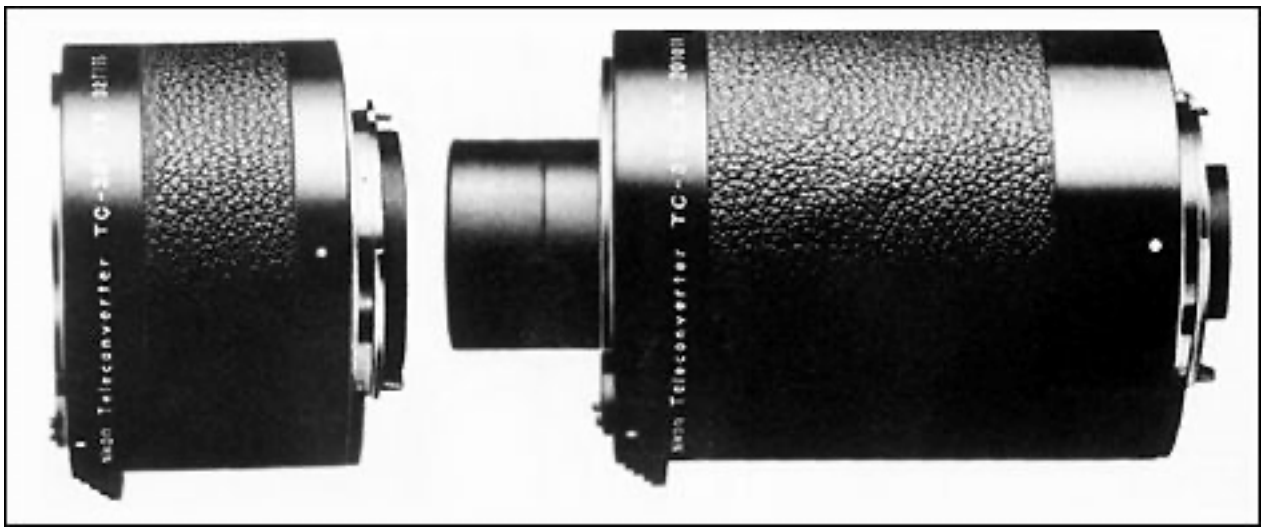


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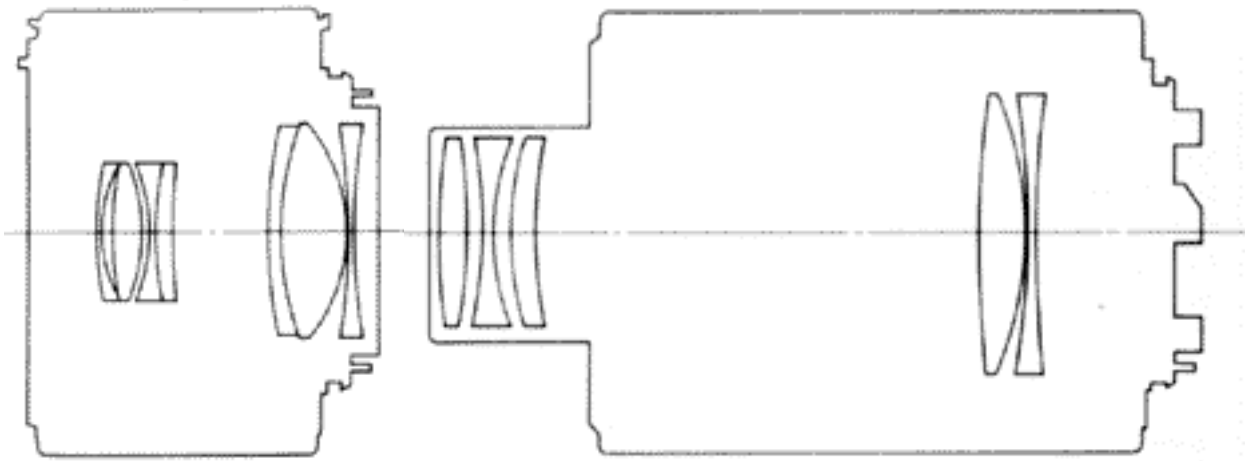


Instruction Manual for Nikon Teleconverters TC-201s & TC-301s **WARNING:** This manual is based on an early copy (believe to be around the time Nikon F4001 was introduced), content may vary accordingly.



Foreword: Nikon Teleconverters **TC-201s** and TC-301s are precision optical accessories, mounting between the camera body and the lens to double the prime lens' effective focal length with a **two f/stop loss in effective aperture**. In conjunction with Nikons first four-mode camera, the **Nikon FA**, these Teleconverters are usable with the camera's automatic multi-pattern metering system and high-speed programmed mode.

In addition to fully automatic diaphragm coupling and Automatic Maximum Aperture Indexing with Ai-type cameras and lenses, Nikon Teleconverters offer an advanced, multiple-element lens construction that ensures highest optical performance with virtually no deterioration in image quality As an added feature, Nikon Integrated Coating (NIC) is applied to lens elements to reduce ghost images and flare and improve color rendition.



TC-201s provides optimum performance with Ai-type lenses of 200mm or less; **TC-301s** is suitable for the Ai-type lenses of 300 mm and longer.

Specifications:

	TC-201s	TC-301s
Lens construction	7 elements in 5 groups	5 elements in 5 groups
Focal length	Double that of lens in use (see table for details on suitable lenses)	Double that of lens in use (see table for details on suitable lenses)
Aperture coupling range	f/2 - f /32	f/2.8 - f/32
Effective aperture	f/4.0 - f/64	f /5.6 - f /64
Diaphragm	Automatic diaphragm coupling provided	Automatic diaphragm coupling provided
Exposure measurement	Via full aperture method; meter coupling ridge provided for Ai cameras	Via full aperture method; meter coupling ridge provided for Ai cameras
Reproduction ratio	Double that of lens in use	Double that of lens in use
Depth of field	1/2X that of lens in use	1/2X that of lens in use
Minimum focusing distance	Same as that of lens in use	Same as that of lens in use
Mount	Nikon bayonet mount	Nikon bayonet mount
Dimensions	Approx. 64.5mm dia. x 43.5mm extension from flange;	Approx. 64.5mm dia. x 83mm extension from flange;
Weight	52mm long (overall)	115mm long (overall)
	Approx. 230g	Approx. 280g

Operation Connecting Lens and Teleconverter Position the lens in the Teleconverter's bayonet mount so that the aperture index on the lens is aligned with the lens mounting index on the teleconverter; then while holding the aperture ring of the lens, turn the lens counterclockwise until it click-stops into position. **To remove:** While depressing the lens release button on the teleconverter and holding the aperture ring of the lens, turn the teleconverter clockwise until it comes off.

Mounting on the Camera Body Position the lens/teleconverter assembly in the camera's bayonet mount so that the camera mounting index on the teleconverter is aligned with the lens mounting index on the camera body; then while holding the aperture ring of the lens or the teleconverter, turn the lens/teleconverter assembly counterclockwise until it click-stops into position. When mounting on a camera with a meter coupling lever (Ai-type), make sure that the camera's meter coupling lever is correctly positioned; when mounting on a camera without this lever (non-Ai-type), "manual" maximum aperture indexing is required. In both cases, refer to the respective camera's instruction manual.

To remove: While depressing the lens release button on the camera body and holding the aperture ring of the lens or the teleconverter, turn the lens/teleconverter assembly clockwise until it comes off.

Focusing with F-501/ N2020* or F-401/N4004** Focus-assist operation can be performed with the TC-201 teleconverter and an F-501 /N2020 or F-401 /N4004, or with the TC-301 and an F-401 /N4004, in combination with a lens having a maximum aperture indicated in the chart below.

* The Nikon N2020 is sold exclusively in the USA and Canadian markets. ** The Nikon N4004 is sold exclusively in the USA.

	Focus-assist operation possible	Manual focusing only
F-501/N2020	A lens having a maximum aperture of f/2 or larger	Less than f/2
F-401/N4004	A lens having a maximum aperture of f/2.8 or larger	Less than f/2.8

Exposure Determination The use of the teleconverter not only doubles the effective focal length of the lens in use, but it also decreases the effective aperture by two f/stops. Thus, with the TC-201 or TC-301 teleconverter in use, the lens' engraved aperture scale is no longer correct. If the TC-201 is attached to lenses having maximum apertures larger than f/2 (e.g., 50mm f/1.2, 50mm f/1.4, **35mm f/1.4**, etc.), the effective aperture becomes f/4 even if the aperture is wider than f/2. Therefore, when using fast lenses, make sure to set the aperture to f/2 or smaller; otherwise, incorrect exposure will result. When the TC-301 is attached to the **ED 300mm f/2 lens**, the effective aperture becomes f/5.6, even with apertures wider than f/2.8. To avoid incorrect exposure, always set the aperture to f/2.8 or smaller.

(1) When using Ai-type camera bodies, e.g. **Nikon F3-series, FA, FG, FE2, FM2(n)**, F-501 /N2020, F-301/N2000, **FG-20, F2a** or **F2AS Photomic** or other Ai bodies introduced later etc., exposure is determined by the full aperture method. In addition, when using the lenses having maximum aperture larger than f/2, some exposure compensation will be required. If the exposure compensation is made by adjusting the ASA/ISO film speed, refer to the following table:

Lens Max. Aperture	Compensation Required (at ASA / ISO 100)
f/1.2	One stop underexposure (set to ASA/ISO 200 position)
f/1.4	2/3 stop underexposure (set to ASA/ISO 160 position)
f/1.8*	1/3 stop underexposure (set to ASA/ISO 125 position)

Note: * No exposure compensation is required when using the AF Ai Nikkor 50mm f/1.8, Ai Nikkor 50mm f/1.8, 50mm f/1.8(N) or **105mm f/1.8**. Note: When using camera bodies other than F3-series cameras, please take note of the numerical value of the exposure compensation in the focusing screens' combination table. Certain lenses need exposure compensation in combination with certain focusing screens.

When using FA, FG, F-501 /N2020 or F-301 /N2000, please note the following points: **Program mode** - No exposure compensation is required. **Aperture-priority mode** - No exposure compensation is required, but the actual shutter speed is higher (within one step) than that displayed in the viewfinder. So, always confirm that the shutter speed displayed in the viewfinder is below 1/1000 sec. (in case of the FA), 1/500 sec. (in case of the F-501/N2020 or F-301/N2000) or 1/250 sec. (in case of the FG) before starting to take pictures. **Shutter-priority mode (FA only)** - No exposure compensation is required, but the effective aperture becomes smaller or 1he actual shutter speed is higher (within one step) than that displayed in the viewfinder. So, always confirm that the lens is set at its minimum aperture and confirm the LCD in the viewfinder before starting to take pictures.

(2) With non-Ai-type camera bodies equipped with TTL metering systems, e.g. **Nikon F2SB Photomic** (or **earlier F2 models**), **Nikkormat FT2, EL(ELW)**, etc., exposure is determined only by the stop-down method. (For details, refer to the camera's instruction manual.) When the lens is used with the Nikon F-401 /N4004, the camera meter coupling function does not operate and the exposure indicator LEDs do not appear. (3) When using cameras without TTL metering, e.g. **Nikon F Photomic**, or a handheld exposure meter, compensation using an **exposure factor of 4** will be necessary when calculating the correct exposure.

Accessories	TC-201s	TC-301s
Supplied	Front lens cap BF-1A, Rear lens cap LF-1	Front lens cap BF-2, Rear lens cap LF-1
Optional	Flexible lens pouch No. 61, Hard lens case CL-30S, Plastic lens case CP-8	Flexible lens pouch No. 62, Hard lens case CL-33S, Plastic lens case CP-9

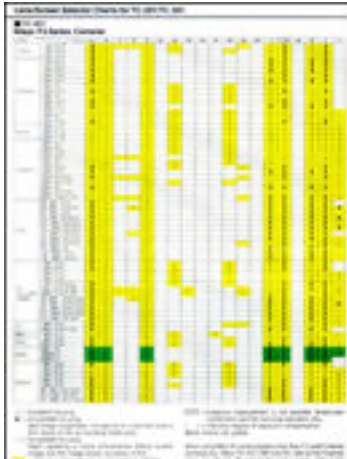
Teleconverter care and maintenance: Always keep the Teleconverter's lens surfaces clean, as dust or smudges can interfere with image sharpness. Use a soft brush-never cloth or tissue-to remove dust. Stubborn smudges should be wiped with lens tissue moistened with alcohol or lens cleaner. Attach both the front and rear caps when the teleconverter is stored separately. Also, storage in one of the various optional cases is recommended for the fullest protection.

Lens/Teleconverter Compatibility: The following table lists various Nikkor and Nikon Series E lenses which can be used in conjunction with Nikon Teleconverters TC-201 and TC-301; compatibility is detailed in the right-hand columns.

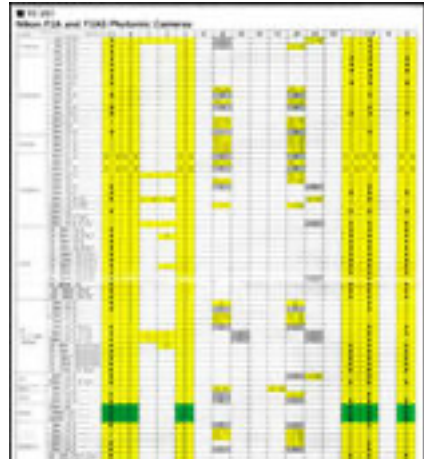
	Lens	TC-201	TC-301
Fisheye	AI 6mm f/2.8	⊙	×
	AI 8mm f/2.8	⊙	×
	AI 16mm f/2.8	⊙	×
	AI 13mm f/5.6	⊙	×
Wideangle	AI 15mm f/3.5	⊙	×
	AI 18mm f/3.5	⊙	×
	AI 20mm f/3.5	⊙	×
	AI 20mm f/2.8	⊙	×
	AI 24mm f/2	⊙	×
	AI 24mm f/2.8	⊙	×
	AI 28mm f/2	⊙	×
	AI 28mm f/2.8	⊙	×
	AI 28mm f/3.5	⊙	×
	AI 35mm f/1.4	⊙	×
Normal	AI 35mm f/2	⊙	×
	AI 35mm f/2.8	⊙	×
	AI 50mm f/1.2	⊙	×
	AI 50mm f/1.4	⊙	×
Telephoto	AI 50mm f/1.8	⊙	×
	AI 85mm f/1.4*	⊙	×
	AI 85mm f/2	⊙	×
	AI 105mm f/1.8*	⊙	×
	AI 105mm f/2.5	⊙	×
	AI 135mm f/2*	⊙	×
	AI 135mm f/2.8	⊙	×
	AI 135mm f/3.5	⊙	×
	AI 180mm f/2.8 ED	⊙	×
	AI 200mm f/2 IF-ED*	⊙	×
Zoom	AI 200mm f/4*	⊙	×
	AI 300mm f/2 IF-ED*	⊙	×
	AI 300mm f/2.8 IF-ED	×	⊙
	AI 300mm f/4.5 IF-ED	×	⊙
	AI 300mm f/4.5	×	⊙
	AI 400mm f/2.8 IF-ED	△	⊙
	AI 400mm f/3.5 IF-ED	×	⊙
	AI 400mm f/5.6 IF-ED	×	⊙
	AI 600mm f/4 IF-ED	×	⊙
	AI 600mm f/5.6 IF-ED	×	⊙

	Lens	TC-201	TC-301
Zoom	AI 35 - 70mm f/3.3 - 4.5	⊙	×
	AI 35 - 70mm f/3.5	⊙	×
	AI 35 - 105mm f/3.5 - 4.5	⊙	×
	AI 35 - 135mm f/3.5 - 4.5	⊙	×
	AI 35 - 200mm f/3.5 - 4.5	⊙	×
	AI 50 - 300mm f/4.5 ED	⊙	×
	AI 80 - 200mm f/2.8 ED*	⊙	×
	AI 30 - 200mm f/4	⊙	×
	AI 100 - 300mm f/5.6	△	×
	AI 180 - 600mm f/8 ED	×	⊙
AF (for F-501/ N2020)	AI 200 - 400mm f/4 ED*	△	⊙
	AI 24mm f/2.8	⊙	×
	AI 28mm f/2.8	⊙	×
	AI 50mm f/1.4	⊙	×
	AI 50mm f/1.8	⊙	×
	AI 55mm f/2.8 Micro	⊙	×
	AI 180mm f/2.8 IF-ED	△	×
	AI 300mm f/2.8 IF-ED	△	⊙
	AI 28 - 85mm f/3.5 - 4.5 Zoom	⊙	×
	AI 35 - 70mm f/3.3 - 4.5 Zoom	⊙	×
AF	AI 35 - 105mm f/3.5 - 4.5 Zoom	⊙	×
	AI 35 - 135mm f/3.5 - 4.5 Zoom	⊙	×
	AI 70 - 210mm f/4 Zoom	⊙	×
	AI 80mm f/2.8	⊙	×
	AI 200mm f/3.5 IF-ED	△	⊙
	AI 58mm f/1.2*	⊙	×
	AI 55mm f/2.8	⊙	×
	AI 105mm f/2.8	⊙	×
	AI 200mm f/4 IF	×	⊙
	500mm f/8	△	×
Reflex	1000mm f/11	△	⊙
	2000mm f/11	△	⊙
	28mm f/2.8	⊙	×
	35mm f/2.5	⊙	×
	50mm f/1.8	⊙	×
	100mm f/2.8	⊙	×
	135mm f/2.8	⊙	×
	36 - 72mm f/3.5 Zoom	⊙	×
	70 - 210mm f/4 Zoom	⊙	×
	75 - 150mm f/3.5 Zoom	⊙	×
Series E	28mm f/3.5	×	×
	35mm f/2.8	×	×
PC			

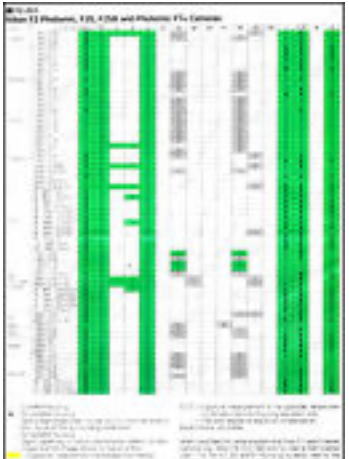
Notes: ⊙ = Perfectly matched ⊠ = Usable, but without filter ○ = Usable, but at a close focused distance, vignetting or other image deterioration may occur. △ = Usable, but vignetting or other image deterioration may occur. × = Not usable, because it cannot be mounted or vignetting or other image deterioration will ruin the photo. Note: The smaller the aperture, the less vignetting. * When these lenses are used at apertures smaller than f/11 with high shutter speeds, there is occasional unevenness of illumination on the film.



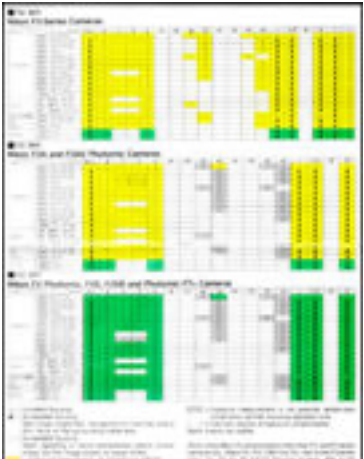
PDF File (592k) Ai Nikon F3 w/TC-201s



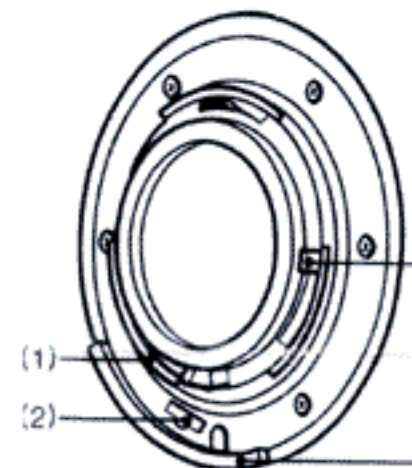
PDF File (604k) Ai Nikon F2A/AS w/TC-201s



PDF File (652K) Non-Ai Nikon F2SB w/TC-201s



PDF File (592k) Ai Nikon F3/F2A(S) Non-Ai F2S(B) Photomic w/TC-301s



Nomenclature (Main Reference Map)

- (1) Focal length indexing ridge
- (2) Lens type signal pin
- (3) Lens speed indexing post
- (4) Meter coupling ridge

Nikon Teleconverters: **TC-1** | **TC-2** | **TC-200** | **TC-201** | **TC-300** | **TC-301** | **TC-14** | **TC-14A** | **TC-14B** | **TC-14C** | **TC-14E** | **TC-16** | **TC-16A** | **TC-20E**

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Nikon MF **RF-Nikkor** lenses for Rangefinder cameras:- [Main Index Page](#)

Nikon **Auto Focus** Nikkor lenses:- [Main Index Page](#)

Nikon **Manual Focus** Nikkor lenses:-

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[Perspective Control \(PC\)](#) - [28mm](#) [35mm](#) [PC-Micro](#) [85mm](#)
[Dedicated Lenses for Nikon F3AF](#) - [AF 80mm f/2.8](#) | [AF 200mm f/3.5 ED-IF](#)
[Depth of Field Control \(DC\)](#): [105mm](#) [135mm](#)
[Medical Nikkor](#) [120mm](#) [200mm](#)
[Reflex-Nikkor Lenses](#) - [300mm](#) [1000mm](#) [2000mm](#)
Others: [Noct Nikkor](#) | [OP-Nikkor](#) | [UV Nikkor](#) [55mm](#) [105mm](#) | [Focusing Units](#) | [Bellows-Nikkor](#) [105mm](#) [135mm](#)
[Nikon Series E Lenses](#): [28mm](#)[35mm](#)[50mm](#)[100mm](#)[135mm](#) | [E-Series Zoom lenses](#): [36-72mm](#)[75-150mm](#)[70-210mm](#)

MF Zoom-Nikkor Lenses: [25-50mm](#) | [28-45mm](#) | [28-50mm](#) | [28-85mm](#) | [35-70mm](#) | [36-72mm](#) [E](#) | [35-85mm](#) | [35-105mm](#) | [35-135mm](#) | [35-200mm](#) | [43-86mm](#) | [50-135mm](#) | [50-300mm](#) | [70-210mm](#) [E](#) | [75-150mm](#) [E](#) | [80-200mm](#) | [85-250mm](#) | [100-300mm](#) | [180-600mm](#) | [200-400mm](#) | [200-600mm](#) | [360-1200mm](#) | [1200-1700mm](#)

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Recommended links to understand more technical details related to the **Nikon F-mount** and production Serial Number:-

http://rick_oleson.tripod.com/index-153.html by: my friend, Rick Oleson
<http://www.zi.ku.dk/personal/lhansen/photo/fmount.htm> by: Hansen, Lars Holst
<http://www.mir.com.my/rb/photography/hardwares/nikonmount/lens2.htm>
<http://www.photosynthesis.co.nz/nikon/serialno.html>

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