black finish; internally, the big move has been a simplification of the 120-220 switching procedure.

To change roll-film sizes all you do is press and slide the film pressure plate about 1/4 in. Through a cutout in the plate you see either "12 ex." in green or "24 ex." in red. Positioning the plate automatically sets the frame counter (20) and wind mechanism. The only time you may have trouble is when lining up the film. In loading, you wind the film until the arrow on the film's backing is aligned with a mark inside.

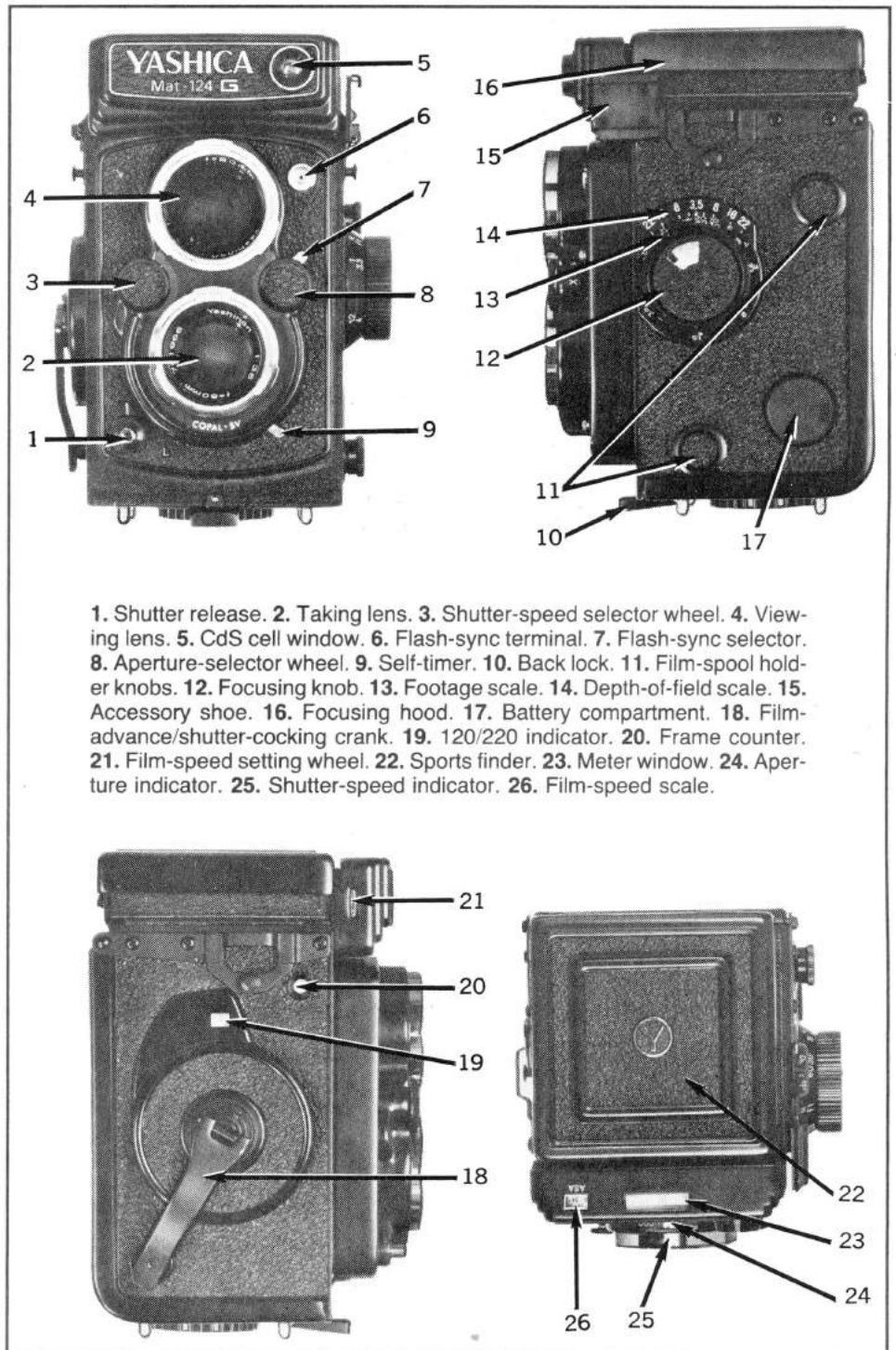
The 220 mark (red, following the color scheme) is in almost the same spot on the camera's back as the mark in most regular 120 cameras. But its 120 (green) mark is on

the underside of the camera's inside, quite close to the film spool itself. Thus it comes up pretty fast when you are winding 120 film. You have to slow down your winding. Keep your eye on the bottom, not the back.

Up on the nameplate, top front, is the tell-tale eye that reveals the CdS cell exposure meter (5). Such an exposure system means there's a battery located in a small compartment (17) on the bottom left side, and a circuit that should be turned off when not in use to prevent drain on the battery. The Yashica Mat-124G prevents this drain very neatly. The circuit is on only when the hood (16) is raised to viewing position.

Along the top front are the meter controls. At the right end a small window (26) contains the ASA scale which you set via a small knurled wheel (21) on the side. Here you have to be a little careful not to move the wheel accidentally and dislodge your ASA setting. However, since you are always looking down at the pointer window (23) next to the ASA window (26), a periodic glance will tell you if the setting has been changed.

The longer window (23), smack in the middle, has a thin red pointer controlled by the shutter-speed setting wheel (3) and a thickish green open-ended pointer controlled by the aperture wheel (8).



1. Shutter release. 2. Taking lens. 3. Shutter-speed selector wheel. 4. Viewing lens. 5. CdS cell window. 6. Flash-sync terminal. 7. Flash-sync selector. 8. Aperture-selector wheel. 9. Self-timer. 10. Back lock. 11. Film-spool holder knobs. 12. Focusing knob. 13. Footage scale. 14. Depth-of-field scale. 15. Accessory shoe. 16. Focusing hood. 17. Battery compartment. 18. Film-advance/shutter-cocking crank. 19. 120/220 indicator. 20. Frame counter. 21. Film-speed setting wheel. 22. Sports finder. 23. Meter window. 24. Aperture indicator. 25. Shutter-speed indicator. 26. Film-speed scale.

Mamiya Universal

LENS: 100mm f/3.5 or f/2.8, stops to f/32, focus to 3½ ft.

SHUTTER: Selkosh-S with speeds from 1 to 1/500 sec., plus B, MX sync.

VIEWING: Level view rangefinder with separate bright-frame fields for 100, 150 and 250mm lenses. Accessory optical finders for wide-angle lenses.

OTHER FEATURES: Graflok back, two back-extending spacers for close-ups, auto parallax adjustment for 100, 150, 250mm lenses, detachable hand-grip, interchangeable roll film, cut film, film pack, Polaroid back, sports finders.

PRICE: \$1060 with 100mm f/3.5, back

adapter and Type II 6 × 7 or 6 × 9cm 120/220 roll-film holder.

MANUFACTURER: Mamiya Camera Co., Tokyo, Japan.

IMPORTER: Berkey Marketing; Mamiya Division, Woodside, NY.

PHYSICAL DIMENSIONS: With roll-film holder and grip: 7¹³/₁₆ in. wide, 7 in. high, 5⁵/₁₆ in. deep (from front of lens to camera back).

WEIGHT: 4 lb. 12 ⁵/₁₆ oz. (without pack adapter).

In spite of Mamiya's recent vicissitudes, the Universal Press camera is still very much

with us. No changes have been made in this eye-level range viewfinder 6 × 9 cm. interchangeable back and lens equipped medium-format camera. With its super wide angle 50mm f/6.3 lens and 6 × 9 cm (2¼ × 3¼ in.) roll film back, it almost equals the coverage of specialized ultra-wide angle cameras, while accepting lenses up to 250mm for tele action, sports, and aerial work. All lenses are rangefinder-coupled although a ground glass focusing back is obtainable. The Universal stands almost alone as a fast-handling, versatile workhorse.

Eight lenses covering the range from super wide-angle (50mm) to 250mm, roll film holders in three formats (accepting both 120 and 220 film), four focusing units, sheet film holders, pack adapter, and Polaroid pack holders round out a package with professional versatility and capability.

The pack back is invaluable for confirming results in tricky situations.

Other features, originally introduced with the Mamiya 23, remain extant. However, instead of the bayonet-mount-lock button to secure the lens—as on the older model—the Universal has a massive, knurled bayonet-locking ring (10) around the entire lens mount. It locks lenses in place quickly, firmly accommodating the rather large 250mm f/5, which requires the extra support.

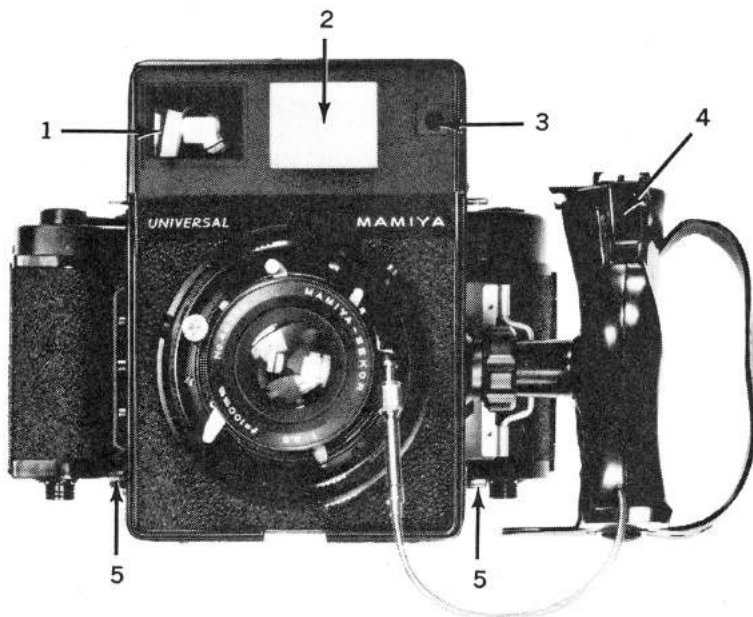
The eyepiece is sufficiently large to afford comfortable viewing. The viewfinder, with its clearly etched markings for 100, 150 and 250mm lenses, is bright, with a good-sized spot in the center for double-image rangefinder focusing. Changing focal lengths is simply a matter of pushing a slide at the rear of the camera, and the focal-length of the finder frame you want shows in a tiny window at the back of the camera and is also projected in the finder. The finder has auto parallax compensation which provides for critical close-up work.

The standard lens for the Universal is a 100mm f/3.5 or f/2.8. The newest in the line, however, is the 50mm f/6.3. This complements the existing 75mm f/5.6, 127mm f/4.7, 150mm f/5.6, and 250mm f/5 lenses.

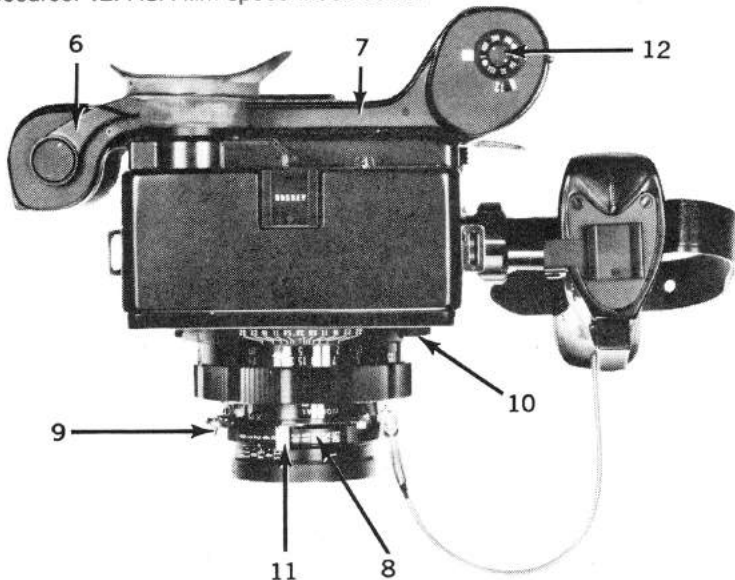
The latter, by the way, cannot be used on the Standard or Deluxe. While it's physically possible to mount the lens, there's some doubt that the camera mount is strong enough to take the weight. In addition, there are no finder masks available for the 250mm lens on the older cameras. So framing would be a matter of guesswork, perhaps a good argument for upgrading your equipment.

A comfortable hand grip fitted with a top-mounted flash accessory shoe and trigger-controlled cable release is adjustable and removable and comfortably supports the solid, yet compact camera. Shutters may be tripped here, with the shutter-mounted trip lever, or with a separate cable release for tripod work. The new model III roll film holder (\$265) has its own body shutter release and double-exposure prevention mechanism.

The long-suit of the Universal is its ability to put out large-format quality work in fast-moving situations.



1. Viewfinder etched for different focal length lenses. 2. Frame illumination window. 3. Secondary rangefinder window. **Hand-grip** shutter release. 5. Film and accessory-back locks. 6. Film advance lever. 7. Interchangeable roll-film holder. 8. Shutter-speed setting ring. 9. PC sync terminal for MX flash. 10. Breech-lock lens clamping ring. 11. Shutter-cocking lever for single or multiple exposures. 12. ASA film-speed index scale.



Konica Instant Press

LENS: 110mm f/4 Konica Hexanon, stops to f/64, focus to 23 in.

SHUTTER: Copal No. 0 with speeds from 1 to 1/500 sec. plus B and T, X sync.

VIEWING: Combined, coincidence-type range/viewfinder with projected, parallax-compensating frameline.

OTHER FEATURES: Accessory shoe, tripod socket.

PRICE: \$600

MANUFACTURER: Konishiroku Photo Industry Co., Inc., Tokyo, Japan.

IMPORTER: Konica Camera Corp., Woodside, NY 11377.

PHYSICAL DIMENSIONS: Shut: 8⁵/₁₆ in. wide, 5³/₄ in. high, 3¹/₂ in. deep; Open: 8⁵/₁₆ × 5³/₄ × 7⁵/₈ in. deep.

WEIGHT: 2 lb. 11 oz.

After the demise of the late lamented Polaroid 195, instant picture shooters were forced to become instant picture snappers, as they were greeted with a series of miniaturized boxes that not only take care of all picture taking actions, including focusing, but eject the film for you as well, thus relieving you of the chore (or responsibility, depending on your point of view) of timing and controlling the processing of your picture. What these instant photography fans longed for was one of those big old-fashioned boxes with bellows, a machine on which the photographer controls aperture, shutter, focusing and ejection of the film packet and times its development. In other words, the 195 or the older roll film Pathfinders, etc. Their patience and longing has finally paid off with a new "old" model from a rather unlikely source.

Konica's Instant Press camera, in style, configuration, controls and operation, comes as close to those old folders as any instant photographer could hope for. While, on the outside, it's a new modern-style plastic machine, internally it retains all the old desirable features—those adjustable controls—plus a few new improvements of its own.

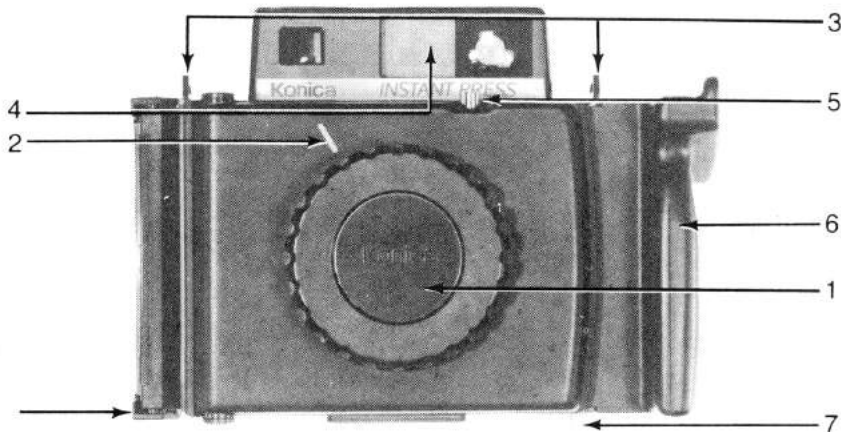
Loading the Instant Press is standard Polaroid operation. You swing away the back retainer bar (9), pull away the back (10), drop in a Polaroid film pack, close it, pull out tabs and you're ready to go. Grasp the front cover at its ends (18) and let it spring open, squeeze the two orange clips (17) at the base of the lens mount and pull outward until the bellows (12) is fully extended. Now you can revert to basic, manual camera operation. Aided by an exposure meter or your innate ability and experience, you can then set your aperture and shutter speed, respectively, by the lever (13) and ring (15) appropriately placed around the outer rim of the lens. Both scales are conveniently repeated on the underside of the lens mount, which becomes one of the lateral sides when you're shooting vertical pictures.

Only one more step stands between you and a finished picture—you must cock the shutter via the small knurled knob (16) on the lens before you press the shutter release (5). Lovers of this type camera consider that extra step a small price to pay for the convenience and joy of working with a completely manual machine.

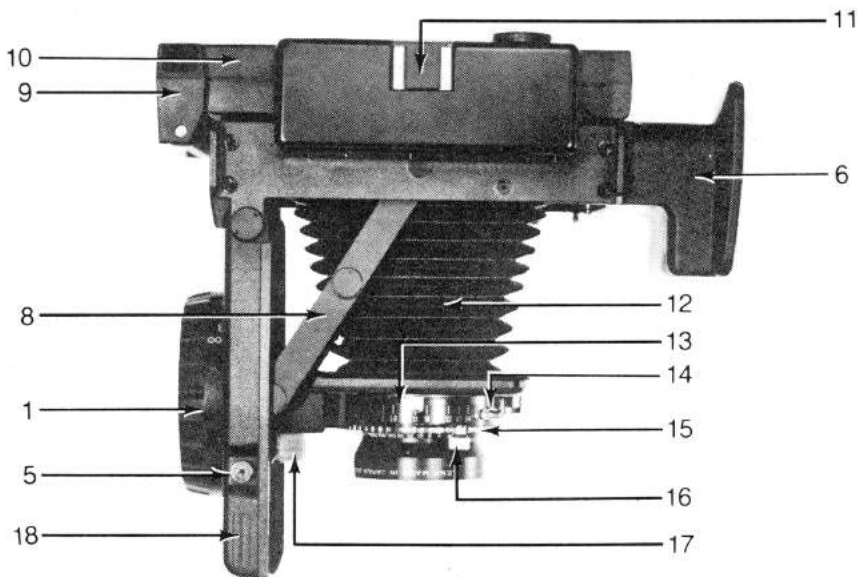
But the Instant Press is no mere copy of the venerable Polaroid 110-series cameras—at about 2³/₄ lbs. it's roughly half the weight of the old-timers and its dimensions are approximately the same as the discontinued Polaroid 195 and 180. Among its little niceties are a bottom-mounted tripod socket, threaded cable-release socket, top-mounted accessory shoe, and base socket for electronic flashes.

Konica has carried the convenience idea to the limit, furnishing a large, comfortable, intelligently designed hand grip (6) to provide

one half of a very positive holding capability. The other half is supplied by the oversized, knurled focusing knob (1) on the front cover. The knob is so large and well placed that you can keep your hand on it for instant focusing while simultaneously holding your index finger on the shutter release (5) ready for action. The large, bright view/rangefinder (4) image is further aided by a Polaroid holdover, a movable frameline that automatically compensates for parallax. To top it all off, Konica has endowed the Instant Press with a minimum focusing distance of under 2 ft., further enhancing this newly minted version of the classic, professional instant camera.



1. Focusing knob. 2. Footage scale index. 3. Neck strap lugs. 4. Combined range/viewfinder. 5. Shutter release button. 6. Anatomical hand grip. 7. Levelling foot. 8. Opening/closing support strut. 9. Back opening retainer bar. 10. Film pack compartment back. 11. Accessory shoe. 12. Bellows. 13. Aperture setting lever. 14. Flash sync cord terminal. 15. Shutter speed setting ring. 16. Shutter cocking lever. 17. Bellows opening lock release. 18. Opening grip.



Polaroid 600SE

LENS: 127mm f/4.7 Mamiya in interchangeable bayonet mount, stops to f/64, focus to 3½ ft.

SHUTTER: Seiko between-lens leaf in each lens with speeds from 1-1/500 sec. plus B, X sync at all speeds, M sync at speeds of 1/30 sec. and slower.

VIEWING: Combined, coincidence-type range/viewfinder with projected, parallax-compensating framelines for 127mm and 150mm lenses.

OTHER FEATURES: Integral left-hand trigger handle attaches to interlens shutters via external cable; interchangeable pack backs incorporate metal dark slide;

accessory shoes atop main body and grip; flash cord retaining clip on grip.

PRICE: \$725 with 127mm f/4.7 and one film-pack holder; 75mm f/5.6 with auxiliary, manual-parallax-compensating finder, \$525; 150mm f/5.6, \$363.

MANUFACTURER: Mamiya Camera Co., Tokyo, Japan.

IMPORTER: Polaroid Corp., Cambridge, MA 02139.

PHYSICAL DIMENSIONS: Body, less grip and film holder, 5 in. wide, 6 in. high, 2.9 in. deep; lens 2.9 in. long, 3.3 in. diam.

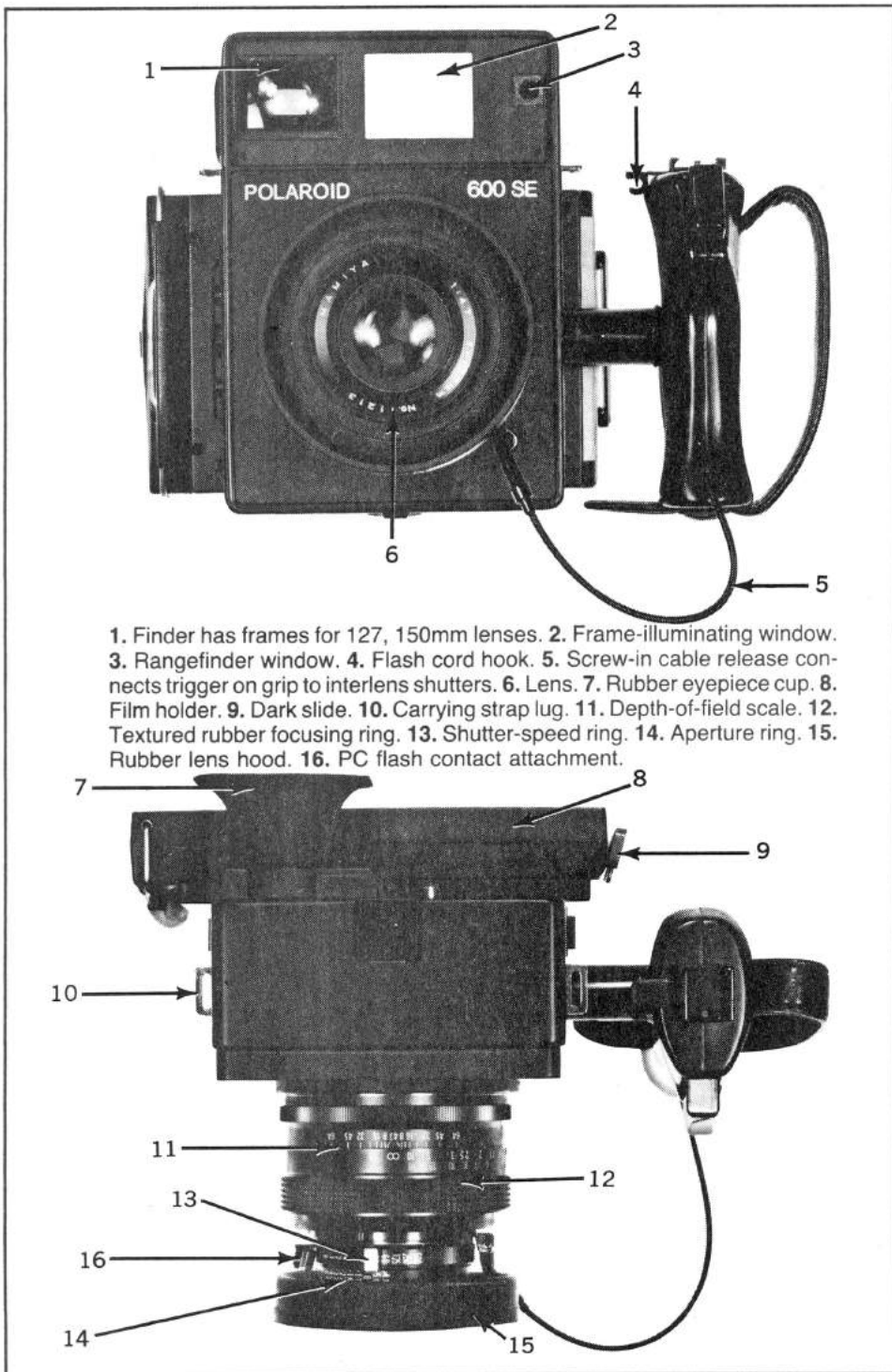
WEIGHT: With grip handle and standard film holder, 3 lb. 9 oz.

There are those who think of Polaroid cameras as fun-but-optional amateur products, but it ain't necessarily so. Take the 600 SE, for instance. It's a camera designed to quiet the raucous cries of working pros longing for a full-fledged instant-pack camera with (natch) full manual controls, flash sync at all speeds and removable holders.

Indeed, it's the very machine that this segment of the market had long clamored for—a rugged, full-fledged professional, rangefinder-focusing field camera with fully interchangeable lenses and a removable film pack holder complete with dark slide. As a matter of fact, pros who shoot people and events will instantly recognize the 600 SE as the latest incarnation of an old friend, the Mamiya Universal press camera—quite logical since the whole rig is manufactured in Japan by Mamiya and its lenses bear the Mamiya trademark.

Since the 600 SE's lenses and back-mounted accessories are not interchangeable with the Mamiya Universal's, and the latter's Polaroid pack adapter can provide full frame (2⅞ × 3¾ in. image area) prints and negs with Polaroid pack films, the obvious questions faced by consumers is why not opt for the Mamiya instead of the Polaroid version? For one thing the venerable Universal was long ago conceived as a hand-held roll-film (and film pack) press camera, and the accessory Polaroid pack back was added later. As a result, only the 75mm and 127mm lenses will cover the *full* Polaroid pack format—the other optics will vignette in the corners and possibly the edges as well, due to the camera's deep-set lens mount. In redesigning the lens mount to eliminate this problem, Polaroid opted for a noticeably shallower bayonet flange, permitting the rear section of the lens barrel to be shortened, thus eliminating the problem. The other major area which has been modified to better accommodate Polaroid film is the viewfinder.

While the 600 SE has only two manually selected finder frames—one for the 127mm "normal" lens, another for the 150mm "medium tele," they show pretty much what you'll get on a Polaroid print (actually about 85 percent of the 2⅞ × 3¾ in. picture area), not the significantly smaller 2¼ × 3¼ or 2¼ × 2¾ in. (6 × 7cm) roll-film formats. Clearly, then, the Polaroid is a much better choice for handheld shooting on Polaroid film packs—which is hardly surprising. To summarize our field test results, the 600 SE handles its assigned tasks as a field camera extremely well and represents a notable technical advance over its folding predecessors. Since the 600 SE's grip is permanently affixed to the left-hand side, you've obviously got to focus with your right hand. This may take a bit of getting used to for photographers weaned on 35mm SLRs. Nevertheless, we're quite sure that serious photographers will be delighted with it. And since it's interchangeable at both ends, many of our complaints (such as the lack of close focusing and ground-glass viewing) will undoubtedly be answered by the provision of accessories in the future.



1. Finder has frames for 127, 150mm lenses. 2. Frame-illuminating window. 3. Rangefinder window. 4. Flash cord hook. 5. Screw-in cable release connects trigger on grip to interlens shutters. 6. Lens. 7. Rubber eyepiece cup. 8. Film holder. 9. Carrying strap lug. 10. Depth-of-field scale. 11. Textured rubber focusing ring. 12. Shutter-speed ring. 13. Aperture ring. 14. Rubber lens hood. 15. PC flash contact attachment.

Polaroid 680

LENS: 116mm f/8 with stops to f/90, focus to 10.4 in.

SHUTTER: Electronically controlled blade with speeds from 14 to 1/180 sec.

VIEWING: Non-interchangeable eye-level finder with full-area focusing, viewing.

OTHER FEATURES: Built-in electronic flash for proportional fill flash in ambient light, full flash indoors; ultrasonic echo ranging auto focusing; motorized lens focusing drive; motorized film advance and shutter cocking; lighten/darken control provision for manual focus; provision for non-flash exposure and tripod.

PRICE: \$265.

MANUFACTURER: Polaroid Corp., Cambridge, MA 02139.

PHYSICAL DIMENSIONS: Shut: 9⁷/₈ × 4¹/₈ × 1⁵/₈ in.; Open 7 × 4 × 5¹/₄ in.

WEIGHT: 1 lb. 13⁷/₈ oz.

If you see the shape of the SLR 680 and are moved to exclaim "SX-70," you're not completely off base. This, the latest in Polaroid's continuing series of develop-before-your-eyes instant-picture cameras, is a happy marriage of a folding SX-70 chassis with the speedy film and quick-recycling electronic flash of the Sun 600 series. It adds up to an automatic-exposure, auto-fill-flash camera of formidable quickness that's mostly fuss-free and definitely fun to use.

All this is spelled out completely in the legend across the bottom door (16) through which the exposed print is ejected: "Polaroid 600 Land Camera, Auto Focus/Auto Strobe." The 680 has the physical attributes, size and operating procedures of the classic SX-70 body plus the attached electronic flash module (6) of the 600 series models.

From SX-70 the new system gets its reflex viewing and focusing of the four-element glass 116mm f/8 lens (10) with its minimum focusing distance of 10.4 in., lighten/darken control (8) and folding, compact body. From 600 it gets the aforementioned flash (6) which fires every time, and, of course, the high-speed film. And from the top model in each of the preceding lines comes the ultrasonic echo-ranging Sonar auto-focusing module (7). More exclusively 680 is the ABS plastic body, a newer SPAR (Strobe Preferred Automatic Recharge) flash recycling system, said to cut recycling to 3 sec.; a large, highly visible external readylight (1) on the back; and a much clearer and easier to use flash bypass switch (2) immediately below. In keeping with the improvements that are bound to result when old systems are upgraded, we also have a redesigned, more convenient autofocus bypass switch (13) located above the manual focusing wheel (12) held over from the original SX-70.

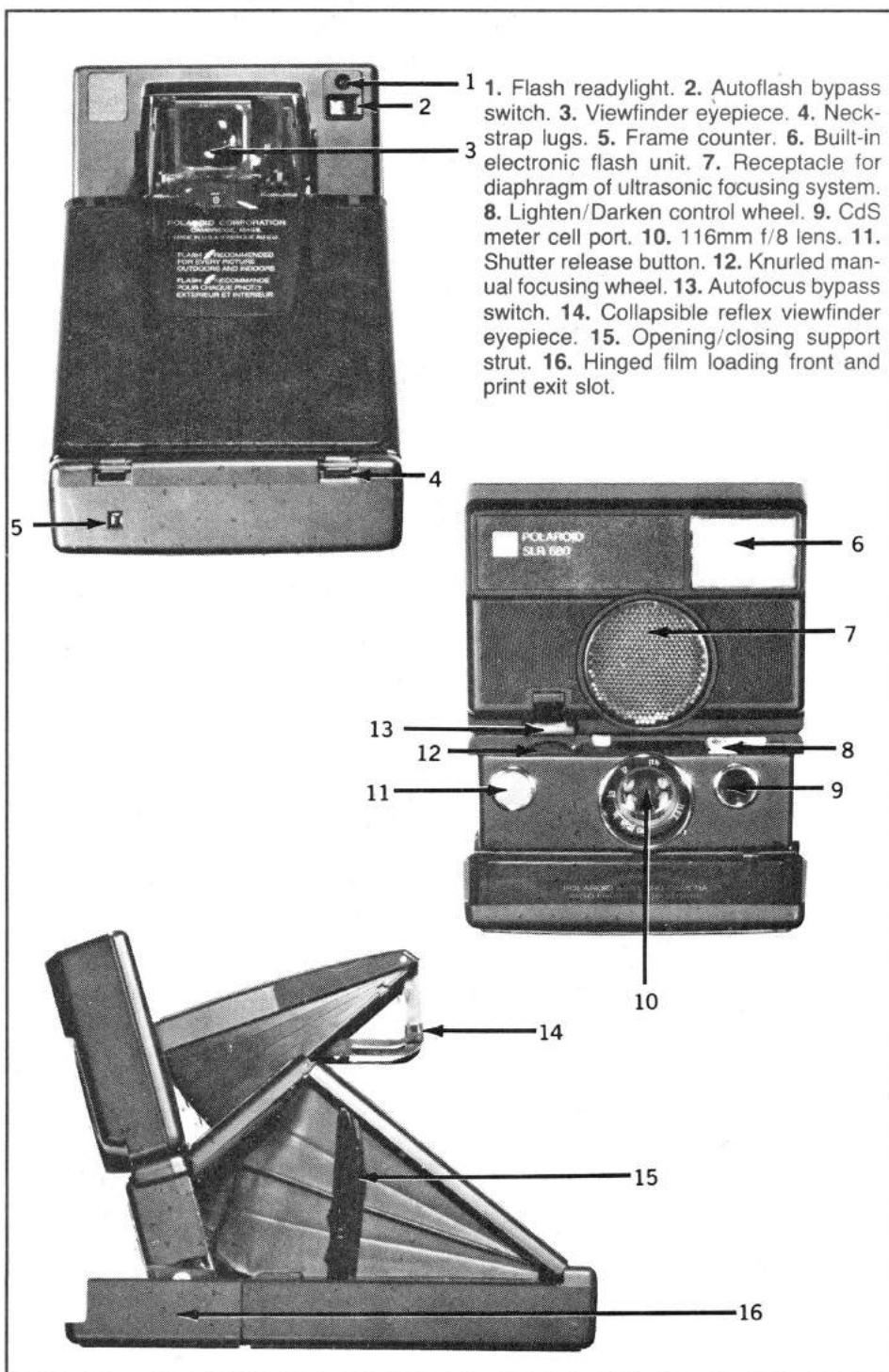
In operation, the SLR 680 is strictly SX-70. You slip the 10-exposure film pack, with its built-in battery that operates all controls, into the bottom (16), the cover sheet is automatically ejected and you're left with just a one-button operation. A light touch on that button (11) gives you a pre-exposure focus setting which you can change if you like merely by

releasing the button, reaiming and resetting. Push the button all the way and all systems—exposure via silicon photo diode (9), focus, flash, print ejection—go. About 90 sec. after your print comes out the door (16), it should be almost completely developed.

Want to take another shot? Just wait for the readylight to return and fire. There's no winding or shutter cocking to worry about.

Also brand new is the "Articulating Flash" unit (6), a 1 × 3/4 × 1/2-in. rectangle set off to one side to help minimize "red eye" in people pictures. Since it is coupled to the Sonar focusing system (7), it tilts forward whenever the lens (10) is focused at close range—from

about 15 ft. down to the minimum of 10.4 in.—thus providing a more accurate placement of the artificial light. The 680 has its own continuous fill flash system, offering varying amounts of fill light depending on the brightness of the reflected available daylight and the camera/flash-to-subject distance. In normal daylight, the aperture/shutter blade mechanism opens for 40% of the total exposure, at which time the flash fires at full output and the blades remain open to finish off the exposure. As the ambient light level decreases, the exposure control module compensates, increasing the ratio of flash to available light for balanced exposures.



Fujica GS645

LENS: 75mm f/3.4 EBC Fujinon in fixed mount, stops to f/22, focusing to 40 in.

SHUTTER: Copal No. 00 mechanical inter-lens leaf with speeds of 1-1/500 sec. plus T, X sync at all speeds, self-timer.

VIEWING: Combined range/viewfinder with projected, parallax-compensating framelines.

OTHER FEATURES: Two 1.5-v batteries power gallium photodiode (GPD) cell behind semi-transparent mirror in viewfinder, providing match-diode metering via LEDs in finder when shutter release is pressed partway down; automatic film stop; double-exposure prevention; single

stroke film-wind lever; integral hot shoe; shutter release lock; accepts 120 and 220 roll film.

PRICE: \$530.

MANUFACTURER: Fuji Photo Film Co., Ltd., Tokyo, Japan.

IMPORTER: Fuji Photo Film, U.S.A., New York, NY.

PHYSICAL DIMENSIONS: 5¾ in. wide, 4⅞ in. high, 2⅜ in. depth (folded).

WEIGHT: 1 lb. 12⅞ oz. (no batteries).

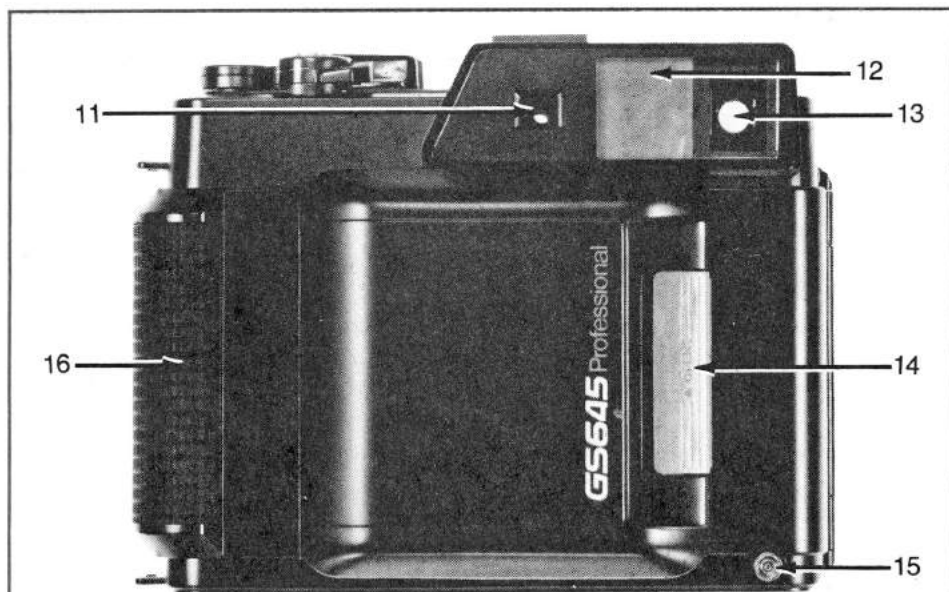
The Fujica GS645 is the original folding, rangefinder member of an illustrious 6×4.5 cm (2¼×1⅝ in.), roll film camera series that

now includes the GS645W (with 45mm f/5.6 lens) and the new GS645S (with semi-wide 60mm f/4 lens). Fuji's folding GS645 is quite compact and light for a medium-format machine and its features are comprehensive and up-to-date. For example, its lens is a multicoated, five-element, 75mm f/3.4, its bright contrasty range/viewfinder has true projected framelines that compensate for both parallax and field size at all focusing distances, and lurking within its viewfinder module is a gallium photodiode (GPD) meter cell which turns on when you touch the shutter release lightly and reads out by means of three LEDs on the right-hand edge of the finder field. Atop the nicely finished body there's a 35mm-style single-stroke film-wind lever and an integral, X sync hot shoe.

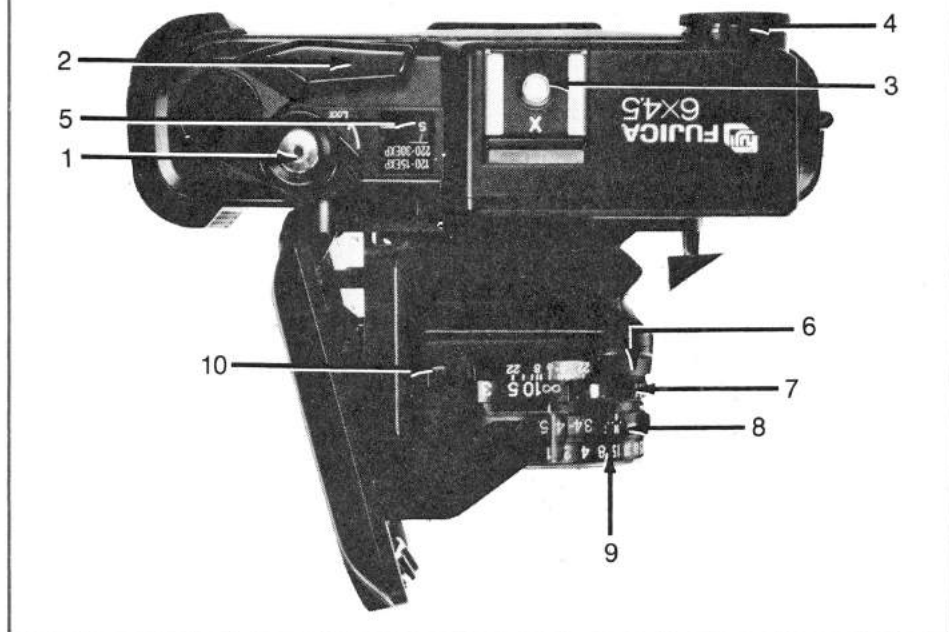
Of course, some things never change, and the GS645 sports such classic features as a folding bellows in between the lens and the main body, with all major exposure-setting and focusing controls concentrated near the front of the lens. At the very front is the large, legible shutter-speed ring with white-on-black digits covering the 1-1/500 sec. shutter-speed range. Directly behind it is the large, non-click-stopped aperture ring with yellow-on-black numbers ranging from f/3.5-22 and a small inset ASA scale with film-speed settings from ASA 25-1600. Nestled in a little recess to the rear of the aperture ring, on the left-hand side, is a small lever for setting the mechanical self-timer. Finally, behind the exposure-setting rings is the smoothly-operating focusing ring which has a convenient, knurled finger rest. A small button marked "T" opens the shutter for time exposures when you press it once. Time exposures are terminated by pressing the main shutter release button atop the body.

Loading the GS645 is straightforward and conventional. Pull down the latch on the left-hand side of the body and swing the hinged back toward the left. Set the sliding control on the back of the camera and the spring-loaded pressure plate to either "120" or "220," then place your film spool in the recess.

To open the camera and extend the lens into shooting position, push in a wide, gray tab on the front of the (folded) camera marked "push" and pull it toward the right until the front standard clicks in place. The pivoted bracing structure supporting the lens is commendably rigid, ensuring very good lens-to-film-plane alignment. To fold the camera you must press in a spring-loaded bar marked "close" after you make sure the shutter is cocked and the lens is set to infinity. Despite its lack of interchangeable lenses, the Fujica GS645 is a thoroughly professional instrument. Its on-film performance is in the same class as much larger SLRs providing the same format, its handling is exemplary (aided in no small measure by the "hand grip" built into the right side of its body) and its overall balance and "feel" is superb once you become accustomed to its controls. Perhaps the best indication of its success is the enthusiastic reception it has received among professionals and serious amateurs.



1. Shutter release with locking collar. 2. Single stroke film-wind lever. 3. X sync hot shoe. 4. Range/viewfinder eyepiece. 5. Frame counter. 6. Depth-of-field scale. 7. Focusing ring. 8. Aperture ring. 9. Shutter speed ring. 10. Time exposure button. 11. Rangefinder window. 12. Frosted light-collecting window for finder framelines. 13. Viewfinder window. 14. Release tab for folding front. 15. PC contact. 16. Integral handgrip.



Nikonos V

LENS: 35mm f/2.5 U.W. Nikkor with stops to f/22, focus to 2 $\frac{3}{4}$ ft., interchangeable bayonet mount.

SHUTTER: Copal vertical travel, metal blade, focal-plane with electronically controlled speeds from 1/30 to 1/1000 sec., mechanical 1/90 sec., plus B; flash sync at 1/90 sec..

VIEWING: High eyepoint optical finder with frame lines and parallax correction marks for 35mm lens, LED shutter speed indications, over- and underexposure warnings and flash ready light. Accessory frame type sportsfinder available for underwater shooting.

OTHER FEATURES: One 3-volt lithium, two 1.55-volt silver oxide, or two 1.5-volt alkaline batteries power two silicon-photodiodes (SPD cells), one in top, one in bottom of chamber behind lens; Top SPD reads illumination off gray blades of shutter for aperture priority automation, or metered manual bottom SPD reads off-film for TTL flash control; focus and f/stop controls on either side of lens, auto resetting frame counter, hinged type back with O-ring seal, special flash socket.

PRICE: \$600 with 35mm f/2.5 U.W. Nikkor; 28mm f/3.5 U.W. Nikkor, \$277; 80mm f4 U.W. Nikkor \$277; 15mm f/2.8 U.W. Nikkor \$1150; Sb-102 flash \$845.

MANUFACTURER: Nippon Kogaku, Tokyo, Japan.

IMPORTER: Nikon Inc., Garden City, NY.

PHYSICAL DIMENSIONS: 5 $\frac{1}{16}$ in. wide, 3 $\frac{7}{8}$ in. high, 2 $\frac{7}{8}$ in. deep (with lens).

WEIGHT: 1 lb. 14 $\frac{7}{8}$ oz.

Nikonos is widely regarded as *the* underwater camera. Having slowly evolved from the original Calypso camera, Nikon added its touches, but it wasn't until the introduction of the Nikonos IV-A that radical design changes appeared, changing the manual, mechanical double shell camera into an automatic electronic camera with more conventional film loading expanding the camera's terrestrial all-weather capabilities.

Underwater photography took great leaps with the IV-A, but underwater flash photography, by far the most useful, was barely updated. The Nikonos V, however, brings automatic underwater photography to a state equal to that for land lovers. With the attachment of the SB-102 flash, you can get the superior accuracy of TTL flash control.

With a bright orange front (a dark green model is also available), and extra large optical viewfinder the Nikonos V has a novel appearance. The V uses the same lenses available for the previous Nikonos cameras (see manufacturer's specs above).

A release button on the double latch used to open the camera back provides extra protection from accidental openings. Loading the Nikonos V is like loading a conventional 35mm camera, except that you flip the pressure plate up when loading and back down into position before closing the back.

Set the ASA dial to the proper film speed, set the shutter-speed dial to A, and with lens

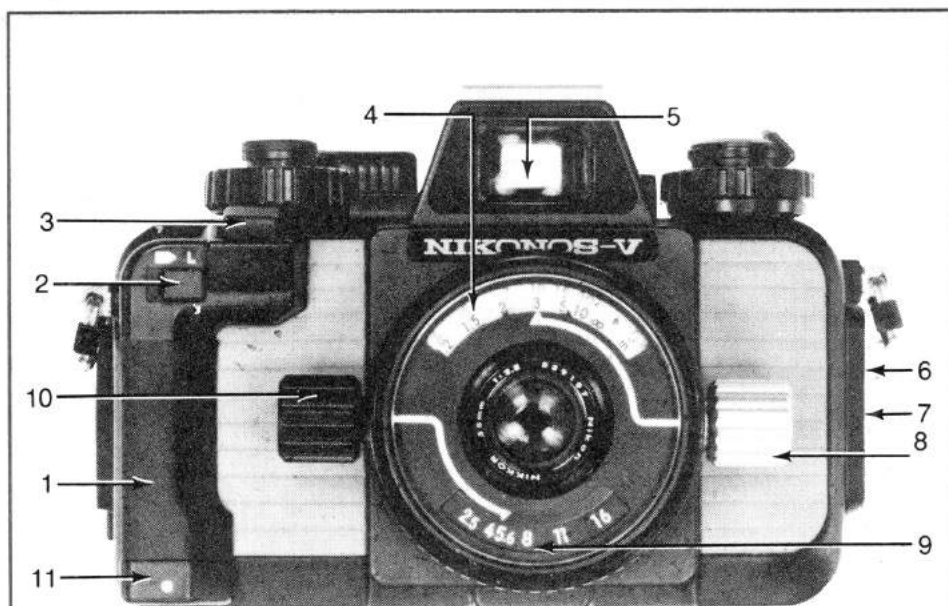
in place the Nikonos V is ready for picture taking, above and below water.

The film advance lever and shutter release are similar to the IV-A, like those of a conventional 35mm camera with 144° advance lever and a bright orange release button, which has been slightly enlarged over that of its predecessor. Touching the release button, located in an anatomical grip, activates the finder display. LED numerals tell you which shutter speed the camera has selected (in aperture priority AE), or what shutter speed you've set. A flashing shutter speed indicates the proper setting for metered manual exposure control. Over and underexpo-

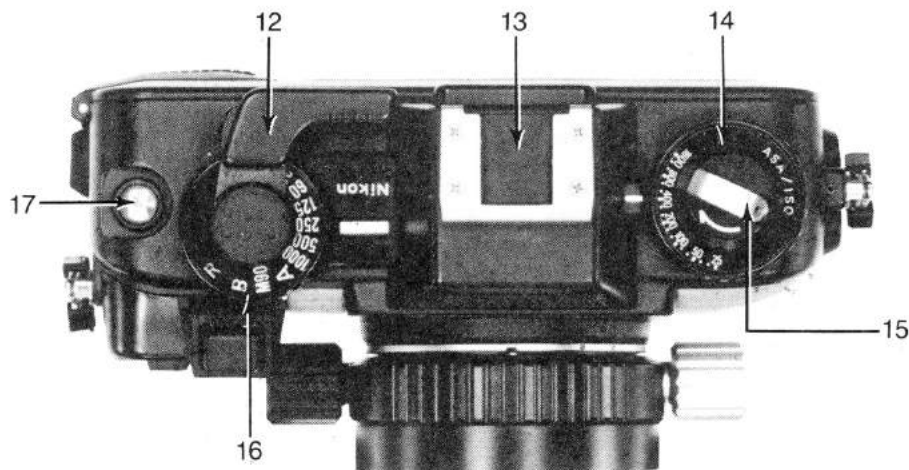
sure warnings are also visible.

The viewfinder is larger than on all previous models allowing for easy underwater viewing. With the film advance lever pushed in, you just bring your mask's faceplate directly against the finder. Frame lines and parallax correction lines (for close-up work) are easy to see.

The Nikonos V is much more than an underwater camera. All controls are easy to operate, even when wearing gloves and its designed to withstand extreme temperatures (-4° F to 140° F) and more bad weather than the photographer and the camera itself can probably withstand.



1. Anatomical grip. 2. Shutter lock. 3. Shutter release. 4. Footage scale. 5. Viewfinder window. 6. Back latch lock. 7. Camera back latch. 8. Focusing knob. 9. Aperture scale. 10. Aperture control and depth-of-field indicator knob. 11. Socket for dedicated TTL flash. 12. Film advance lever. 13. Accessory shoe. 14. ASA film-speed setting dial. 15. Folding rewind lever. 16. Shutter-speed dial. 17. Frame counter.



Plaubel Makina

LENS: 80mm f/2.8 Nikkor in fixed mount, stops to f/22, focusing to 3 ft., 3.4 in.

SHUTTER: Copal No. 0 between-lens leaf with speeds from 1-1/500 sec. plus B, X sync at all settings.

VIEWING: Combined range/viewfinder with projected, parallax-compensating framelines.

OTHER FEATURES: Two 1.5-v batteries power gallium photodiode (GPD) cell behind semi-silvered mirror in range/viewfinder module, providing center-weighted match-diode metering; LED meter readout in finder activated by spring-loaded button; automatic film stop, dou-

ble-exposure prevention, integral accessory shoe.

PRICE: \$1000.

MANUFACTURER: Doi Corp., Ltd., Tokyo, Japan.

IMPORTER: Plaubel, USA, 342 Madison Avenue, New York, N.Y. 10017.

PHYSICAL DIMENSIONS: 6³/₈ in. wide, 4¹/₂ in. high, 2³/₈ in. deep (with camera in folded position).

WEIGHT: 2 lbs. 13⁷/₁₆ oz. (with meter batteries installed).

A host of small but significant improvements transform the original Plaubel Makina

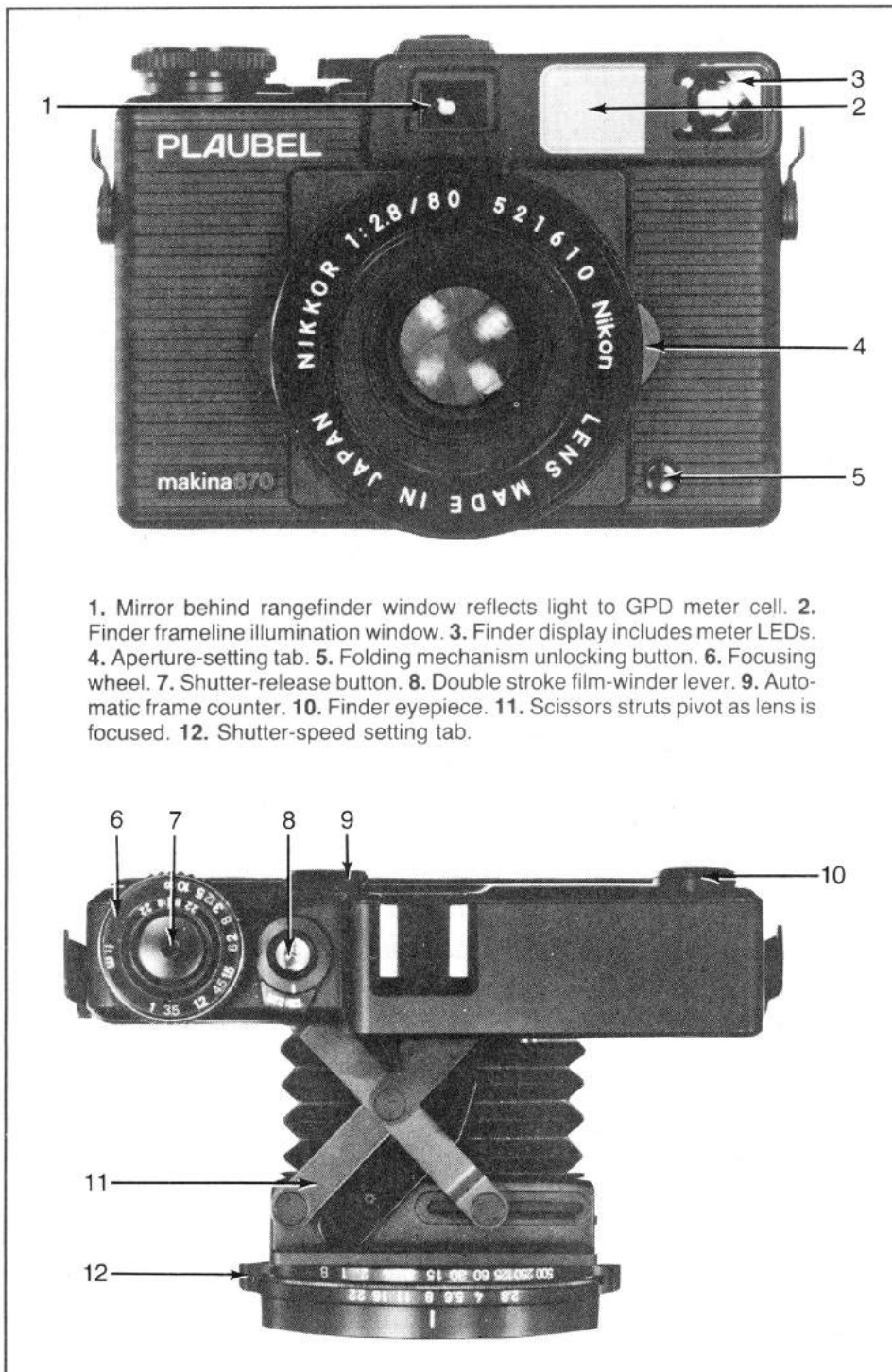
67 into the sleek, updated 670. First comes 120/220 film capability with 20-shot capacity on the longer rolls; then there's a new, range/viewfinder with full parallax and field frame compensation visible instead of one moving corner indicator. The natty, striated body, new for the normal version with 80mm f/2.8 Nikkor lens, was lifted from the wide-angle Plaubel Makina 67W.

Operational enhancements include a smoother, more accurate, two-stroke wind lever (up one from the former one-stroke lever) a wider-swinging (to 180°) back for easier loading that's double locked for added security, and a more grippable rubberized surface on the top-mounted focusing knob. The Makina 670 now locks the shutter release automatically when you fold it, too, but its basic identity as a professional caliber, 6×7cm roll film folder remains the same. To keep the camera reasonably small and light, the 670's finder shows a smaller-than-life-size (.67X) viewing image, but since the rangefinder base is quite long (63mm or 2¹/₂ in.) focusing accuracy is assured. Indeed, since the camera is fitted with what is, in effect, a semi-wide-angle lens (80mm on 6×7cm is equivalent to 37mm on the 35mm format), precise focusing can be achieved even at the closest distances.

The built-in metering system employs a gallium photocell (GPD) located in a space in between the rangefinder and frosted-in bright frame windows, inside the top cover! By means of an ingenious optical system, 20 percent of the light passing through the rangefinder window is reflected back through a small lens which focuses it into the GPD meter cell, and since only the central rays of light striking the first main mirror reach the GPD cell, this system provides a neat way of achieving center-weighted readings while protecting the meter cell from extraneous light. Incidentally, the Makina's rangefinder system also has a couple of notable advantages—it's a rugged design and doesn't require super-precise alignment to function well. And while this configuration does tend to decrease viewfinder brightness somewhat, Plaubel's engineers have effectively minimized that problem.

To turn the 67's meter on, press a small spring-loaded button just below the wind lever tip and look through the finder. The meter readout LEDs are piped into a little dark patch along the right side of the finder. This patch intrudes slightly into the finder area but not annoyingly so, and match-diode metering is swift and positive. The Makina's focusing control is a 1¹/₄-in.-diameter knurled wheel that is conveniently placed around the oversized shutter button.

For general picture taking, the latest of the legendary Makinas is a superlative instrument. It handles well, is quiet, and under its modern plastic covered exterior lurks a body built like a tank. Architectural photographers will appreciate its extremely low levels of linear distortion, low-light types will marvel over its sensitive metering system, and pros on the run will commend its convenience.



1. Mirror behind rangefinder window reflects light to GPD meter cell. 2. Finder frameline illumination window. 3. Finder display includes meter LEDs. 4. Aperture-setting tab. 5. Folding mechanism unlocking button. 6. Focusing wheel. 7. Shutter-release button. 8. Double stroke film-winder lever. 9. Automatic frame counter. 10. Finder eyepiece. 11. Scissors struts pivot as lens is focused. 12. Shutter-speed setting tab.