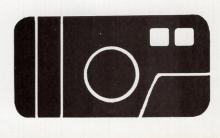


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# Nikon F3HP, F3/T

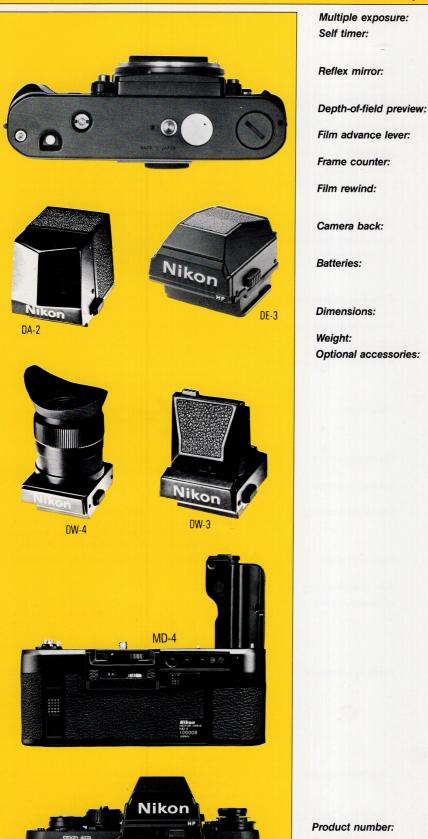


#### Nikon F3HP

# 

act number:	1691
of camera:	Electronically-controlled, single-lens-reflex camera
re format:	24mm x 36mm (standard 35mm format)
mount:	Nikon F bayonet
25:	Nikkor 50mm f/1.2, 50mm f/1.4 or 50mm f/1.8 as standard lenses, and more than 60 Nikkor and Nikon Series E lenses
er:	Horizontal-travel, titanium foil, focal-plane shutter
er release:	Electromagnetic type switches meter on when depressed halfway (after shutter release lock is released); meter then remains on for 16 sec. after finger is taken off the shutter release button; release button threaded to accept ISO-type standard cable release
up mechanical release:	Lever provided to trigger camera at mechanical 1/60 sec. exposure time, regardless of the exposure setting (except at T); used when battery power is exhausted, or to conserve battery power for T (Time) exposures
natic exposure control:	Aperture-priority, automatic exposure control with stepless shutter speeds from 8 sec. to 1/2000 sec.
al exposure control:	Quartz digital control for 16 stepped shutter speeds from 8 sec. to 1/2000 sec., including X (1/80 sec); B (Bulb) and T (Time) also provided
anical shutter control:	Possible using backup mechanical release lever at T (Time) setting on shutter speed dial, or at 1/60 sec. when shutter speed dial set to any other setting
inder:	High-eyepoint Eyelevel Finder DE-3 as standard; interchangeable with other viewfinders; 0.75X magnification with 50mm lens; virtually 100% coverage
ece shutter:	Provided; prevents light from entering the finder eyepiece under remote-control operating conditions
sing screen:	Type K as standard; 21 other types as optional accessories
sure metering:	Thru-the-lens (TTL) light metering; silicon photodiode and metering circuits incorporated into camera body; meter works with all interchangeable viewfinders and interchangeable finder screens
ring range:	EV1 to EV18 (f/1.4 at 1 sec. to f/11 at 1/2000 sec.) with 50mm f/1.4 lens and ISO 100 film
speed setting:	ISO 12 to 6400
ssory shoe:	Provided; special Nikon type located at base of rewind knob; accepts direct mount Speedlights SB-16A, SB-17 and SB-21A, as well as accessory cords SC-12 and SC-14; two optional flash adapters available for flash units with ISO hot shoe contacts and for flash unit for Nikon F2
synchronization:	All speeds of from 8 sec. to 1/60 sec., plus X (1/80 sec.) with electronic flash; with F3-dedicated speedlights, the shutter speed is automatically set to 1/80 sec at A (automatic operation) or at manual shutter speed settings of 1/125 sec. or above; synchronization is also possible at slower speeds; threaded PC-type sync terminal provided at front of camera for off-camera and mutiple-flash photography
finder display:	Liquid Crystal Display shows shutter speed; on auto, +2000 indicates overexposure and -8- indicates underexposure; on manual, M appears with + indicating overexposure, - indicating underexposure or - and + simultaneously indicating correct exposure; LED ready light glows when F3-dedicated speedlights are ready; the lens aperture in use is also shown in the viewfinder via the aperture-direct-readout (ADR) scale provided on all AI and AIS lenses
finder illuminator:	Provided; illuminates both LCD panel in camera and ADR scale on lens aperture ring of AI and AIS Nikkor lenses
sure compensation:	Provided; from +2 to -2 in one-third step increments
sure memory:	Possible via front-mounted lock button

#### Nikon F3HP, F3/T



Product number: Type of camera:

Possible via top-mounted lever

Quartz-controlled, 10 sec. delayed exposure; LED blinks at 2 hz. for the first 8 sec., and at 8 hz. for the last 2 sec.

Automatic, instant-return type with lock-up facility; incorporates brake mechanism and air damper for reduced vibration and noise

Possible via button fitted coaxial with the mirror lock-up lever

30° stand-off angle and 140° winding angle; wound in single stroke or series of smaller strokes

Additive type; automatically reset when camera back is opened

Via rewind crank after depressing film rewind button; automatic film rewind possible with Motor Drive MD-4

Interchangeable with optional special-purpose backs; opened by pulling up the film rewind knob (after unlocking)

Two type 1.5V silver-oxide (button cell) batteries; when optional Motor Drive MD-4 is mounted, the camera receives all power from the motor drive batteries

Approx. 101.5mm (H) x 148.5mm (W) x 69.0mm (D) (4" x 5.8" x 2.7")

Approx. 760g (26.8 oz.), body only

Eyelevel Finder DE-2 Action Finder DA-2 Waist-Level Finder DW-3 High-Magnification Finder DW-4 Motor Drive MD-4 Miscellaneous focusing screens Speedlights SB-11/14/140/16A/17/21A Data Backs MF-14/MF-17/MF-18 250-ex Magazine Back MF-4 Auto Rewind-Stop Back MF-6B Eyepiece Adapter Ring DK-3

#### Nikon F3/T

#### 1694

The Nikon F3/T is a ruggedized version of the Nikon F3HP; the use of titanium outer covers makes this camera ideal for heavy-duty users, such as photojournalists.

#### Nikon N4004

Product number:

Type of camera:

Picture format:

Autofocus selector:

Viewfinder information:

Focus memory:

Focusing screen:

Exposure metering:

Exposure control:

Exposure memory:

Shutter speeds:

Film advance:

Frame counter:

Accessory shoe:

Built-in TTL flash:

Flash synchronization:

AF-assist flash photography:

Flash ready-light:

Power source:

**Optional accessories:** 

**Dimensions:** 

Weight:

Film rewind:

Self-timer:

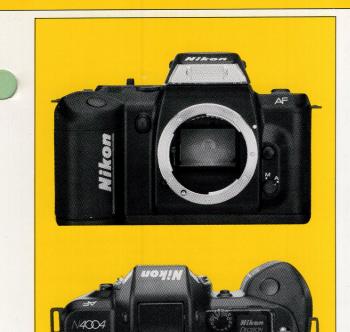
Shutter:

Film speed settings:

Viewfinder:

Lens mount:

Lenses:









#### Nikon N4004

#### 1750

Electronically-controlled, autofocus single-lens-reflex camera with built-in motor drive and TTL flash unit

24mm x 36mm (standard 35mm format)

Nikon F bayonet with autofocus contacts

Autofocus Nikkor lenses and more than 70 non-AF Nikkor and Series E lenses (with limitation)

A mode: autofocus priority with shutter release possible only after the green focusing LED lights up; M mode: manual focusing

Via shutter release button

Fixed pentaprism viewfinder with about 92% frame coverage

Green LED provides information on focusing via steady illumination when subject is correctly focused; red LEDs of "+", "0", "-" provide information on exposure (over, correct, under), as well as red thunderbolt mark for flash ready-light

Type B with central focus brackets for autofocus operation; 12mm diameter reference circle denotes centerweighted metering area

Thru-the-lens (TTL) full aperture exposure measurement with segmented silicon photodiode (SPD)

Triple-sensor metering for automatic exposure correction for difficult lighting conditions; dual program, shutter speed and aperture are set automatically, taking into account the focal length of the lens; in shutter-priority, aperture is set automatically, for pre-selected shutter speed; in aperture-priority, shutter speed is set automatically for preselected aperture; in manual, aperture and shutter speed are set manually

Via front-mounted AE-lock control

ISO 25-5000 automatic setting for DX-coded films

Electronically-controlled, vertical-travel, focal plane shutter

Stepless, automatic settings between 1 sec and 1/2000 when set for program "A" (aperture-priority) or "S" (shutter-priority) operation; 12 electronicallytimed fixed speeds from 1 sec. to 1/2000 sec. for manual setting; long exposures at B setting.

Automatic loading check system; film automatically advanced to frame "1" after shutter release is depressed once; film advance indicator provided on camera back

Additive-type with automatically reset to "S" when the camera back is opened

Motorized, automatic after depressing rewind button

Electronically-controlled, 10 sec. shutter release delay; visual display via LED at front of camera

Standard ISO hot shoe with additional contacts for TTL metering and flash ready indication

GN 12 (ISO 100 film) with angle of coverage sufficient for use with lenses to 35mm focal length; TTL automatic flash control via built-in sensor; operation integrated with standard triple-sensor metering to enable proper exposure control even under difficult subject lighting conditions

1/100 sec. for automatic modes; 1/100 sec. or slower in manual mode, including  ${\sf B}$ 

Flash symbol visible as soon as the Nikon Speedlight is ready; blinks to indicate when flash is required or when light output of flash was inadequate for correct exposure

Possible with optional Nikon Speedlights SB-20/22

Four 1.5 V AA-type (penlight) batteries via battery chamber at base plate of camera

154mm (W) x 102mm (H) x 65.6mm (D) (6.0" x 4.0" x 2.6")

Approximately 645g (22.6 oz.), body only

Body Cap BF-1A Speedlights SB-15/18/20/22

# ns-reflex





#### Nikon N2020

1740

Electronically-controlled, single-lens-reflex camera with built-in motor drive and dual autofocus

24mm x 36mm (standard 35mm format)

Nikon F bayonet with autofocus contacts

More than 12 autofocus Nikkor lenses and more than 70 non-AF Nikkor and Series E lenses; With Autofocus Converter TC-16A, more than 30 Nikkor lenses can be used in the autofocus mode

S mode, autofocus priority with shutter release possible only after the green focusing LED lights up; C mode, shutter release priority, the shutter can be released at any time; C mode particularly suitable for photographing moving objects; M mode, manual focusing

Via shutter release button in single-serve autofocus and via AF-lock button in continuous-serve autofocus

Fixed pentaprism viewfinder with about 92% frame coverage

LED providing information on focusing: Focusing not possible (X) Correctly focused (0)

Arrow indicates direction of rotation of lens as a focusing aid; LEDs indicate shutter speed, warning of overexposure and underexposure, and flash recycling

Type B with central focus brackets for autofocus operation: 12mm diameter reference circle denotes centerweighted metering area; interchangeable with types E and J focusing screens

Thru-the-lens (TTL) full aperture centerweighted exposure measurement with silicon photodiode (SPD)

In dual program, shutter speed and aperture are set automatically, taking into account the focal length of the lens; standard program, shutter speed and aperture are set automatically; high-speed program, shutter speed and aperture are set automatically for preselected aperture; manual, aperture and shutter speed are set manually

EV1 to EV19 (f/1.4 at 1 sec. to f/16 at 1/2000 sec.) with 50mm f/1.4 lens and ISO 100 film

Via front-mounted AE-lock control

+2 to -2 steps in one-third increments via dial

Automatic setting for DX-coded films (ISO 25-5000); manual setting for films without DX code (ISO 12-3200)

Electronically-controlled, vertical-travel, focal plane shutter

Stepless, automatic settings between 1 sec and 1/2000 sec. on P Dual, P, P Hi, and A; 12 quartzcontrolled, fixed speeds from 1 sec. to 1/2000 sec. for manual setting; long exposures at B setting.

Automatic loading check system; with simultaneous film advance to frame 1; modes of operation, single-frame advance (S), continuous advance to 2.5 frames/sec. (C) or shutter locked (L)

Automatically resets to S when the camera back is opened

Via manual rewind crank after actuating rewind lever

Sounds in the following cases: DX setting but no DX-coded film, DX contact dirty, over- or under-exposure and possible blur in autoexposure modes, and at end of film roll

Electronically-controlled, 10 sec. shutter release delay; audible and visual display

Standard ISO hot shoe with additional contacts for TTL metering and flash ready indication with N2020-dedicated speedlights





Flash synchronization:

Flash ready-light:

Autofocus-assist flash photography:

Power source:

Dimensions:

Weight: Optional accessories: 1/125 sec. for automatic modes; 1/125 sec or slower (plus B) in manual

Flash symbol visible as soon as the N2020-dedicated Speedlight is ready; blinks after exposure when light intensity is inadequate

Possible with optional Nikon AF Speedlights SB-20/22 with camera in single-servo (S) mode

Four 1.5V AAA-type (penlight) batteries; with optional Battery Holder MB-3, four 1.5V AA-type batteries can be used

148.5mm (W) x 97.5mm (H) x 54.5mm (D) (5.8" x 3.8" x 2.1")

Approximately 610g (22.1 oz.), body only

Body Cap BF-1A Battery Holder MB-3 (for AA-type batteries) Multi Data Back MF-19 Autofocus Converter TC-16A Remote Trigger Cord MC-12A Tripod Adapter AH-3 Speedlights SB-15/16B/18/20/21B/22

# Nikon N2000



#### Nikon N2000 1720 Electronically-controlled, single-lens-reflex camera with built-in motor drive 24mm x 36mm (standard 35mm format) Nikon F bayonet More than 60 Nikkor and Nikon Series E lenses Fixed pentaprism viewfinder with approximately 92% frame coverage Via LEDs, shutter speed, warning of overexposure or underexposure and recycling of flash Fixed type K2 BriteView focusing screen with central non-shading split-image rangefinder circle, microprism collar and matte/Fresnel outer field; 12mm diameter reference circle denotes centerweighted metering area Thru-the-lens (TTL), center-weighted, full-aperture exposure measurement via silicon photodiode (SPD) Standard program, shutter speed and aperture are set automatically; high-speed program, shutter speed and aperture are set automatically, particularly suitable for longer focal lengths; aperture-priority mode, shutter speed is set automatically for preselected aperture; manual mode, aperture and shutter speed are set manually EV1 to EV19 (f/1.4 at 1 sec. to f/16 at 1/2000 sec.) with 50mm f/1.4 lens and ISO 100 film Via front-mounted exposure-lock +2EV to -2EV in one-third increments via selector dial Automatically for DX-coded films (ISO 25-4000); manually for films without DX code (ISO 12-3200) Electronically-controlled, vertical-travel, focal plane shutter Stepless, automatic speed setting between 1 sec and 1/2000 sec on P, P Hi, and A; 12 stepped, electronically-controlled fixed speeds from 1 sec. to 1/2000 sec, plus B (Bulb) in manual mode Automatic loading check system; with simultaneous film advance to frame 1; Mode of operation, singleframe mode (S), Continuous-frame mode with 2.5 frames/sec. (C) and Locked mode (L) Additive-type; automatically resets to S when the camera back is opened With rewind crank after rewind button is depressed Sounds in the following cases: DX setting but no DX-coded film, DX contact dirty, over- or underexposure and possible picture blur in autoexposure modes, and at end of film roll Electronically-controlled, 10 sec. delay; audible and visual indication Standard ISO hot shoe with additional contacts for TTL metering and flash ready light for use with N2000-dedicated speedlights 1/125 sec in auto modes; 1/125 sec and all slower speeds, including B, in manual mode Flash symbol visible as soon as the N2000-dedicated Speedlight is ready; blinks when light intensity is insufficient Four 1.5V AAA-type (penlight) batteries; with optional Battery Holder MB-3, four 1.5V AA-type batteries can be used Interchangeable with Multi Data Back MF-19

148.5mm (W) x 97.5mm (H) x 54.5mm (D) (5.8" x 3.8" x 2.0")

Approximately 570g (20.0 oz.), body only

Body Cap BF-1A Battery Holder MB-3 (for AA-type batteries) Multi Data Back MF-19 Remote Trigger Cord MC-12A Tripod Adapter AH-3 Speedlights SB-15/16B/18/20/21B/22

#### Nikon FM2









#### Product number:

Type of camera: Picture format: Lens mount: Lenses: Shutter:

Shutter release:

Shutter speeds:

Film advance lever:

Self-timer: Viewfinder:

Viewfinder display:

Focusing screen:

Mirror:

Motor drive coupling:

Multiple exposure lever:

Frame counter:

Film rewind:

Accessory shoe: Flash sync:

Flash ready-light:

Exposure metering system:

Metering range:

Film speed range: Power source:

Exposure meter switch:

Battery power check:

Camera back:

**Dimensions:** 

Weight: Optional Accessories:

Nikon FM2 1683 (chrome) 1684 (black) Mechanically-controlled, single-lens-reflex camera 24mm x 36mm (standard 35mm format) Nikon F bayonet More than 60 Nikkor and Nikon Series E lenses Mechanically-controlled, vertical-travel, metal focal plane shutter with titanium curtains Mechanical shutter release with ISO screw socket for cable release AR-3; shutter release button locked when film advance lever is flush with camera body Mechanically governed speeds of 1 sec. to 1/4000 sec., plus B (Bulb) Single-stroke type; 30° stand-off angle and 135° winding angle Mechanical type; 10 sec. exposure delay Fixed pentaprism viewfinder with about 93% frame coverage Shutter speed, f-number in use via aperture-directreadout scale on lens and 3 LEDs (+, 0, -) for exposure setting in 5 steps Standard type K2 with split-image rangefinder spot and microprism ring; full matte screen B2 and full matte screen with grid E2 as optional accessories; screens can also be used with the Nikon FE2 Rapid-return mirror with special control and braking to reduce vibrations and operating noise; depth-offield preview lever provided at front of camera Electrical contact and mechanical coupling for optional Motor Drive MD-12 Provided; couples with frame counter to stop count when multi-exposure being executed Additive-type, with automatic resetting to S when the camera back is opened Via film rewind crank after rewind button is depressed Standard ISO-type; contact for ready light provided X synchronization up to 1/250 sec.; ISO-type hot shoe contact; separate PC-type flash connector with screw thread for connection to flash units mounted off-camera LED in viewfinder lights up when Nikon FM2-dedicated speedlight is fully charged Thru-the-Lens (TTL), center-weighted full aperture metering with two silicon photodiodes (SPD) EV1 to EV18 (1 sec. at f/1.4 to 1/4000 sec. at f/8) with 50mm f/1.4 lens and ISO 100 film ISO 12 to 6400 One 3V lithium battery or two 1.5V silver-oxide (button-cell) batteries Pressing the shutter release button switches meter on; meter is automatically switched off about 30 seconds after the shutter release button is released LED in viewfinder lights up to indicate sufficient power when the shutter release button is pressed Pops open when the film rewind knob is pulled up; can be removed to insert Data Back MF-16; memo holder provided 142.5mm (W) x 90mm (H) x 60mm (D) (5.6" x 3.5" x 2.4") Approx. 540g (19 oz.), body only Focusing Screen Type B2/E2 Motor Drive MD-12 Data Back MF-16 Body Cap BF-1A Speedlights SB-15/16B/18/20/21B/22

#### 





#### Nikon FE2

1631 (black)

Electronically-controlled, single-lens-reflex camera 24mm x 36mm (standard 35mm format)

Nikon F bayonet

More than 60 Nikkor and Nikon Series E lenses

Electronically-controlled, vertical-travel, metal focal plane shutter with titanium curtains

Electromechanical

Thru-the-Lens (TTL) light metering; pressing shutter release button halfway switches meter on, provided that the frame counter is at 1 or a higher number; the exposure meter switches off automatically 16 seconds after the shutter release button is released; meter switches off automatically at M250 and B settings

19 settings provided; A (automatic), manually selected, electronically-timed shutter-speed settings from 8 sec. to 1/4000 sec., plus mechanical 1/250 sec. (M250) and B (Bulb)

Through-the-lens (TTL), centerweighted metering system using a pair of silicon diodes; full aperture and stopped-down metering possible

EV1 to EV18 (f/1.4 at 1 sec to f/8 at 1/4000 sec) with 50mm f/1.4 lens and ISO 100 film

-2 EV to +2 EV in one-third increments via selector dial

ISO 12-4000

Automatic, stepless speeds from 8 to 1/4000 sec; 16 quartz-controlled, manually-selected from 8 to 1/4000 sec; mechanical 1/250 sec. (M250) and B (Bulb)

Single-stroke-type; 30° stand-off angle and 135° winding angle

Provided at base for optional Motor Drive MD-12 When film advance lever is flush with camera body

Fixed pentaprism viewfinder with about 93% frame coverage

Shutter speed, f-number, warning symbols for exposure compensation, warning symbols for overexposure and underexposure

Standard K2 matte screen with Fresnel lens, splitimage rangefinder spot and microprism collar; interchangeable with two additional focusing screens (B2 and E2)

Mechanical-type; approx. 10 sec exposure delay; reset facility provided

Via self-timer lever provided

Via multiple exposure lever provided

Standard ISO hot shoe with additional contacts for TTL metering and flash ready-light for Nikon FE2-dedicated speedlights

At ''A'', 1/250 sec.; on manual, 1/250 sec and all slower speeds, including B (Bulb)

Via LED in viewfinder

Additive-type; automatically resets to S when the camera back is opened

One 3V lithium battery or two 1.5V silver oxide (button-cell) batteries

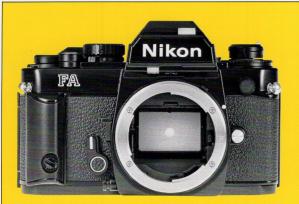
Interchangeable with optional Data Back MF-16

142.5mm (W) x 90mm (H) x 57.5mm (D) (5.6" x 3.5" x 2.3")

Approximately 550g (19.4 oz.), body only

Focusing Screen Type B2/E2 Motor Drive MD-12 Data Back MF-16 Body Cap BF-1A Speedlights SB-15/16B/18/20/21B/22

#### **Nikon FA**





Type of camera: Picture format: Lens mount: Lenses: Shutter:

Shutter speeds:

Viewfinder:

Focusing screen:

Exposure metering:

Exposure meter switch:

Light metering range: Exposure control range: Exposure control:

Exposure information:

#### Nikon FA

1730 (chrome) 1731 (black)

Electronically-controlled, single-lens-reflex camera 24mm x 36mm (standard 35mm format)

Nikon F bayonet

More than 60 Nikkor and Nikon Series E lenses Electronically-controlled, vertical-travel, metal focal plane shutter with titanium curtains

Stepless speeds of from 1 sec. to 1/4000 sec. in "P" (Program) and "A" (Aperture Priority) automatic exposure modes; 16 manually-selected speeds of from 1 sec. to 1/4000 sec. provided for operation in "S" (Shutter-Priority) and "M" (Manual) exposure modes; manual speed setting controlled via ceramic oscillator; mechanicallycontrolled 1/250 sec. (at "M250") and long exposure (at "B") settings provided

Fixed pentaprism viewfinder with approximately 93% frame coverage; eyepiece shutter provided for operation when eye is away from eyepiece

Matte screen with Fresnel lens and central splitimage rangefinder spot surrounded by microprism collar (Nikon Type K2 screen)

TTL full-aperture automatic multi-pattern metering or centerweighted metering via silicon photodiode (SPD); metering method selected via changeover switch; Automatic Multi-Pattern metering (AMP) provides for light measurement in five areas of the focusing screen to enable automatic exposure correction for difficult light conditions; centerweighted metering provides for approximately 60% of the light reading to be concentrated in the 12mm circle in the center of the viewfinder

Built in exposure meter commences measurement when the shutter release button is half depressed; meter switches off about 16 sec. after the button is released

EV1 to EV20 (f/1.4 at 1 sec. to f/16 at 1/4000 sec.) with 50mm f/1.4 lens and ISO 100 film

EV1 to EV16-1/\_3 with 50mm f/1.4 lens and ISO 100 film (AMP metering)

Three automatic exposure modes, "P" (programmed), "S" (shutter-priority) and "A" (aperture-priority), plus "M" (manual) exposure mode provided; In "P" mode, shutter speed and aperture both set automatically and steplessly; dual program operation at "P" provides for automatic selection of "normal" program for lens focal lengths shorter than 135mm and "Hi-speed" program for focal lengths of 135mm and longer; In "S" mode, speed manually preselected and aperture set automatically and steplessly via camera; automatic correction ("cybernetic" override) of shutter speed if preselected speed does not give satisfactory exposure; In "A" mode, aperture manually preselected and shutter speed set automatically and steplessly via camera; In "M" mode, both shutter speed and aperture are set manually

In "P" mode, the LCD above the viewfinder displays the fixed speed closest to the automatically selected speed; "HI" or "LO" in the LCD give warnings of over-exposure or underexposure, respectively; "FEE" indicates that the aperture has not been properly set; In "S" mode, the LCD displays the integral aperture number closest to the automatically selected aperture, or the fixed speed closest to the automatically selected speed if the set speed does not give satisfactory exposure; the LCD gives a warning of overexposure or underexposure with "HI" or "LO", respectively; the fixed speed manually selected is always displayed separately; In "A" mode the LCD displays the fixed speed and warns of overexposure or underexposure with "HI" or "LO", respectively; the fi-number set is always displayed separately; In "M" mode, the LCD displays the manually selected shutter speed preceded by "M";





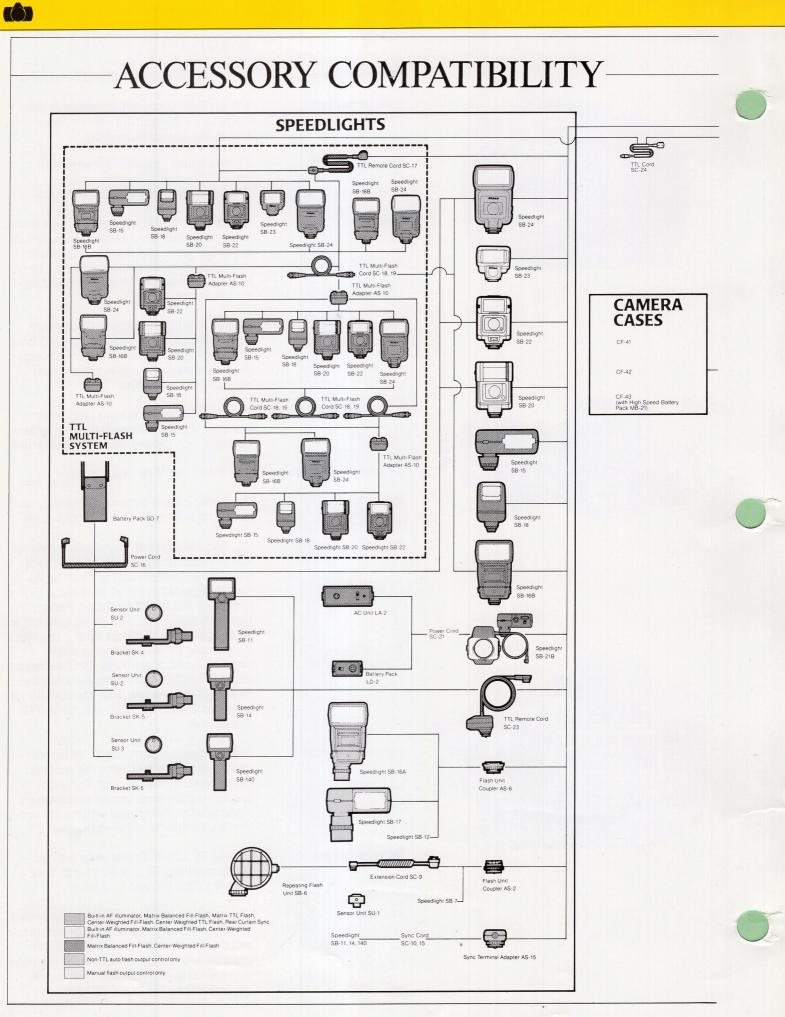
_	"-+" simultaneously illuminated means correct exposure, "+" or "-" individually illuminated means overexposure or underexposure, respectively; the f number set is always displayed
Exposure compensation:	-2 EV to +2 EV in one-third increments via selector dial; a red warning LED with a +/- symbol is visible inside the viewfinder when the meter is on and compensation has been selected
Film advance:	Wound in single stroke with 30° lever stand-off angle and 135° winding angle; film advance lever doubles as shutter release button lock when set flush to camera body
Automatic film advance:	Possible via optional Motor Drive MD-15 or MD-12
Frame counter:	Additive-type, with automatic resetting to "S" when camera back is opened; shutter fires at 1/250 sec. (unless shutter speed dial is set at B) until counter reaches frame "1"
Film rewind:	Manually via folding crank after rewind button in baseplate is depressed
Self-timer:	Mechanical type; 10 sec. exposure delay
Depth-of-field preview lever:	Provided for visual review of depth-of-field on the focusing screen
Multiple exposures:	Possible via lever fitted coaxially to film advance lever
Camera back:	Interchangeable with optional Data Back MF-16
Data back contacts:	Two internal electrical contacts provided for camera operation with Data Back MF-16
Handgrip:	Detachable; must be removed when attaching motor drive
Accessory shoe:	Standard ISO hot shoe with additional contacts for TTL metering and flash ready-light for Nikon FA- dedicated speedlights; accepts SB-15/16B/18/20/21B/22 for TTL direct flash control
Flash synchronization:	1/250 sec. or slower with electronic flash; with Nikon-dedicated speedlights sync automatically set to 1/250 when flash is mounted and camera and flash are turned on; with "M" mode, flash sync provided at speeds of from 1 to 1/250 sec.; threaded PC-type terminal provided for off-camera flash operation
Flash ready-light:	Viewfinder LED lights up as soon as the Nikon flash unit is ready; LED blinks to warn of insufficient light output or incorrect shutter speed setting or film speed setting
Power source:	One 3V lithium battery or two 1.5V silver-oxide (button-cell) batteries
Dimensions:	142.5mm (W) x 92mm (H) x 64.5mm (D) (5.6" x 3.6" x 2.5")
Weight:	Approximately 625g (22.3 oz.), body only
Optional accessories:	Focusing Screen Type B2/E2 Motor Drive MD-15 Data Back MF-16 Body Cap BF-1A Speedlights SB-15/16B/18/20/21B/22

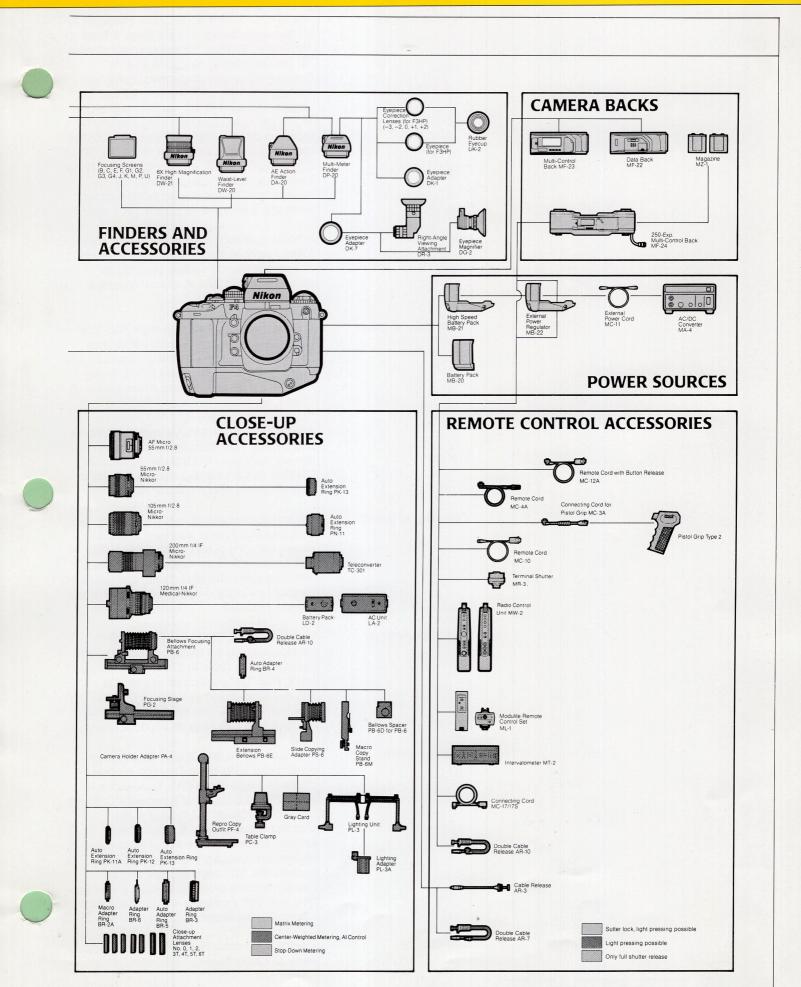


### Nikon F4

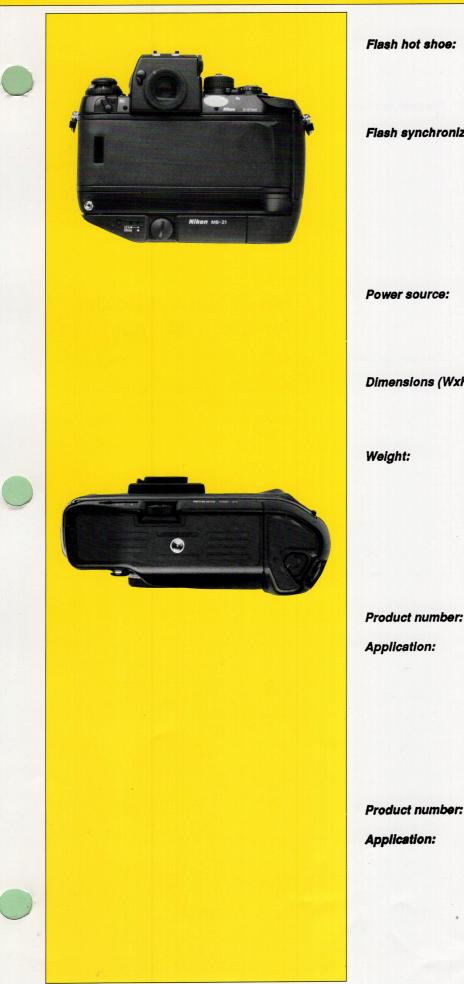
Product number:	1791 (With MB-21 High Speed Battery Pack)
Type of camera:	Electronically-controlled, professional 35mm single-lens-reflex camera with autofocus and built-in high-speed motor drive
Picture format:	24mm x 36mm (standard 35mm format)
Lens mount:	Nikon F bayonet with autofocus contacts
Lenses:	More than 80 Nikkor and Series E SLR lenses in all; more than 15 AF Nikkor lenses for full automatic focus and exposure operation; more than 70 non-autofocus AI lenses for "A" mode automatic and "M" mode manual expo- sure operation
Focus modes:	Single-servo ("S") autofocus, Continuous- servo ("C") autofocus and Manual ("M") focus with electronic rangefinder; electronic range- finder operation with lenses of maximum aperture f/5.6 or brighter
Autofocus detection:	TTL phase-detection system using Nikon advanced AM200 autofocus module; system equipped with 200-segment CCD sensor unit
AF detection range:	EV minus 1 to EV 18 (ISO 100)
Autofocus lock:	Via shutter release button in "S" focus mode or AF lock button (AF-L) in "C" focus mode
Exposure metering:	5% Spot metering with any viewfinder via light sensor mounted within camera body; tradi- tional 60/40 Center-weighted metering via circuitry provided in DP-20 Multi-Meter Finder (standard) and DA-20 AE Action Finder (optional); Nikon-exclusive Matrix metering for automatic control of difficult lighting conditions via standard DP-20 finder using multi- segment silicon-photo-diode (SPD) sensors; advanced built-in micro computer integrates metering functions with flash photography for balanced fill-flash operation with Nikon TTL Speedlights
Exposure control:	Automatic exposure modes of "A" (aperture- priority), "S" (shutter-priority), "P" (normal programmed exposure), and "P <sub>HI</sub> " (high- speed-weighted programmed exposure) via mode selector; full manual exposure control of camera provided at "M" mode setting
Metering range:	EV 0 to EV 21 with Center-weighted and Matrix metering; EV 2 to EV 21 with Spot metering (ISO 100 and f/1.4 lens)
Shutter:	Electromagnetically-controlled, vertical-travel high-speed focal plane shutter; aluminum and carbon-fiber shutter blades ensure highly accurate and high speed operation; equipped with special tungsten shutter balance for maximum reduction of shutter vibration

maximum reduction of shutter vibration





Shutter control:	Speed control via lithium niobate oscillator; 16 shutter speed setting in 1 EV steps of from 1/8000 sec. to 4 sec. for camera operation in "S" (shutter-priority) automatic and "M"	
	(manual) exposure control modes; stepless operation of from 1/8000 sec. to 30 sec. for camera operation in "P" (normal program), "P <sub>HI</sub> (high-speed-weighted program) and "A" (aperture-priority) automatic exposure control modes; additional settings of "B" (bulb), "T" (time) and "X" (1/250 sec. for flash sync.) pro- vided; selection of speed settings via top- mounted shutter-speed dial; safety lock for electronic flash synchronization ("X") setting	
Viewfinder:	Interchangeable finder system; DP-20 Multi- Meter Finder as standard; extensive finder and screen viewing system available as option; virtually 100% viewfinder coverage provided	
Vlewfinder display:	Camera body equipped with large LCD and LED panels for miscellaneous information display with any camera finder; additional LCD panel provided with standard DP-20 finder; finder display of all exposure information in all modes, compensation values, focusing indicators, flash ready-light and frame counter provided as standard via various finder-visible LCD panels; LCD illuminators provided in camera body and DP-20 finder; illuminator ON/OFF switch provided on camera body at base of shutter-speed selector dial	
Focusing screens:	Interchangeable screen system; camera equipped with Type B advanced BriteView screen featuring overall matte/Fresnel field with central autofocus reference brackets and reference circles for Spot (5mm) and Center- weighted metering; 12 optional F4-dedicated screens available	
Film speed range:	Via top-mounted film speed selector dial; settings provided for manual selection of film speeds of from ISO 6 to ISO 6400 in 1/3 EV steps, plus "DX" position for selection of automatic film speed sensing via DX-code contacts; with DX-code operation, film speed range of from ISO 25 to ISO 5000 is provided	
Film transport:	Film advance via built-in high-speed motor drive; motor firing mode selection enables choice of Single-frame ("S"), Continuous-Hi- speed (" $C_{H}$ "), Continuous-Lo-speed (" $C_{L}$ ") and Continuous-"Silent" (" $C_{g}$ ") rates of fire; shooting speed of up to 5.7 fps (frames/ second) are possible; choice of powered or manual film rewind provided; operation of rewind lever "R1" alone enables manual rewind via crank provided; operation of levers "R1" and "R2" enables powered rewind with	
Self-timer:	automatic stop at completion of rewind cycle Electronically-controlled timer with 10-second delay provided; flashing LED indicates	



operation; timer operation cancellable Flash hot shoe: Standard ISO-type shoe with supplemental contacts for operation with Nikon-dedicated electronic Speedlights; hot shoe contacts enable finder ready-light and TTL flash control interface "X"-type synchronization for electronic flash Flash synchronization: units possible at manual shutter speeds settings of from 1/250 sec. to 30 sec., plus "B", "T" and "X" ; when camera operated in fully automatic programmed exposure modes with selected Nikon TTL Speedlights, shutter speeds of from 1/250 sec. to 1/60 sec. are selected automatically via cybernetic flash sync operation to achieve balanced fill-flash effects Power source: Nikon MB-21 High Speed Battery Pack (six AA-type batteries) as standard; MB-20 Battery Pack (four AA-type batteries) and MB-22 External Power Regulator (for connection to alternative voltage sources) as option 168.5 x 138 x 76.6mm (6.6 x 5.4 x 3.0 in.) Dimensions (WxHxD): with MB-21 High Speed Battery Pack; 168.5 x 117 x 76.6mm (6.6 x 4.6 x 3.0 in.) with MB-20 Battery Pack Approx. 1,280g (45.1 oz.) with MB-21 High Weight: Speed Battery Pack (without batteries); approx. 1,090g (38.4 oz.) with MB-20 Battery Pack (without batteries)

#### MB-20 Battery Pack for Nikon F4

4631

Provides for powering the Nikon F4 with four AA-type (penlight) batteries; this is the most compact power source for the F4 camera

#### MB-21 High Speed Battery Pack for Nikon F4 (repl.)

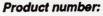
4632

Provides for the fastest battery-powered motor drive operation with the Nikon F4; maximum firing rate with the MB-21 is approx. 5.7 fps; comes as standard with the Nikon F4 camera; unit consists of MB-21G (grip), MB-21B (base) and MS-21 Battery Holder





#### MB-22 External Voltage Regulator for Nikon F4



Application:

4633

Provides for operation of the Nikon F4 via external power; connects to the base of the camera in place of MB-21 High Speed Battery Pack for operation with the Nikon MA-4 AC/DC Converter; connection to the MB-22 is via optional MC-11 Power Connecting Cord; MB-22 External Voltage Regulator consists of MB-21G (grip) and MB-22B (base)

#### MS-21 Battery Holder for Nikon F4 (repl.)

Product number:

Application:

4637

Provides for the mounting of three AA-type (penlight) batteries within the MB-21B base portion of the MB-21 Hi-Speed Battery Pack