

# VG-D70

Vertical / Battery Grip for the Nikon D70



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## Overview

The VG-D70 is an aftermarket grip for the Nikon D70 digital SLR camera. The VG-D70 :

- provides a means of holding the camera in a vertical orientation without changing the orientation of the hand,
- allows for a second battery, essentially doubling the number of shots on a charge,
- adds a second shutter release button, used in portrait orientation.
- provides additional length to the camera body when held horizontally (landscape), particularly useful with larger hands,
- increases the mass of the camera, helping to damp handheld movement,
- provides a standard connector for use with remote release cables, stereo camera connections, and other remote control equipment,
- provides an alternate connection for external power, using an industry standard connector,
- includes a place to store the camera’s battery door,
- retains a tripod mounting thread (metal).

### ***Items included:***

VG-D70 grip (Fully assembled)  
Fiber optic cable (spare included)  
Users Guide (this document)

## Installation

- 1) Remove D70 battery door, store in the grip
- 2) Install battery packs (one or two)
- 3) Attach to camera
- 4) Install shutter release connection (fiber optic cable or optional jumper cable)



### ***D70 Battery Door***

First, place the grip on a table... flat side down. (Whew, that was easy!)

Open the battery door on the D70, remove the battery pack, and carefully pull the door off, with it angled it at a point midway between opened and closed. The door can be easily removed and re-installed, with no damage to the door or the camera.



You may want to store the battery door in the VG-D70, so that you don't lose it! The door fits nicely into the grip in this orientation.



## **Battery Packs**

The VG\_D70 can operate with one or two battery packs installed. It doesn't matter if one of the battery packs is not charged. The grip will automatically use the battery with the greater charge.

If two battery packs are desired, simply drop one into the bottom of the grip, so that the battery pack's metal contacts will touch the exposed springs in the grip. If you install this battery pack incorrectly, nothing will be damaged, but this battery won't be connected.



If you use one or two packs, one must be placed upright on the grip, and the tethered battery cap dropped over the end of the battery pack. There are contacts in the cap which mate with the battery pack, and the orientation becomes obvious when you handle it.



### ***Attach to the camera***

Slide the camera down on top of the grip, guiding the battery pack and cap into the battery compartment. When seated, tighten the screw firmly to fasten the grip to the camera.

A coin will work nicely as a screwdriver. The mounting screw is also threaded to attach the VG-D70 and camera to a tripod.

Be a little careful when removing the grip... the tether to the battery cap is tough, but it's not indestructible!



## ***Shutter Release Connection***



### **Fiber Optic IR Cable**

The fiber optic cable simply slides into the small hole on the front of the grip. Push the cable in fully, and then rotate so that its natural curve places the exposed point of the fiber near the sensor on the front of the camera.

If the fiber optic connection is not used, the cable can be removed and laid inside the grip. This is a good place to keep the spare cable as well.

### **Optional Jumper Cable**

If your D70 camera body has been modified with a remote control jack (see the Harbortronics website for more information), then you may install a short jumper cable between the camera and the VG-D70, giving you full control over the camera shutter release functions.

The jumper cable is an optional accessory from Harbortronics, and simply plugs into the jacks on the camera and the grip.

If you use the shutter release jumper cable, you won't need the fiber optic cable, and may remove it.



## Shutter Release Operation

### ***Fiber Optic IR Cable***

Nikon does not provide an electrical socket for controlling the D70’s shutter. However, the camera does have an IR (infrared) sensor, which can be used with an optional IR remote control transmitter (Nikon ML-L1, ML-L3, Harbortronics DigiSnap 2100 time-lapse controller, etc.). The VG-D70 also has an internal IR transmitter, which shines up through a plastic fiber optic cable onto the sensor.

When the shutter release button on the VG-D70 is fully pressed, the internal transmitter will transmit the appropriate code to the camera to activate the shutter. The IR transmitter uses very low power, and is always ready to operate.

If you are not familiar with the operation of the camera with an IR remote control, please review that section of the camera manual. In summary though, you just set the camera shooting mode to ‘quick response remote’. There are some quirks however, when using the camera in this mode.

- 1) The camera will shut off the remote sensor after a period of time, if not actively used. We recommend you configure this for the maximum time, 15 minutes, via the cameras on-screen menu.
- 2) When the shooting mode is set for IR remote control, the shutter release button on the camera operates differently. Half-pressing the shutter release button on the camera will activate the metering & focusing functions, but a full-press of the button will not take the picture. The shutter can only be released via an IR remote controller.
- 3) The camera’s IR sensor cannot be used to pre-set the metering / focusing, as is normally performed by the shutter release half-press position. This means that the VG-D70 shutter release button, even through it has a standard two-position shutter release action, cannot be used to half-press the camera via the fiber optic cable. When fully pressed, the VG-D70 will cause the camera to take a picture, performing the metering / focusing operations as needed.

### ***Optional Jumper Cable***

If your camera has been modified to accept a remote cable release, installing the jumper cable (\$25) will allow the VG-D70 shutter release button to functional in half-press and full-press positions, exactly the same as the cameras own shutter release button.

## Additional Features of the VG-D70

### **Remote Control Jack**

The remote control jack makes use of the common 2.5mm stereo jack interface, as do the Canon EOS-Rebel cameras (both film and digital). The jack can serve as an input or an output connection.

When directly connected to a modified D70 body, the utility of the shutter release button on the VG-D70 is maximized.



When using the fiber optic connection to the camera, the VG-D70 can be remotely controlled via this jack, with low cost shutter release cables such as the RS-60E3 (normally stocked at Harbortronics), and other remote control devices compatible with EOS-Rebel cameras.

Two VG-D70’s may be connected together with a jumper cable for stereo control of two D70 cameras, using the shutter release button on either grip, and the

fiber optic connections to the camera. If you have two modified camera bodies, then you can simply connect the cameras together directly.

### **External Power Jack**

The D70 already has a connection for an AC adapter (Nikon EH-5), which is very expensive! The VG-D70 provides an additional *standard* connector (same as used on the Coolpix cameras) for this same purpose, allowing use of lower cost AC adapters.

The VG-D70 has internal protection circuitry to prevent damage to the camera from improper adapters. Reverse polarity connection and overvoltages are prevented from reaching the camera.

## Specifications

### *Physical*

Weight	8.4 ounces, 238 grams Note: EN-EL3 Battery Pack weighs 2.71 oz, 76.8 gm
Length	5.37 inches, 136 mm (max)
Width	2.80 inches, 71.1 mm (max)
Height	1.67 inches, 42.4 mm (max)
Mounted Height	Raises the camera by 1.35”
Grip Material	High strength polyurethane

### *Remote Control Jack*

Type	2.5mm stereo jack
- Tip	Full Press
- Center	Half Press
- Base	Common (ground)
Internal pullups	47K Ohms to 3.3V
Input Activation	5K Ohms or less to common to activate
Output Impedance	< 100 Ohms from dual state switch
Input Voltage	6V, no damage

### *External Power Jack*

Type	1.7 x 4.75 mm coaxial power jack
Polarity	Center positive
Maximum Voltage	10V (automatic disconnection)

### *Battery Sharing*

The greatest voltage among two batteries and external power is connected to camera (Diode-Or connection).

### **PRICE**

MSRP	US \$165
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## Service / Warranty

All Harbortronics LLC products are warranted against any manufacturing defects for a period of one (1) year from the date of purchase. Defective products should be returned prepaid to Harbortronics. Harbortronics will at its discretion, repair or replace such products without charge, and will return to the customer prepaid. Except as mentioned above, no other warranty expressed or implied, applies to this Harbortronics product. All other claims, of any nature, including but not limited to camera damage are not covered. This warranty does not cover damage caused by misuse, accident, or abuse. This warranty does not cover consequential damages or other incidental damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions may not apply to you. Contact Harbortronics at [www.Harbortronics.com](http://www.Harbortronics.com) for service instructions.