TimeFlow™ Intervalometer

Operating Instructions

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Operating your *TimeFlow*™ 240K Intervalometer

Introduction

Congratulations on your purchase of a *TimeFlow*™ Intervalometer (TIV)!

On the outside, your TIV has a durable powder-coat finish and two easy-to-read thumbwheel switches.

On the inside, your TIV uses the latest in surface-mount and microprocessor technology. The end result of nearly three years of development, your TIV is a rugged, dependable accessory that will allow you to create compelling time lapse footage.

It is suggested that you read this entire document before using your *TimeFlow*™ Intervalometer. The best way to familiarize yourself with the controls and operation of the TIV is to experiment with it while it is not attached to your camera.

Controls and Indicators

The *base plate* has a 3/8" hole at one end where it is held between camera and tripod. The *pushrod* sticks out the front of the *control box*. The pushrod is threaded into the *actuator*, which is not visible. If you gently push and pull on the pushrod you can hear the gears of the actuator whir.

On one side of the control box are the two *thumbwheels*, the *idle light* (red), the *run light* (green), and the *run/idle pushbutton*.

On the other side is the 4AA battery pack. Do not connect a 9V battery to the battery pack snap or your TIV will be transformed into a fancy paperweight. On the front of the unit is the on-off switch. Up is on.

Installation

The base plate of the TIV is held between camera and tripod.

If using a 3/8" tripod, remove the head from the tripod. Turn the camera over. Turn the TIV over and align the hole in the base plate with the threaded hole in the bottom of the camera.

Screw them together with the tripod head. Now you can mount the assembly on top of your tripod.

If your tripod screw is not long enough, you can either get a longer screw, or, if your tripod head lets you switch to a ¼" screw, try using that with a thread adapter.

You must cover the viewfinder when filming. Otherwise, light will shine into the camera and fog the film. If you pull off the rubber eyecup, the top of a 35mm film canister will snap right on.

Adjusting the Pushrod

The pushrod must be adjusted for proper length. This is done by twisting the pushrod. Twist clockwise to shorten and counterclockwise to lengthen.

There is a nut on the end of the pushrod to lock it in place. Loosen to adjust, tighten after adjusting.

If the pushrod is too short, it will not trigger the single-frame release. If the pushrod is too long, it will not allow the single-frame release mechanism inside the K-3 to release for the next frame.

Ideally, the pushrod should be adjusted to be as short as possible while still triggering the single-frame release. **You can also adjust how far out the pushrod moves.** It might be necessary to do this. See the next section.

Pushrod length is pre-adjusted at the factory. However, it will probably need to be adjusted more precisely for your camera. Fortunately, you only have to do this once.

There is a little brass locknut on the pushrod that prevents it from rotating. Loosen this locknut to adjust (and snug back up once done).

Attach the TIV and wind the camera.

Set the thumbwheels to 00 and apply power. The light will flash in an alternating pattern, indicating that the TIV is in the manual triggering mode. Each time you press the pushbutton the pushrod will pulse outward, then return to the neutral position.

Grab the pushrod and guide it into the single-frame release hole on the K-3. Press the button. The pushrod will move out and then return to the

neutral position. Did it trigger a frame? If it did, then it is probably very close to the correct length.

If it didn't, the pushrod is either too short or too long. If it is too long, twist the pushrod clockwise until it is too short. It is easiest to start with the pushrod too short and then lengthen it.

If the pushrod is too short, you must twist it counterclockwise to lengthen it. Lengthen it until it is just inside the single-frame release hole.

Keep adjusting until a frame is exposed every time you press the button. *Note that if the spring has wound down, a frame will never be exposed.*

Sometimes, when the pushrod is at the wrong length, the single-frame release on the K-3 can jam. If this happens, gently pull the pushrod out from the single-frame release hole and tap on the filming button on the K-3.

If frames are exposed every time, screw in the pushrod (clockwise) slightly and test it again. Keep shortening the pushrod until it doesn't reliably trigger a frame (or until it falls out of the single-frame hole). Then lengthen it slightly.

K-3's can be very finicky about the pushrod length. A quarter-turn can make the difference between running perfectly and skipping frames or jamming the button.

For a final test, change the thumbwheel setting to 01. Press **and release** the pushbutton and the TIV will start exposing frames, one per second. To stop, press **and hold** the pushbutton for about ½ second, then release.

Changing the thumbwheel setting away from 00 takes the TIV out of manual triggering mode and places it into idle mode. To change back to manual triggering mode turn the thumbwheels to 00.

When the TIV is triggering frames, the base plate will flex. This is normal

Changing the Pushrod Throw

The throw of the pushrod, i.e. how far it moves out when triggering a frame, is controlled by a timing value. You can change this value to precisely match the throw of the pushrod to the needs of your camera.

At the factory, this timing value, called *right_time*, is set to 64. The timing value used when the pushrod is not extended is 58. The difference between these two (6 units) is the throw. Increasing this value will make the pushrod move out further. Decreasing this value will make the pushrod move out less.

Refer to the addendum sheet for instructions on how to change the value of *right_time*.

Filming

All TIV models have two modes, idle and run.

When the TIV is in *idle mode*, no frames are exposed. In *run mode*, the single-frame release is triggered

Switching between these two modes is done by the Run/Idle pushbutton.

When power is first applied, the TIV will go into idle mode. In idle mode, the idle light will flash every ½ second. This is an indication that the TIV is working correctly and is ready to receive your input.

The TIV allows you to set both the number of frames to expose (*frames*) as well as specify the interval between exposures (*interval*).

When power is applied to the TIV, *frames* is preset to 20 seconds (480 frames of film).

To program *frames*, dial in the seconds of film you wish to expose on the thumbwheels. Remember, the K-3 will wind down after about 25 seconds. Values from 1-29 can be entered.

Then **press and hold** the pushbutton until the lights flash in an alternating pattern. Release the pushbutton. *Frames* is now set, and the TIV will return to idle mode.

To set the *interval*, turn the thumbwheels to the interval you'd like, between 1 and 20 seconds. For example, if you would like one frame to be exposed every 5 seconds, turn the thumbwheels to 05.

Like all mirror-reflex cameras, the shutter on the K-3 is not light-tight, and intervals above about 8 seconds may lead to fogging in the footage. For most time-lapse (clouds, traffic, etc.) intervals of 1-4 seconds work best.

To start filming, **press and release** the pushbutton

After the set number of frames have been exposed, the TIV will automatically return to idle mode.

To stop the TIV while it is running, press and hold the pushbutton for about ½ second. Release and the TIV will return to idle mode.

Changing the thumbwheels while the TIV is filming will have no effect on the interval. You must press the pushbutton twice (going to idle mode, then back to run mode) to register the change.

Frames will remain set to the value you programmed (or 20 seconds, if you don't change it). You do not need to enter *frames* again if you wish to shoot the same number of exposures again.

Turbo Mode
Use thumbwheel settings of 40-49 for very fast intervals. A setting of 40 will give a 2/3-second interval. A setting of 49 will expose frames at about 3fps.

Conclusion
Film, experiment, and let us know if you have any problems, or any suggestions for improvement.

Refer to the Addendum for other features.

TimeFlow™ TIV-240K Addendum

Setting *Interval*

01-20 = 1 second to 20 seconds
21-29 = interval in half-minute increments.
21 = 30 seconds, 22 = 60 seconds, 23 = 90 seconds, etc.

Press and release pushbutton to film.

Turbo Mode

Use 40-49 for very short intervals.
40 = 2/3 second
45 = ½ second
49 = 1/3 second

Press and release pushbutton to film.

Setting *Frames*

01-50 = 1 to 50 seconds of film.

Press and **hold** pushbutton (until lights flash) to set *frames to expose*.

Special Function

38: Turn off LEDs
Lights go off!   TIV works the same, but no lights. Useful if you don't want to attract attention.

39: Turn on LEDs.

36: 'Shot-spacer'
Turn to 36 and press the pushbutton. 24 frames will be exposed at a fast rate. Put on the lens cap for a 1-second black separation between shots.

US/Europe FPS

When setting *frames*, the TIV assumes 1 second of film is 24 frames. You can change this to any value from 1-99. For example, if you are shooting for transfer to PAL, you can change this value to 25.

It's a two-step process. Turn the thumbwheels to 70, press the button, turn to 75, press the button, then turn to the fps value, and press the button. '→' represents a pushbutton press.

70→75→**25**→ (change to PAL)

70→75→**24**→ (back to 24fps)

Changing Pushrod Throw

To change the pushrod throw, enter

70→72→nn→: set right-time to nn (default 64)

The '→' represents a pushbutton press. It is a two-step process, to prevent accidental changing of the values.