

# CONTAX RTS



Real Time System

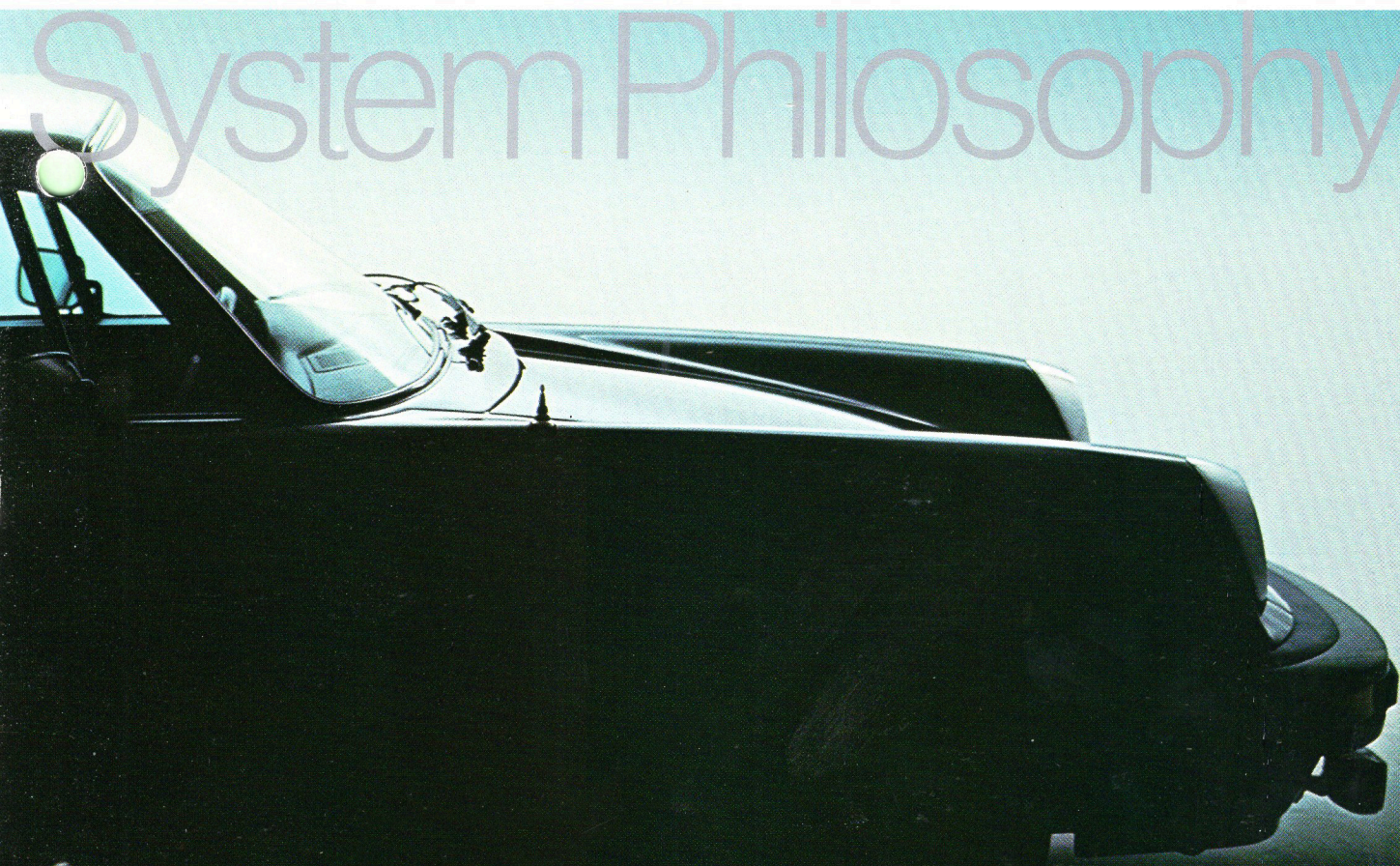


Product of Real Time





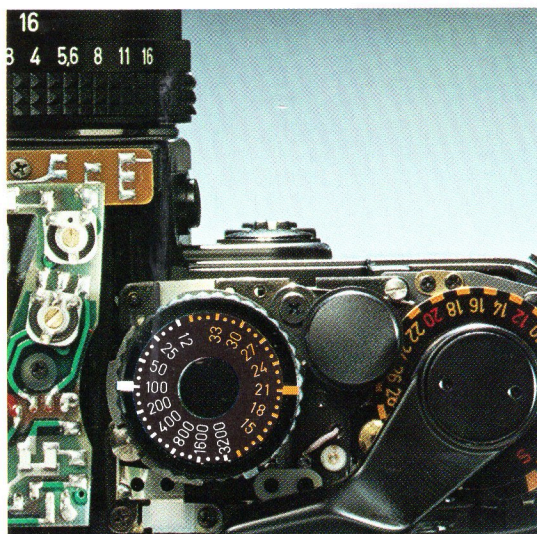
# System Philosophy



The new CONTAX RTS is a highly advanced 35mm SLR system camera designed to ensure the limitless potential of 'Real Time' photography. Developed by mutual cooperation of Carl Zeiss, West Germany, and Yashica, Japan, it assures perfect coordination of optical, mechanical and electronic performance, thus offering innumerable advantages in automatic as well as manual modes of operation. In designing the CONTAX RTS, Carl Zeiss, West Germany, provided its most sophisticated know-how in optical technology, while Yashica mobilized all its resources in the sphere of electronics and camera technology. The functional design which distinguishes it from any other SLR camera is the creation of the Porsche Design Group of West Germany.

CONTAX RTS





## CONTAX Real Time System Highlights

In designing the CONTAX RTS, instantaneous functional response as well as absolute fidelity of visual information were regarded as constituting as vital a factor as precision, quality, dependability and automatic control of exposure. In short, the theme pursued in developing this highly advanced 35mm SLR system camera was 'Real Time' — a computer terminology denoting total absence of physical time-lag in disposition of information.

As the basis for ensuring 'Real Time' operation, the New Bayonet Mount was developed by mutual cooperation of Carl Zeiss, West Germany, and Yashica, Japan. This new mount is unique in the fact that it is not merely a precision mechanical means of affixing the lens to the camera body. Many thousands of manhours of research into even the remotest possibility of future evolution of the camera system had gone into the development of this new mount. It rather provides full functional coordination of the optical, electronic and mechanical systems. It has all the essential linkage systems which make any one of the wide range of Carl Zeiss interchangeable lenses an integral part of the CONTAX RTS, thus providing the most effective display of such information as the correct shutter speed in

relation with the preselected lens aperture, the maximum aperture of the lens in use and the preselected f-stop.

This well-calculated system mount has an effective diameter of 48mm and flange back measurement of 45.5mm, both computed to enable effective use of the present and future ultra-fast lenses and a whole lot of system accessories.

### ● Real Time 16-dot LED Array Shutter Speed Display

The CONTAX RTS features a 16-dot LED (Light Emitting Diode) array as a means of providing 'Real Time' viewfinder display of the precise shutter speed. In combined function with the SPD (Silicon Photo Diode) sensor used for light reading, this 16-dot LED array affords instantaneous display of the required information because the LED comes on immediately without the time-lapse for warm-up required in case of tungsten filament light bulbs.

Whenever exposure condition is to be checked, depression of the LED display pushbutton on the front-face of the camera turns on the LED dot in the viewfinder to display the correct shutter speed in relation with the preselected f-stop.

One dot indicates setting of the calibrated

speed in alignment, while two dots signify an in-between speed.

This 'Real Time' LED shutter speed display will come on regardless of whether the camera is set at 'Auto' or 'Manual', or whether the film advance lever has been manipulated or not.

### ● Real Time Magnetic Release

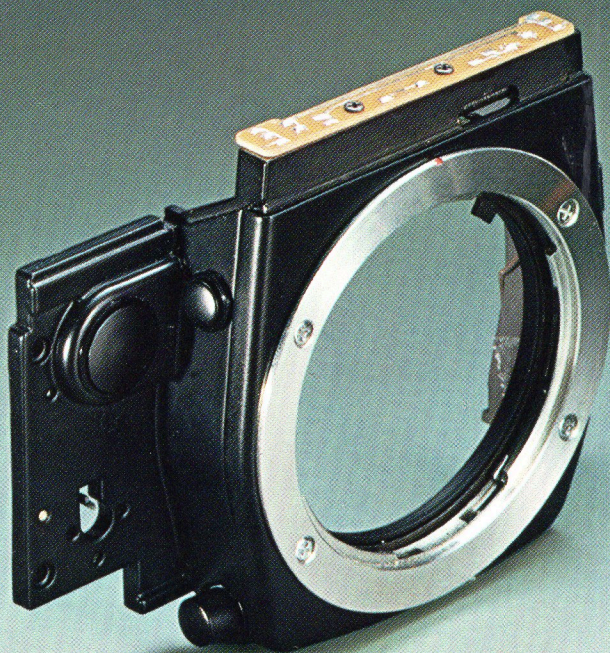
The electromagnetic release system designed specifically to meet the exacting functional requirements of an advanced 35mm SLR system camera opens a whole new possibility of 'Real Time' photography.

The release button has a stroke of less than one millimeter and enables the photographer to activate the magnetic release system at the very moment he senses the need to trip the shutter, smoothly and without the possibility of erratic movement of the camera that may spoil an otherwise perfect shot.

This magnetic release system functions electronically and therefore permits use of a whole lot of devices which generate electrical pulses for off-hand activation of the shutter, without any intermediate means.

Coupled with the 'Real Time' light reading which is taken immediately upon depression of the release button, this totally





new system offers such system applications as could not be attempted with other SLR system cameras.

#### ● Real Time Shutter Speeds

The CONTAX RTS is the only SLR camera which offers a highly accurate maximum shutter speed of 1/2000 sec.

To guarantee the utmost precision in exposure even at the extra-high shutter speed of 1/2000 sec., a focal plane shutter of a completely new design has been incorporated. Every constituting part of this shutter is designed and arranged so as to minimize moment inertia, the very cause of erratic shutter function resulting in uneven exposure of the picture area, especially when a high shutter speed is in use.

On both 'Auto' and 'Manual', the shutter is timed electronically, thus assuring precise speeds over an extremely wide range from 4 seconds up to 1/2000 sec.

#### ● Real Time Off-Hand Control

The unique magnetic release system of the CONTAX RTS offers innumerable advantages in 'Real Time' off-hand control of the camera operation. It affords effective use of a wide range of such off-hand control accessories as the radio controller set,

infrared controller set, interval timer and cable switches. With such accessories, the photographer is capable of 'Real Time' shutter tripping while positioning himself away from the camera, with the camera control on 'Auto'. Animal or bird photography, surveillance photography, photogrammetry, photography in hazardous situations and medical photography are just some of the wide applications of this 'Real Time' off-hand control.

#### ● Real Time Motor Drive System

Here too, the 'Real Time' magnetic release system plays an important role in providing full synchronization of the camera function and motor drive system. At the final stage of operation of the magnetic release system, a motor drive switch makes contact to transmit a signal to the motor drive system that the exposure has been completed and the camera is readied for film wind. By virtue of this unique system, the CONTAX RTS assures perfectly synchronized operation on 'Auto' under all light conditions.

Two types of motor drive units have been designed for use with the CONTAX RTS. The Real Time Winder which is a compact, lightweight and versatile unit can be regarded almost as a standard equipment

owing to the fact that it opens new photographic possibilities without impairing the original maneuverability of the CONTAX RTS.

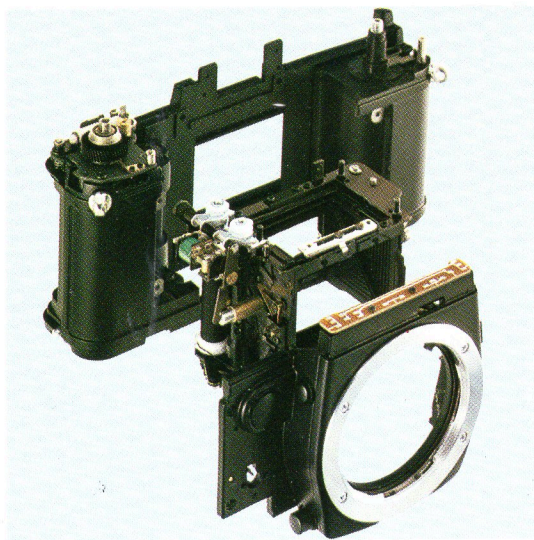
These motor drive units can be regarded as an electric distribution panel which combines the camera with several off-hand control accessories.

#### ● Real Time T\* (T-Star) Carl Zeiss Interchangeable Lenses

These lenses, most of which have been designed especially for the CONTAX RTS by Carl Zeiss, mark the apex of optical performance. They are T-Star coated not only to minimize harmful surface reflections but also to provide ultra-flat transmittance throughout the visual spectral range for high fidelity color reproduction.

The extra-high speed design of these Carl Zeiss interchangeable lenses, together with the T-Star multi-layer anti-reflection coating, permits the photographer to select comparatively high shutter speeds even in subdued light situation—a 'Real Time' advantage in all photographic applications.





# Functional Outline of the CONTAX Real Time System

## ● Exposure Control Through TTL Center-Weighted Light Reading

The teamwork of the SPD (Silicon Photo Diode) light sensor and the most sophisticated electronic circuit affords a unique 'Real Time' exposure control. The system has no equal in the speed of functional response and requires no 'standby' or warm-up switching.

The SPD located directly above the viewfinder eyepiece takes center-weighted light reading immediately upon activation of the magnetic release system. It responds faithfully to even the slightest variation of the light intensity and the subject brightness information thus sensed is then stored in the memory register as soon as the deflection mirror begins its upward travel.

The exposure is thus computed within a fraction of a millisecond and the correct shutter speed in relation with the preselected lens aperture is momentarily displayed in the viewfinder when the shutter is tripped.

On 'Auto', the exposure is computed on the basis of aperture preselection, while on 'Manual' either the shutter speed or lens aperture can be preselected by referring to the viewfinder display.

Whenever necessary, the LED display in the viewfinder can be turned on instantane-

ously for preview of the correct shutter speed in relation with preset f-stop.

## ● Comprehensive, Information-Packed Real Time Display

The CONTAX RTS features by far the most advanced and comprehensive viewfinder display of all exposure information.

By sighting through the viewfinder and following the normal preliminary steps such as aperture preselection and focusing, the photographer is provided a preview of the correct aperture/speed combination.

### (1) Aperture Display

The aperture display of the CONTAX RTS is both automatic and comprehensive.

When any one of the Carl Zeiss interchangeable lenses is properly mounted on the camera body, the aperture scale along the top edge of the viewfinder frame shifts to either right or left to display the maximum aperture of the lens in use on the far right.

Rotation of the aperture ring on the lens to key the slide resistor for through-the-lens light reading automatically moves the green tab, thus displaying the preselected lens opening in green on the scale.

Because there will be no black-out of the top area of the viewfinder field no matter

what type of lens is in use, this aperture display permits precise f-stop setting while sighting through the viewfinder.

### (2) 16-Dot LED Shutter Speed Display

In addition to the precise shutter speed set in relation with the preselected lens aperture, this display also shows whether the camera is set at 'Auto' or 'Manual' and warns against over- or under-exposure.

On 'Auto', the green pointer is at the top-most position and covers the 'A' setting. On 'Manual', the same pointer shift through rotation of the shutter control dial and overlaps the figure corresponding to the shutter control dial setting.

When the LED dot comes on in alignment with the 'A' setting, it signifies over-exposure, while the LED dot in alignment with the 'B' setting indicates under-exposure.

On 'Auto' and 'Manual', the LED dot comes on momentarily at the time of shutter tripping, providing a glimpse of the shutter speed at which the exposure is being made. Also, it can be turned on before or after film wind for effective preview of the exposure information.

On Manual, the green pointer must be aligned with the LED dot by turning either the lens aperture ring or the shutter control

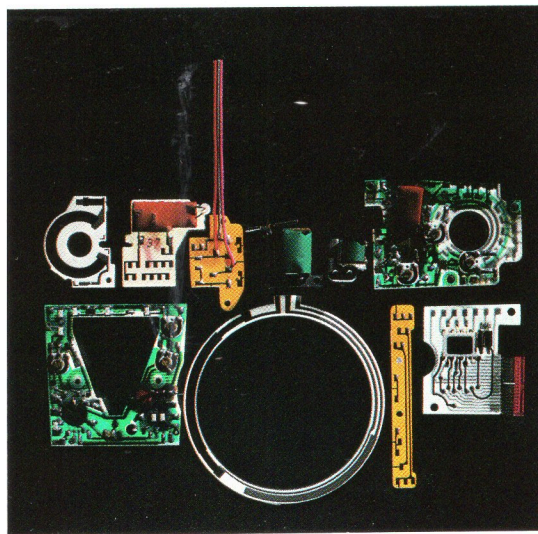




**Information-packed viewfinder display of the CONTAX RTS**

Photo within the viewfinder frame was taken with Tele-Tessar 200mm F3.5 on the data indicated.





dial. In other words, either the lens aperture or the shutter speed can be preselected on manual operation, depending on the specific photographic requirement.

On both 'Auto' and 'Manual', a single LED dot indicates automatic setting of the shutter speed corresponding to the figure in alignment, while two LED dots signify setting of a shutter speed between the figures in alignment.

### (3) Exposure Compensation Display

The CONTAX RTS features an exposure compensation scale at the base of the ASA film speed dial. This provision permits ready exposure compensation for obtaining special effect or coping with difficult light situations, regardless of whether the camera is set at 'Auto' or 'Manual'.

As soon as the pointer is moved to any setting other than the 1X normal exposure position, a black circular tab appears on the lower left edge of the viewfinder frame. This display instantly tells the photographer that exposure compensation is being made.

### ● Unlimited Possibility of Real Time System Application

All electronic and mechanical systems of the CONTAX RTS are designed specifically

to afford the most effective use in system application in concert with the various types of lenses and accessories.

Take, for instance, the electromagnetic shutter release system. It is basically a solenoid system built right into the camera enabling direct use of various off-hand control accessories. Because this system also activates the automatic light reading and exposure control and generates a signal pulse when the exposure is fully completed, perfect synchronization with motor drive units is assured.

By virtue of these systems, the CONTAX RTS is the only advanced 35mm SLR system camera permitting fully automatic exposure control even when off-hand controls and motor drive units are in use. It is because of these unique features that the CONTAX RTS offers such possibility in system application as could not possibly be attempted with other advanced SLR cameras.

The use of the Real Time Winder with the following features, therefore, opens new horizons in 'Real Time' photography. It enables the use of the CONTAX RTS for photographic assignments which no other camera could possibly accomplish, such as sequence shooting of sport events and scientific and criminological research.

### ● Feature Outline of The Real Time Winder

This compact, lightweight and versatile motor drive unit is designed exclusively for use with the standard camera back and Data Back. Without impairing the original maneuverability of the CONTAX RTS, the Real Time Winder permits use as a film winder, in addition to its original use as a motor drive unit.

Film drive speeds: Two-way selection of film drive—'S' for single frame film advance and 'C' for continuous automatic film drive, both usable at all shutter speeds and on 'Auto'. Maximum 2 frames per second film drive speed provided at 'C' setting over a shutter speed range from 1/2000 to 1/60 sec.

Power source: 6 AA size alkaline or manganese batteries. Replacement of alkaline batteries provide power for film drive of up to 50 cassettes of 36 exposure load film.

Shutter release: Uses the camera's magnetic release.







# CONTAX RTS System Accessories

## CARL ZEISS Interchangeable Lens Group

- ① F-DISTAGON 16mm F2.8
- ② DISTAGON 15mm F3.5
- ③ DISTAGON 18mm F4
- ④ DISTAGON 25mm F2.8
- ⑤ DISTAGON 28mm F2
- ⑥ DISTAGON 35mm F1.4
- ⑦ DISTAGON 35mm F2.8
- ⑧ PLANAR 50mm F1.4
- ⑨ S-PLANAR 60mm F2.8
- ⑩ PLANAR 85mm F1.4
- ⑪ SONNAR 85mm F2.8
- ⑫ PLANAR 135mm F2
- ⑬ SONNAR 135mm F2.8
- ⑭ TELE-TESSAR 200mm F3.5
- ⑮ VARIO-SONNAR 40mm-80mm F3.5
- ⑯ MIROTAR 500mm F4.5
- ⑰ MIROTAR 1000mm F5.6

## Finder System

- ① Rubber Eyecup/Eyepiece Shutter
- ② Diopter Lenses  
(8 types from +3 to -5 diopters)
- ③ Right-Angle Finder Type II
- ④ Magnifier
- ⑤ Viewing Screens  
(Standard microprism screen, split-image screen, matte screen, sectioned matte screen and cross scale screen)

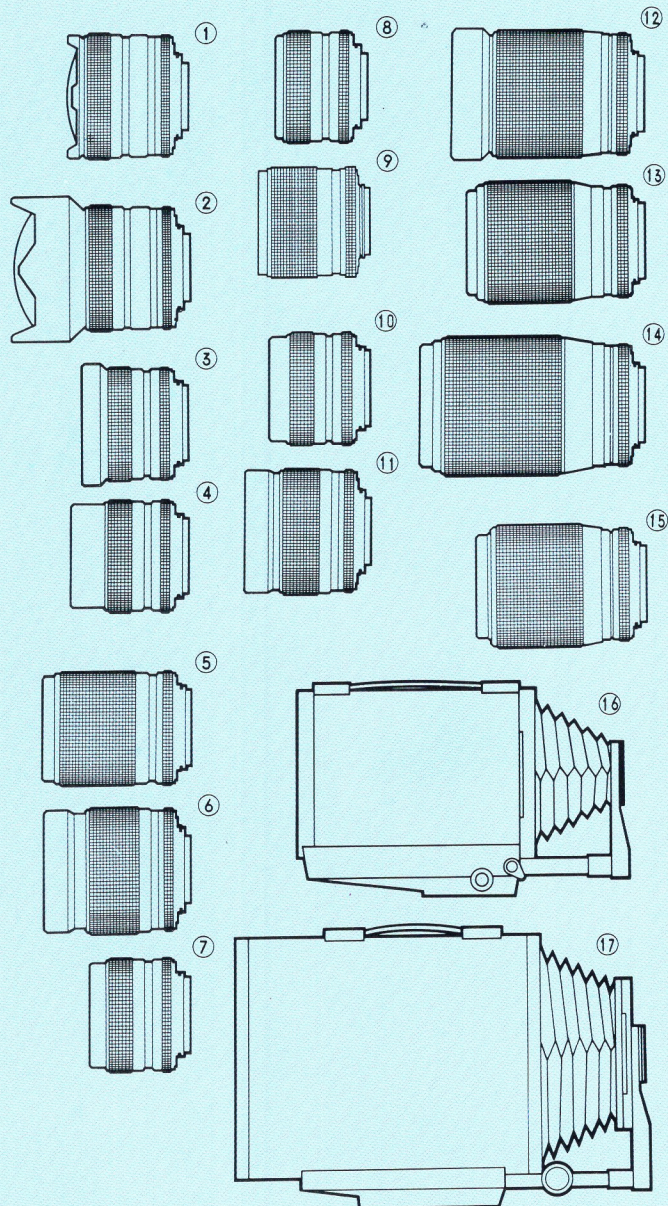
## Filters & Lens Shades

- ⑥⑤ Lens Shades
- ⑥⑥ Filters  
(Multi-layer coated; 55mm & 67mm screw-in types)
- ⑥⑦ Softar I, II & III

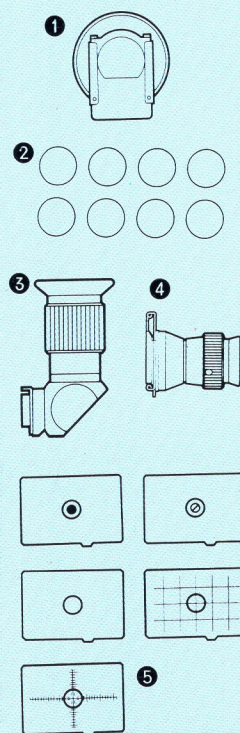
## Macrophoto System

- ⑥ Auto Bellows
- ⑦ Focusing Rail
- ⑧ Connector Cord
- ⑨ Cable Release
- ⑩ Slide Copier
- ⑪ Auto Extension Tube Set Type F
- ⑫ Microscope Adapter Type F
- ⑬ Oscilloscope Mount
- ⑭ Oscilloscope Adapter RT
- ⑮ Macro Stand Stage Glass
- ⑯ Macro Stand
- ⑰ Copy Stand Type II

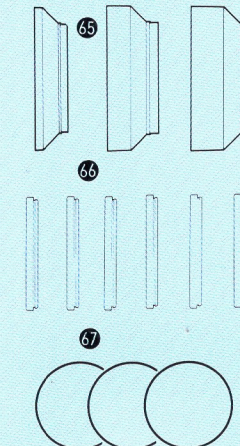
## CARL ZEISS Interchangeable Lens Group



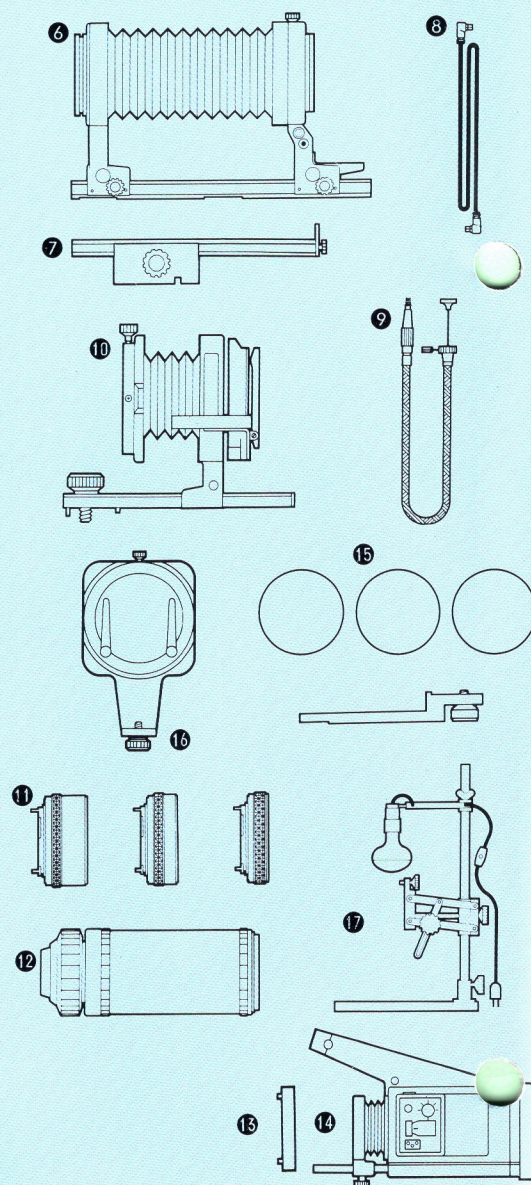
## Finder System



## Filters & Lens Shades



## Macrophoto System





Data Back  
Data Back

Real Time Winder System

- 21 Real Time Winder
- 22 RTW Battery Case
- 23 Power Cord 300
- 24 Power Cord 1000
- 25 RTW Power Pack
- 26 Power Pack Jacket A

External Camera Power System

- 18 External Battery Protector
- 19 External Power Adapter

Off-Hand Control System

- 27 Cable Switch 30
- 28 Cable Switch 300
- 29 Cable Switch 1000
- 30 Interval Timer
- 31 Infrared Controller Set
- 32 Radio Controller Set

Professional Motor Drive System

- 33 Professional Motor Drive
- 34 Motor Drive Control Cord 300
- 35 Motor Drive Control Cord 1000
- 36 Motor Drive Control Grip
- 37 Motor Drive Battery Checker
- 38 Motor Drive Battery Cartridge
- 39 NiCd Battery Pack
- 40 NiCd Battery Charger
- 41 Motor Drive Power Pack
- 42 Power Pack Jacket B
- 43 Motor Drive AC Control Box
- 44 250 Film Back
- 45 250 Film Magazine
- 46 Film Loader

Real Time Flash System

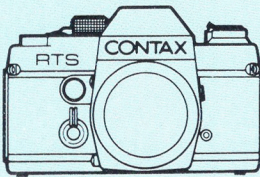
- 47 Twin-Flash Adapter
- 48 Direct-Shoe Extension Cord Type A
- 49 Direct-Shoe Extension Cord Type B
- 50 Real Time Flash 24  
(Wide-Angle Adapter  
for RTF 24 & Color Filters)
- 51 Real Time Flash 34  
(Color Filters for RTF 34)

Other Accessories

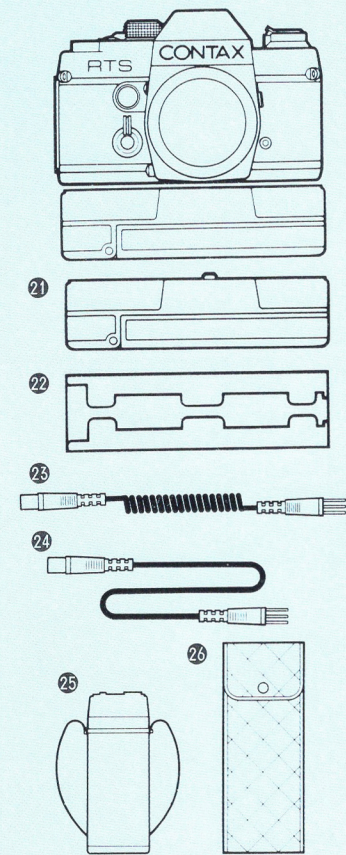
- 52 Body Cap
- 53 Shoulder Pad
- 54 Lens Rear Cap
- 55 Lens Cap
- 56 Shoulder Strap
- 57 Lens Case

Carrying Cases

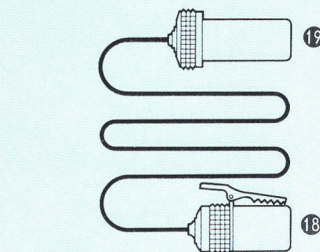
- 58 Standard Eveready Case
- 59 Deluxe Eveready Case
- 60 Tele-Nose
- 61 Wide-Nose
- 62 Kit Bag
- 63 Professional Case A
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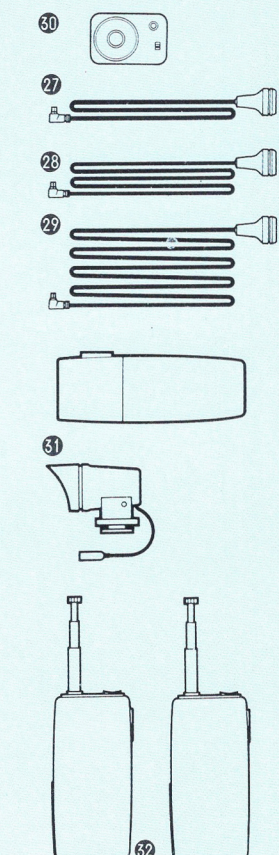
Real Time Winder System



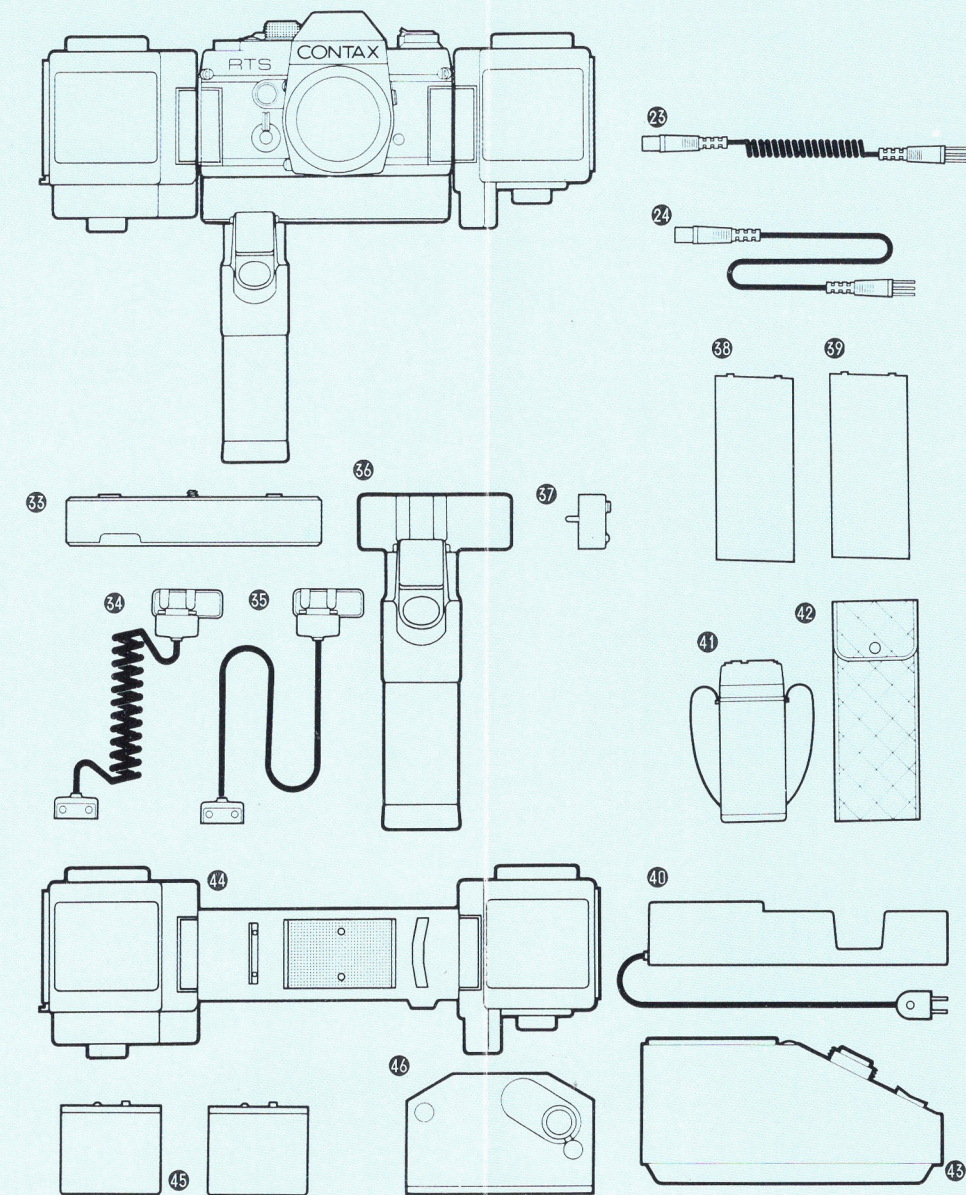
External Camera Power System



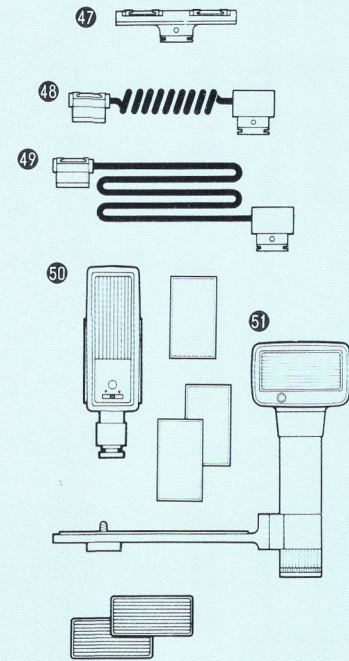
Off-Hand Control System



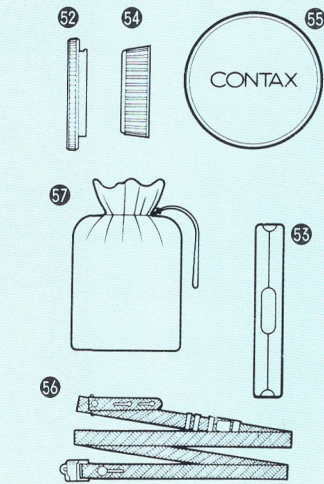
Professional Motor Drive System



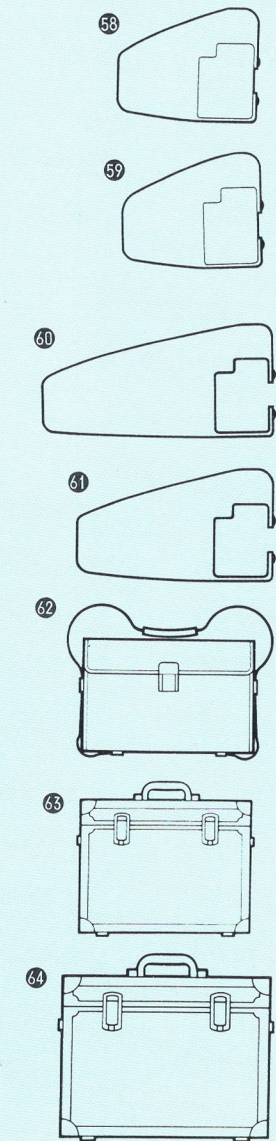
Real Time Flash System



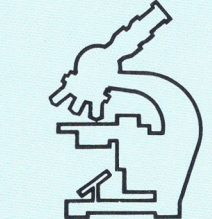
Other Accessories



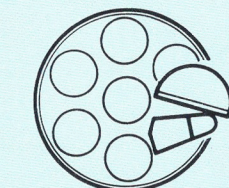
Carrying Cases



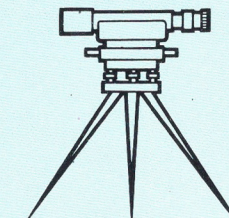
Photomicrography System



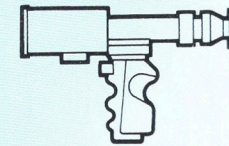
Medical Photography System



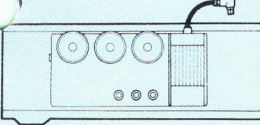
Photogrammetry System



Orion Image Intensifier



Data Back







Carl Zeiss Interchangeable Lens Group



# CONTAX RTS Technical Data

## LENS

PLANAR 50mm F1.4 standard lens composed of 7 elements in 6 groups and interchangeable with a wide range of Carl Zeiss lenses designed specifically for the CONTAX RTS. All lenses feature T-Star multi-layer anti-reflection coating.

## LENS MOUNT

NEW BAYONET MOUNT developed by mutual cooperation of Carl Zeiss, West Germany, and Yashica, Japan. Features complete coupling system for ① keying the aperture slide resistor to afford TTL full aperture light reading and displaying the aperture setting in use, ② displaying the maximum aperture of the lens in use, and ③ ensuring fully automatic diaphragm action.

- Effective diameter: 48mm
- Flange back measurement: 45.5mm
- Setting angle: 72 degrees (Lens locks in place when given one-fifth of a turn to the right).
- Lens release button on the left side of the lens mount as viewed from the front-face of the camera.

## SHUTTER

Newly designed focal plane shutter providing electronic timing on both Auto and Manual modes of operation. Functions on a completely new concept to ensure utmost accuracy of exposure at all shutter speeds.

- Shutter speeds: Continuously variable from 4 sec. (F1.4 at ASA 100) to 1/2000 sec. on 'Auto'; 14 clickstop speed settings (4, 2, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000 and 1/2000 sec.) plus B on 'Manual'.
- Shutter control dial set coaxially with the film rewind system stops at 'Auto' position when turned all the way in a counter-clockwise motion.
- Standard DIN 'X' sync terminal, plus direct 'X' contact shoe with anti-shock provision (circuit contact is made only when the electronic flash unit is mounted on the shoe).
- Built-in self-timer with mechanical governor activates the magnetic release system for shutter tripping at a delayed action of 8 seconds.

## SHUTTER RELEASE

Electromagnetic release system of an original design. Depression of the magnetic release button activates a microswitch which instantly energizes the electromagnet and triggers a chain-reaction—it activates the TTL full aperture light reading system, triggers the flip-up of the deflection mirror, stores the light reading information in the memory register in the course of the mirror flip-up, stops down the lens diaphragm to the pre-selected setting and trips the focal plane shutter.

- Stroke: Not more than 1mm
- Release socket on the camera body

## EXPOSURE CONTROL

Through-the-lens full aperture 'center weighted' light reading with the SPD (Silicon Photo Diode) sensor positioned above the viewfinder eyepiece.

- On 'Auto', light reading is taken immediately upon depression of the magnetic release button.
- Depression of the LED display pushbutton immediately activate the light reading system and turns on the LED shutter speed display in the viewfinder for effective exposure checking before or after film wind on either 'Auto' or 'Manual' mode of operation.
- On normal operation, the exposure control as well as other electronic systems are powered by a 6 V silver oxide (Eveready 544, Mallory PX28 or equivalent) or 6V alkaline (Alkaline Eveready 537 or equivalent) battery.
- ASA film speed range from ASA 12 to 3200.

*For full information on the camera system, Carl Zeiss lenses and system accessories, write to the nearest Yashica office or Contax agent, enclosing return postage and actual cost of the brochures.*

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- EV range from EV -1 to EV 19 (F1.4 at ASA 100).

- Exposure compensation: Four-way exposure compensation with settings of 4X, 2X, (1X), 1/2X and 1/4X.

## VIEWFINDER DISPLAY

Viewfinder gives display of all necessary exposure information.

- 16-dot LED array shutter speed display comes on when the LED display pushbutton is depressed and when the magnetic release is activated, thus providing and effective preview of the correct shutter speed in relation with the lens aperture in use.
- On 'Auto' and 'Manual', the LED display indicates the calibrated speed and in-between speed as well.
- On 'Auto', the green pointer is at 'A' position.
- On 'Manual', the green pointer indicates the speed setting of the shutter control dial.
- On 'Manual', the shutter control dial or the lens aperture ring must be turned to bring the pointer in alignment with the LED dot.
- Aperture display shows ① the maximum aperture of the lens in use on the extreme right, and ② the f-stop in use in green figure.
- Exposure compensation display appears on the lower left corner of the finder frame to signal exposure compensation.

## VIEWFINDER

Through-the-lens reflex viewfinder adjusted to -0.82 diopter shows 92% of the actual picture area. Reflecting surfaces of the pentaprism silver coated and deflection mirror features multi-layer coating to ensure maximum brightness of the viewfinder image.

- Magnification: 0.87X

## VIEWING SCREEN

Standard viewing screen with microprism center focusing spot interchangeable from the lens mount side.

## FILM ADVANCE

Film advance lever advances the exposed frame and charges the shutter in one action (140° stroke) or in several short strokes.

## EXPOSURE COUNTER

Automatic resetting counter registers the number of exposed frames.

## FILM REWIND

Film rewind by foldaway crank-handle. When the crank-handle is folded into place, the film rewind knob remains stationary, while the film rewind stud rotates freely.

## CAMERA BACK

Removable camera back interchangeable with the Data Back or 250 Film Back. Back cover lock released by pulling the rewind knob all the way out.

## MULTIPLE EXPOSURE PROVISION

Pressure on the film rewind release button on the camera base applies a ratchet system brake on the take-up spool, permitting shutter charging without film advance.

## OTHER FEATURES

- Depth-of-field preview button
- Mirror lock lever
- Film rewind release button which automatically resets when the film advance lever is manipulated.
- Battery check button which turns on the LED battery checker display when there is sufficient battery power.
- Accessory shoe
- Motor drive coupling terminal and film advance coupler

## SIZE & WEIGHT

142×89.5×50mm; Approx. 700 grams (body only)