Fringer NF-GFX User's Manual

(Firmware v1.0)

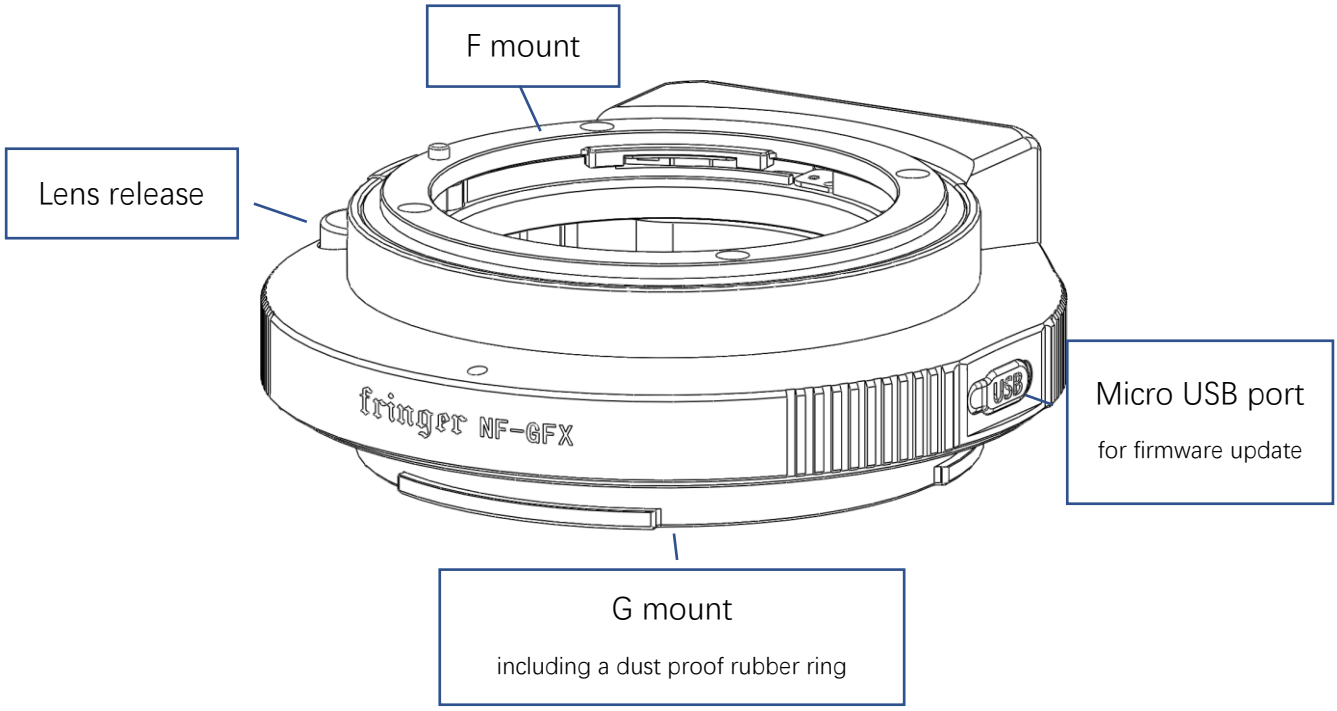
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1. Introduction

This product is compatible with Nikon F mount and Fujifilm G mount protocols. It can control lens' aperture electronically, auto focus and report lens information for EXIF recording.

There is a built-in aperture motor so that it can drive aperture diaphragm of not only E lenses, but also AF, D and G lenses. In addition to that, the adapter supports more unique features including Phase Detection AF (on GFX100 & GFX100S only, so far), IBIS, Lens VR, In-camera LaCA (Lateral Chromatic Aberration) Correction, and In-camera vignetting and distortion correction, etc.



2. Compatibility

This adapter works on G mount cameras. On cameras without PDAF support, such as GFX50s, GFX50r and GFX50s II, adapted lenses can only work in the CDAF mode. Most of lenses on the tested and optimized lens list should work normally in the AF-S mode. However, as many F mount lenses are not designed for contrast AF, AF speed may be slow. And AF accuracy may not be good, either. Meanwhile, AF-C mode is not supported. If AF performance can't satisfy you, MF is recommended.

On cameras with PDAF support, such as GFX100 and GFX100S, tested and optimized lenses AF much faster and more accurate. In some circumstances, the experience of using adapted lenses on these cameras is just like using a DSLR. Thus, if you are about to purchase a new G mount camera to use F mount lenses, the 102M pixel models are highly recommended.

This adapter works with F mount lenses. It supports electronic aperture control on Nikon AF, D, G, and E lenses and other electronic F lenses from third parties like Sigma and Tamron. There is an aperture motor inside the adapter. Thus, lenses with mechanical diaphragm controls as well as

electromagnetic ones are both supported. Meanwhile, it supports auto focus on Nikon AF-S, AF-P lenses and other F mount AF lenses from major third parties. Be noted, Nikon AF/AF-D lenses can be used. But AF won't work as there isn't AF motor inside these lenses. MF can be used instead. For all F mount lenses that have CPU chip and successfully communicate with the adapter through lens contacts, EXIF will record lens parameters like focal length range, max aperture range, current focal length, current aperture, etc. For lenses with built-in image stabilization functions (VR/OS/VC, etc.), image stabilization can be activated and controlled by the camera menu item "IS MODE". Users may also activate IBIS on some camera models like GFX100(S) and GFX50S II. However, they can't be activated at the same time.

Lens type / Features	AF/AF-D Lenses	AF-S/AF-P D/G Lenses	AF-S/AF-P E Lenses	3rd party lenses with AF motor
Electronic aperture control	●	●	●	●
Autofocus		●①	●①	●①
LaCA correction		●②	●②	●②
EXIF recording	●	●	●	●

① Only tested and optimized lenses support PDAF and have better AF performance. See section 5 for the lens list.

② For all tested and optimized lenses, there are profile data for each of them stored in the adapter. They are sent to the camera to correct lateral chromatic aberration (LaCA) which can be seen as color fringes on high contrast edges. See section 5 for the lens list.

③ Among lenses that are not on the tested and optimized lens list, especially Tamron lenses, there may be some of them that are not compatible. In that case, none of the auto functions is available.

3. Function descriptions

3.1 Lens self-test (for lenses NOT tested and optimized only)

When you install a lens not tested/optimized on the adapter and power on the camera for the first time, the adapter may drive the AF module to the close end and then to infinity. After that, the camera will reboot to finish the self-test and calibration process. During the process, please do not touch the focus ring of the lens, or you may interfere with the calibration. If there is something wrong with the self-test procedure, the AF function may not be in a normal state. If that happens, turning on and then turning off the camera at once will clear the calibration data stored. Installing another lens and powering on the camera will do the same.

Tested and optimized lenses don't do this.

3.2 Full frame or medium format selection (35mm mode on/off)

F mount lenses are designed for full frame cameras. Its image circle covers a 36mm x 24mm sensor. But the dimension of the sensor of GFX cameras is about 44mm x 33mm. Thus, many F lenses can't fully cover it at all and may cause dark corners/vignetting and distortion, etc. It's normal and not the malfunction of the adapter.

By default, the camera menu item "35mm mode" is set to "auto". Images will be cropped to 36x24mm automatically when an adapter is attached. (Be noted, it won't do that auto crop if focus bracketing support or in-body vignetting and distortion correction for current lens is enabled in SETTINGS.INI on the adapter. Check section 3.7.1 and 3.7.4 for more details.) Thus, usually you won't see the issues mentioned above. But, since some of the F mount lenses do cover the medium format sensor, you may force the camera to capture 44x33mm images by setting "35mm mode" to "off" on camera menu.

3.3 Setting aperture and shutter speed value

Setting aperture value through command dial on the camera:

You may use camera's command dial to set aperture value. Please refer to the camera's manual for more details. Be noted that the front dial of some GFX cameras may be shared by ISO and aperture settings. On those camera models, you may need to press the front dial before setting the aperture value if it is in the ISO setting mode.

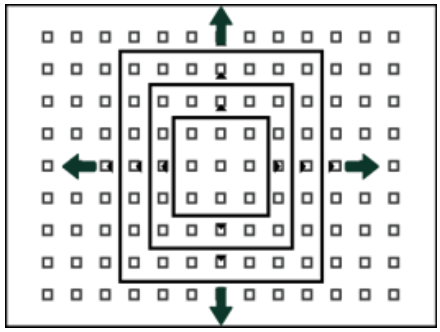
For Nikon AF/AF-D lenses, please set aperture ring on the lens to the minimum position (maximum F number). Or the lever inside the lens may interfere with that of the adapter when controlling diaphragm.

Manually setting shutter speed is suggested! If you set shutter speed to auto, when environment brightness changes during view finding, the lens aperture blades may move frequently with a little noise and slightly flashing of LCD or EVF. Native GF lenses behave the same. But their aperture motor moves so fast and silently that you will never notice. However, F mount lenses' aperture motor moves slower and noisier. If you want to avoid it, please manually set shutter speed. You may still set shutter speed to auto if that's tolerable. Be noted that if "PREVIEW EXP./WB IN MANUAL MODE" on the camera menu is set to "OFF", the described issue may occur even the shutter speed is set manually.

Regarding AF/D/G lenses from Nikon and other non-electromagnetic auto lenses from third parties, there is a mechanical coupling between the lens and the adapter which may bring aperture control tolerance inevitably. When the camera is metering, if the shutter speed is set to auto, e.g., aperture priority mode, it may use a different aperture from your setting. That may cause metering

tolerance. To avoid it, you need to set the shutter speed manually so that the camera will use the same aperture setting when metering.

3.4 Setting AF modes



Due to the limitation of F mount lenses who are designed for 35mm cameras, when using them on GFX cameras, there may be distortions in the edge areas that damage the performance of auto focus. Thus, please avoid using focus points in those areas if possible. Focus points in the 5 or 7 rows in the middle are usually safe to be chosen. In most cases, the rest of focus points work, too. But the AF accuracy and success rate may decrease.

On cameras with PDAF, e.g., GFX100 and GFX100S, the size of the focus points may affect AF performance. If AF success rate or accuracy issues are encountered, you may try different AF point size settings. Usually, the smaller focus point setting may bring more accuracy. But it may need more lights and details in the small area covered by the focus point to work, or the success rate may become poorer. In contrast, the bigger focus point setting may bring higher AF success rate. But accuracy may decrease.

On cameras with PDAF, e.g., GFX100 and GFX100S, both AF-S and AF-C modes are supported. In many circumstances, AF performance is similar to that of a DSLR. But if the camera doesn't support PDAF, e.g., GFX50S, GFX50R and GFX50S II, only AF-S mode is supported as CDAF is used instead of PDAF. And AF performance is poorer. That is normal and not the malfunction of the adapter. In both PDAF and CDAF modes, face/eye detection AF works.

We have tried our best to make F mount lenses work better on G mount. But please understand that different lens and camera system will never collaborate like a native system. Sometimes even lenses optimized may encounter AF issues. You may try to improve its accuracy by half pressing shutter release button **more than once** before releasing the shutter. Or you may try AF-C instead of AF-S mode (on GFX100 and GFX100S only). If necessary, please change to the MF mode.

When you want to use MF mode, please set AF/MF switch on the lens to the MF position. The camera will be set to the MF mode automatically.

Most of lenses that are not on the tested and optimized lens list should work normally. But since PDAF isn't supported and CDAF performs poorer, you may encounter slow and inaccurate AF. Sometimes MF would be the only choice. Or you may wait for the lens to be added to the list by future firmware updates.

3.5 Lens built-in VR and camera IBIS functions

This product supports both lens VR (or OS, VC) and IBIS functions. But they don't work at the same time. You may choose between them. When the camera is powered on or entering the shooting mode from the playback mode, the VR switch on the lens decides which one is activated, lens VR or IBIS. "On" status of the switch at that time enables lens VR and disables IBIS, and vice versa. IBIS will be automatically enabled if the lens doesn't have VR function at all. In most cases, IBIS works better than lens VR unless the lens is a very long telephoto one.

Whatever lens VR or IBIS is chosen, the stabilization function is controlled by "IS MODE" menu item. If it's set to "Continuous" (Mode 1), IS functions are activated all the time. When it's set to "Shooting only" (Mode 2), lens IS function is enabled when the shutter release button being half-pressed and disabled about 2 seconds after its release while IBIS function is only enabled during the exposure. Because of the ages of some F mount lenses, the old design may limit their ability of instant activation of IS module. Thus, "Shooting only" mode may not work reliably for them. In that case, "Continuous" mode is suggested.

Caution: IBIS performance of some lenses may be affected if camera is in native lens mode. If you encountered such a problem when focus bracketing is enabled in SETTINGS.INI, please turn it off to restore IBIS performance. Check section 3.7.1 for more details.

3.6 In-body vignetting and distortion correction

In-body vignetting and distortion correction profiles for some lenses are embedded in the adapter. See table 1 for the detailed list. Detail about the relevant configuration items can be found in section 3.7.3.

Lens model	Configuration item	Keep IBIS
AF-S NIKKOR 20mm f/1.8G ED	ForceNativeAfs2018G	Y
AF-S NIKKOR 28mm f/1.4E ED	ForceNativeAfs2814E	Y
AF-S NIKKOR 28mm f/1.8G	ForceNativeAfs2818G	Y
AF-S NIKKOR 35mm f/1.4G	ForceNativeAfs3514G	Y
AF-S NIKKOR 35mm f/1.8G ED	ForceNativeAfs3518G	Y
AF-S NIKKOR 50mm f/1.8G	ForceNativeAfs5018G	Y
AF-S NIKKOR 58mm f/1.4G	ForceNativeAfs5814G	Y
AF-S MICRO NIKKOR 60mm f/2.8G ED	ForceNativeAfs6028G	Y
AF-S NIKKOR 85mm f/1.4G	ForceNativeAfs8514G	Y
AF-S NIKKOR 85mm f/1.8G	ForceNativeAfs8518G	Y
AF-S NIKKOR 105mm f/1.4E ED	ForceNativeAfs10514E	Y

AF-S VR NIKKOR 200mm f/2G IF-ED	ForceNativeAfs2002GVR	N
AF-S NIKKOR 200mm f/2G ED VR II	ForceNativeAfs2002GVR2	N
AF-S VR NIKKOR 300mm f/2.8G IF-ED	ForceNativeAfs30028GVR	N
AF-S NIKKOR 300mm F2.8G ED VR II	ForceNativeAfs30028GVR2	N
AF-S NIKKOR 300mm f/4E PF ED VR	ForceNativeAfs3004EVR	N
AF-S NIKKOR 400mm f/2.8G ED VR	ForceNativeAfs40028GVR	N
AF-S NIKKOR 400mm f/2.8E FL ED VR	ForceNativeAfs40028EVR	N
AF-S NIKKOR 500mm f/4E FL ED VR	ForceNativeAfs5004EVR	N
AF-S NIKKOR 500mm f/5.6E PF ED VR	ForceNativeAfs50056EVR	N
AF-S NIKKOR 600mm f/4G ED VR	ForceNativeAfs6004GVR	N
AF-S NIKKOR 600mm f/4E FL ED VR	ForceNativeAfs6004EVR	N
AF-S NIKKOR 16-35mm f/4G VR	ForceNativeAfs16354GVR	N
AF-S NIKKOR 70-200mm f/2.8E FL ED VR	ForceNativeAfs7020028EVR	N
AF-S NIKKOR 70-200mm f/2.8G ED VR II	ForceNativeAfs7020028GVR2	N
SIGMA 24mm F1.4 DG HSM A015	ForceNativeSigma2414A	Y
SIGMA 28mm F1.4 DG HSM A019	ForceNativeSigma2814A	Y
SIGMA 35mm F1.4 DG HSM A012	ForceNativeSigma3514A	Y
SIGMA 40mm F1.4 DG HSM A018	ForceNativeSigma4014A	Y
SIGMA 50mm F1.4 DG HSM A014	ForceNativeSigma5014A	Y
SIGMA 85mm F1.4 DG HSM A016	ForceNativeSigma8514A	Y
SIGMA 500mm F4 DG OS HSM S016	ForceNativeSigma5004OSS	N
SIGMA 24-35mm F2.0 DG HSM A015	ForceNativeSigma2435A	N
SIGMA 120-300mm f/2.8 DG OS HSM S013	ForceNativeSigma12030028OSS	N
TAMRON SP 35mm F/1.8 Di VC USD F012	ForceNativeTamron3518VC	Y
TAMRON SP 45mm F/1.8 Di VC USD F013	ForceNativeTamron4518VC	Y
TAMRON SP 85mm F/1.8 Di VC USD F016	ForceNativeTamron8518VC	Y
TAMRON SP 15-30mm F/2.8 Di VC USD G2 A041	ForceNativeTamron1530VCG2	N
TAMRON 17-35mm f/2.8-4 Di OSD A037	ForceNativeTamron1735284	N
TAMRON SP 150-600mm F/5-6.3 Di VC USD G2 A022	ForceNativeTamron150600VRG2	N

Table 1 lenses that support in-body vignetting and distortion correction

Note:

1. As 35mm lenses are not designed for medium format cameras, there may be strong vignetting and distortion. The in-body correction function is to reduce them rather than eliminate them.
2. Because of the limitation of the camera, the corrections work only if the camera is set in native lens

mode. But the performance of IBIS of some adapted lenses may be degraded in that mode. Lenses with “keep IBIS” marked as “Y” are not affected by that issue. For lenses marked as “N”, please use lens VR function if possible. Or you may make your own choice on which one goes first, IBIS or in-body correction. If you want IBIS first, please set the relevant configuration item in SETTINGS.INI to 0. Refer to section 3.7.3 for more details.

3. Some lenses may have very strong vignetting and cause dark corners. In that case it isn’t correctable at all. Thus, those lenses won’t be added to the list.

3.7 Advanced settings

Connect the adapter to a computer with the USB cable coming with the adapter. A drive named “FRINGER” appears. In the root folder there is a file named “SETTINGS.INI”. It’s in format of ordinary INI files. Do not modify it unless you know how to do that. If you want to restore it to default, just remove it. The adapter will re-generate it when the next time it works on a camera body.

There are two working modes of the GFX cameras, i.e., adapter mode and native lens mode, as described in the following table (table 2):

Function of adapted lenses	Adapter mode	Native lens mode
Focus bracketing	Not supported	Supported
IBIS	Fully supported	Degraded or not supported for some lenses
Vignetting and distortion correction profile	Not supported	Supported
Mount adapter setting menu	Available	Grayed out
35mm format mode “AUTO”	Crop to 35mm	Keep 44 x 33 frame

Table 2 Function differences of two working modes of GFX cameras

To understand which mode the camera is currently in, there are two simple ways. 1. You may set “35mm format mode” to “AUTO” in camera menu. If there is a “35” on the top left of the screen, it’s in adapter mode. 2. You may check the “Mount adapter setting” menu item. If it’s grayed out, it’s in native lens mode.

3.7.1 Focus bracketing support

Description:

By default, the focus bracketing on camera menu is grayed out. To use that function, you need to modify SETTINGS.INI as following.

Item name:

FocusBracketing

Item value:

0 (default): focus bracketing menu item disabled (set the camera in adapter mode)

1: focus bracketing menu item enabled (set the camera in native lens mode)

Caution:

1) When setting focus range and begin position, don't manually turn focus ring! Always use AF to drive focus point to the position you want. Or the focus bracketing function may not work properly.

2) When "FocusBracketing=" is set to 1 in the SETTINGS.INI, the adapter is set to native lens mode and some functions of the camera may change. Check Table 2 for more details.

3.7.2 Move AF to infinity when powering off/switching to playback mode

Description:

On one hand, lenses with external focus design may not be convenient to be stored in a bag when its AF isn't on infinity. Moving AF to infinity automatically when powering off (or switching to playback mode) is preferred. On the other, one some lenses, the experience of moving AF to/from infinity every time switching the camera to/from playback mode is not good. To make your own choice, you may modify SETTINGS.INI as following.

Item name:

PowerOffInfinity

Item value:

0 (default): Disabled.

1: Enabled for all lenses.

3.7.3 Force native lens mode for certain lens models to activate in-body vignetting and distortion correction

Description:

By default, these configuration items activate certain lens' in-body vignetting and distortion correction by setting the camera in native lens mode. See section 3.6 for more details. Users may also turn it off if they want to manually adjust in mount adapter setting menu.

Item name:

ForceNativeXXXX (XXXX corresponds to the lens currently installed)

Item value:

1 (default): Force the camera in native lens mode when using this lens

0: Camera working mode is decided by the value of FocusBracketing.

4. Firmware update

You need a PC or Mac and a Micro B USB cable, i.e., the one coming with the adapter, to upgrade it.

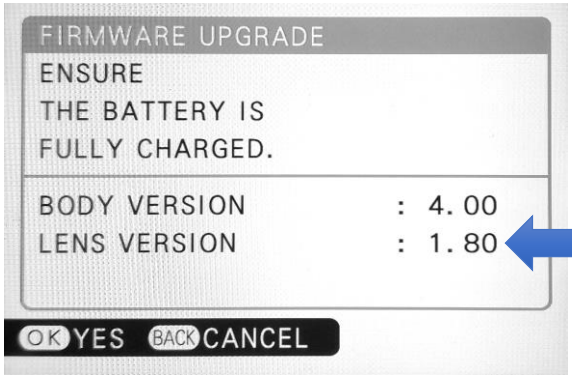
1) Download new firmware from Fringer's website. For example, 'NFGF_100.BIN' is v1.00.
2) Get the adapter off the camera. Make sure not to connect the adapter with the computer while it is installed on a camera body.
3) Plug the USB cable to the Micro USB port on the adapter.
4) Connect the other end of the cable to a USB port of your PC or MAC. Then a mobile drive named 'FRINGER' emerges. Open 'VERSION.TXT' on that drive and check current firmware version (the line begins with 'Version:').
5) If upgrading is needed, copy the downloaded firmware file to the drive named 'FRINGER'. Wait for about 20 seconds. Ignore any error messages about the drive. The adapter would disconnect itself and reconnect. The 'FRINGER' drive would appear again. If it doesn't reconnect automatically, you may manually disconnect the USB cable and reconnect it with the computer.
6) Check VERSION.TXT again and make sure its firmware version has changed to the new one.

Note: Do not copy files other than the official firmware to the adapter.

Troubleshooting:

Some of the cables in the market are for charging only and not suitable for data transfer. Thus, if you can't find the "FRINGER" drive when adapter is connected to the computer, check your cable!

You may also read the adapter's firmware version by Fujifilm's method, i.e., press and hold DISP button before powering on the camera. The "Lens version" on the screen is actually the adapter's firmware version. See the following figure.



5. Tested and optimized lens list

(Firmware v1.00)

1	AF-S NIKKOR 14-24mm f/2.8G ED
2	AF-S NIKKOR 16-35mm f/4G ED VR
3	AF-S NIKKOR 18-35mm f/3.5-4.5G ED
4	AF-S NIKKOR 24-70mm f/2.8E ED VR
5	AF-S NIKKOR 24-70mm f/2.8G ED

6	AF-S NIKKOR 24-85mm f/3.5-4.5G ED VR
7	AF-S NIKKOR 28-300mm f/3.5-5.6G ED VR
8	AF-S NIKKOR 70-200mm F2.8G ED VR
9	AF-S NIKKOR 70-200mm F2.8G ED VR + 1.4X
10	AF-S NIKKOR 70-200mm F2.8G ED VR + 1.7X

11	AF-S NIKKOR 70-200mm F2.8G ED VR + 2X
12	AF-S NIKKOR 70-200mm F2.8G ED VR II
13	AF-S NIKKOR 70-200mm F2.8G ED VR II + 1.4X
14	AF-S NIKKOR 70-200mm F2.8G ED VR II + 1.7X
15	AF-S NIKKOR 70-200mm F2.8G ED VR II + 2X
16	AF-S NIKKOR 70-200mm f/2.8E FL ED VR
17	AF-S NIKKOR 70-200mm f/2.8E FL ED VR + 1.4X
18	AF-S NIKKOR 70-200mm f/2.8E FL ED VR + 1.7X
19	AF-S NIKKOR 70-200mm f/2.8E FL ED VR + 2X
20	AF-S NIKKOR 70-200mm f/4G ED VR
21	AF-S NIKKOR 70-200mm f/4G ED VR + 1.4X
22	AF-S NIKKOR 70-200mm f/4G ED VR + 1.7X
23	AF-S NIKKOR 70-200mm f/4G ED VR + 2X
24	AF-P NIKKOR 70-300mm f/4.5-5.6E ED VR
25	AF-S NIKKOR 70-300mm f/4.5-5.6G ED VR
26	AF-S NIKKOR 80-400mm f/4.5-5.6G ED VR
27	AF-S NIKKOR 80-400mm f/4.5-5.6G ED VR + 1.4X
28	AF-S NIKKOR 80-400mm f/4.5-5.6G ED VR + 1.7X
29	AF-S NIKKOR 80-400mm f/4.5-5.6G ED VR + 2X
30	AF-S NIKKOR 180-400mm f/4E TC1.4 FL ED VR
31	AF-S NIKKOR 200-400mm f/4G IF-ED VR
32	AF-S NIKKOR 200-400mm f/4G IF-ED VR + 1.4X
33	AF-S NIKKOR 200-400mm f/4G IF-ED VR + 1.7X
34	AF-S NIKKOR 200-400mm f/4G IF-ED VR + 2X
35	AF-S NIKKOR 200-400mm f/4G ED VR II
36	AF-S NIKKOR 200-400mm f/4G ED VR II + 1.4X
37	AF-S NIKKOR 200-400mm f/4G ED VR II + 1.7X
38	AF-S NIKKOR 200-400mm f/4G ED VR II + 2X
39	AF-S NIKKOR 200-500mm f/5.6E ED VR
40	AF-S NIKKOR 200-500mm f/5.6E ED VR + 1.4X
41	AF-S NIKKOR 20mm f/1.8G ED
42	AF-S NIKKOR 24mm f/1.4G ED
43	AF-S NIKKOR 24mm f/1.8G ED
44	AF-S NIKKOR 28mm f/1.4E ED

45	AF-S NIKKOR 28mm f/1.8G
46	AF-S NIKKOR 35mm f/1.4G
47	AF-S NIKKOR 35mm f/1.8G ED
48	AF-S NIKKOR 50mm f/1.4G
49	AF-S NIKKOR 50mm f/1.8G
50	AF-S NIKKOR 58mm f/1.4 G
51	AF-S Micro NIKKOR 60mm f/2.8G ED
52	AF-S NIKKOR 85mm f/1.4G
53	AF-S NIKKOR 85mm f/1.8G
54	AF-S NIKKOR 105mm f/1.4E ED
55	AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED
56	AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED + 1.4X
57	AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED + 1.7X
58	AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED + 2X
59	AF-S VR NIKKOR 200mm f/2G IF-ED
60	AF-S VR NIKKOR 200mm f/2G IF-ED + 1.4X
61	AF-S VR NIKKOR 200mm f/2G IF-ED + 1.7X
62	AF-S VR NIKKOR 200mm f/2G IF-ED + 2X
63	AF-S NIKKOR 200mm f/2G ED VR II
64	AF-S NIKKOR 200mm f/2G ED VR II + 1.4X
65	AF-S NIKKOR 200mm f/2G ED VR II + 1.7X
66	AF-S NIKKOR 200mm f/2G ED VR II + 2X
67	AF-S VR NIKKOR 300mm f/2.8G IF-ED
68	AF-S VR NIKKOR 300mm f/2.8G IF-ED + 1.4X
69	AF-S VR NIKKOR 300mm f/2.8G IF-ED + 1.7X
70	AF-S VR NIKKOR 300mm f/2.8G IF-ED + 2X
71	AF-S NIKKOR 300mm f/2.8G ED VR II
72	AF-S NIKKOR 300mm f/2.8G ED VR II + 1.4X
73	AF-S NIKKOR 300mm f/2.8G ED VR II + 1.7X
74	AF-S NIKKOR 300mm f/2.8G ED VR II + 2X
75	AF-S NIKKOR 300mm f/4E PF ED VR
76	AF-S NIKKOR 300mm f/4E PF ED VR + 1.4X
77	AF-S NIKKOR 300mm f/4E PF ED VR + 1.7X
78	AF-S NIKKOR 300mm f/4E PF ED VR + 2X

79	AF-S NIKKOR 400mm f/2.8G ED VR
80	AF-S NIKKOR 400mm f/2.8G ED VR + 1.4X
81	AF-S NIKKOR 400mm f/2.8G ED VR + 1.7X
82	AF-S NIKKOR 400mm f/2.8G ED VR + 2X
83	AF-S NIKKOR 400mm f/2.8E FL ED VR
84	AF-S NIKKOR 400mm f/2.8E FL ED VR + 1.4X
85	AF-S NIKKOR 400mm f/2.8E FL ED VR + 1.7X
86	AF-S NIKKOR 400mm f/2.8E FL ED VR + 2X
87	AF-S NIKKOR 500mm f/4E FL ED VR
88	AF-S NIKKOR 500mm f/4E FL ED VR + 1.4X
89	AF-S NIKKOR 500mm f/4E FL ED VR + 1.7X
90	AF-S NIKKOR 500mm f/4E FL ED VR + 2X
91	AF-S NIKKOR 500mm f/5.6E PF ED VR
92	AF-S NIKKOR 500mm f/5.6E PF ED VR + 1.4X
93	AF-S NIKKOR 500mm f/5.6E PF ED VR + 1.7X
94	AF-S NIKKOR 500mm f/5.6E PF ED VR + 2X
95	AF-S NIKKOR 600mm f/4G ED VR
96	AF-S NIKKOR 600mm f/4G ED VR + 1.4X
97	AF-S NIKKOR 600mm f/4G ED VR + 1.7X
98	AF-S NIKKOR 600mm f/4G ED VR + 2X
99	AF-S NIKKOR 600mm f/4E FL ED VR
100	AF-S NIKKOR 600mm f/4E FL ED VR + 1.4X
101	AF-S NIKKOR 600mm f/4E FL ED VR + 1.7X
102	AF-S NIKKOR 600mm f/4E FL ED VR + 2X
103	AF-S NIKKOR 17-35mm f/2.8D ED
104	AF-S NIKKOR 300mm f/4D IF-ED
105	AF-S NIKKOR 300mm f/4D IF-ED + 1.4X
106	AF-S NIKKOR 300mm f/4D IF-ED + 1.7X
107	AF-S NIKKOR 300mm f/4D IF-ED + 2X
108	SIGMA 12-24mm F4 DG HSM A016
109	SIGMA 14-24mm F2.8 DG HSM A018

110	SIGMA 24-35mm F2 DG HSM A015
111	SIGMA 24-70mm F2.8 DG OS HSM A017
112	SIGMA 100-400mm F5-6.3 DG OS HSM C017
113	SIGMA 100-400mm F5-6.3 DG OS HSM C017 + 1.4X
114	SIGMA 120-300mm F2.8 DG OS HSM S013
115	SIGMA 120-300mm F2.8 DG OS HSM S013 + 1.4X
116	SIGMA 150-600mm F5-6.3 DG OS HSM S014
117	SIGMA 150-600mm F5-6.3 DG OS HSM C015
118	SIGMA 60-600mm F4.5-6.3 DG OS HSM S018
119	SIGMA 14mm F1.8 DG HSM A017
120	SIGMA 20mm F1.4 DG HSM A015
121	SIGMA 24mm F1.4 DG HSM A015
122	SIGMA 28mm F1.4 DG HSM A019
123	SIGMA 35mm F1.4 DG HSM A012
124	SIGMA 40mm F1.4 DG HSM A018
125	SIGMA 50mm F1.4 DG HSM A014
126	SIGMA 85mm F1.4 DG HSM A016
127	SIGMA 135mm F1.8 DG HSM A017
128	SIGMA 500mm F4 DG OS HSM S016
129	SIGMA 500mm F4 DG OS HSM S016 + 1.4X
130	SIGMA 500mm F4 DG OS HSM S016 + 2X
131	TAMRON SP 15-30mm F/2.8 Di VC USD G2 A041
132	TAMRON 17-35mm F/2.8-4 Di OSD A037
133	TAMRON SP 24-70mm F/2.8 Di VC USD G2A032
134	TAMRON SP 70-200mm F/2.8 Di VC USD G2 A025
135	TAMRON 100-400mm F/4.5-6.3 Di VC USD A035
136	TAMRON SP 150-600mm F/5-6.3 Di VC USD G2 A022
137	TAMRON SP 35mm F/1.4 Di USD F045
138	TAMRON SP 35mm f/1.8 Di VC USD F012 (Lens firmware V3)
139	TAMRON SP 45mm f/1.8 Di VC USD F013 (Lens firmware V3)
140	TAMRON SP 85mm f/1.8 Di VC USD F016 (Lens firmware V4)