## Before you start:

Set EV Step to **1/3 EV**. Set the camera to the exposure mode **M**; set exposure to **11 seconds** or more.

Programming of Dandelion is simple and includes three steps:

- 1. Activation of the program mode
- 2. Command input
- 3. Data input

Activate the program mode in Dandelion. First, capture some sharp image in order to quickly return to it later.

Turn the adapter ring on the bayonet joint to detach Dandelion from the camera (the camera will display aperture "0.0"). Hold your finger on the shutter release button and turn the ring again to make Dandelion touch the camera. Within 3 seconds starting from that moment you will have to press the shutter release button and set exposure to 11 seconds or more.

After the exposure finishes, Dandelion will enter the program mode. As you turn the control dial, the aperture will change from F3.5 to F11. Herewith each aperture corresponds to a number (see table 1).

| Aperture        | F3.5 | F4.0 | F4.5 | F5.0 | F5.6 | F6.3 | F7.1 | F8.0 | F9.0 | F10 | F11 |
|-----------------|------|------|------|------|------|------|------|------|------|-----|-----|
| Corresp. Number | -    | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8   | 9   |

Table 1. Aperture and corresponding numbers.

Please mind that the camera won't make a shot until it receives the acknowledgement sign. That's why within the 3 seconds you will not only have to press the shutter release button, but also capture a sharp picture with your lens. So you won't be able to change any settings of the Dandelion **without the lens**.

However there exist exceptions:

- Set the camera to **AI Servo** mode (focus tracking mode) if your camera has one. As a rule AI Servo mode doesn't block the shutter release.
- Turn the blocking off in the menu if your camera has such option.
- If Dandelion is set to **MF** mode, there is no blocking by default.

All new Dandelions by default have a 10-second delay before activation. You can change it from 01 to 99 seconds (see **F11** function). A short delay helps activate the program mode quicker. A longer delay excludes the possibility of an accidental activation.

Like you have already understood, in order to activate the program mode you will have to make one shot within 3 seconds after power connection, with exposure 1 second longer than the default time. By default Dandelion is set to 10 seconds, thus the activating shot must be at least 11 seconds long.

Please remember that the activating shot must be started no later than 3 seconds after you turn the ring and Dandelion touches the camera. Otherwise the program mode will not be activated.

In program mode Dandelion will set the camera to the **MF** mode automatically in order to prevent problems with shot blocking.

Dandelion will stay in the program mode until you enter a correct command or data. If you wish to quit the program mode anyway, turn the adapter ring to detach Dandelion from the camera.

In the new Dandelion the delay before activation is set to 10 seconds. You can change it from 01 to 99 seconds. See also **F11** function.

If your camera has the **bulb** mode, use it instead of M.

If your camera has a depth of field preview button, you can use it for command and data input. Just press it on certain apertures. However, to activate the program mode you will still have to make a shot in the **M** or **bulb** mode.

Some cameras (usually old film cameras) have a **EV Step** of **1/2 EV**. In that case several programming options may be unavailable.

## **Command and Data Input**

Command input is as simple as making one shot on certain apertures. After that you will have to enter several digits (data). The data are to be entered as such, for example, the number 28 must be entered in the following way: first 2, then 8.

## **List of Commands And Their Formats**

**F4.0 + aperture – aperture change.** Make a shot on aperture 4.0. After that the camera will allow you to choose an aperture from 1.0 to 64. Choose any using the control dial. To choose, make one shot on the chosen aperture, Dandelion will remember it and quit the program mode.

You cannot choose or program any intermediate apertures, such as **F1.7**.

Mind that if aperture is set from F1.0 to F2.0, it may influence exposure metering and reduce it.

Incorrect aperture "04", or "00", or " " (empty), that is, the one with value **less than 1.0**, is false and cannot be programmed.

**F5.6 + 5 digits – focal length change.** The digits are to be entered from greatest to least. If the focal length is less than 5 digits, add zeros. For example, for 50mm: 00050. All five digits have to be entered.

Therefore, to change focal length to 50mm, make shots successively on the following apertures: F5.6 (command), F4.0 (the first digit is 0), F4.0 (the second digit is 0), F4.0 (the third digit is 0), F7.1 (the fourth digit is 5), F4.0 (the fifth digit is 0).

Focal length ranges from 00001mm to 65535mm. If the command and 5 digits are entered correctly, Dandelion will quit the program mode. Check the result.

**F8.0 + 2 digits from 01 to 17 – correction of focus confirmation dot.** Dandelion calibration function. You can move the dot a bit forward or backward, to manually find the calibration constant. By default Dandelion is set for the center, constant 09.

**F9.0 (without settings) – switching focus mode** - between **MF** and **AF**. This option is the same as MF/AF switch on an autofocus lens. Please mind that in the **MF** mode accuracy of focus confirmation depends on the direction in which the focus ring is turned. Besides, some cameras may not make an acknowledging beep (then check the viewfinder).

**F11 + 2 digits – delay before entering the program mode.** This is set to 10 seconds by default. You can change it into 01 to 99 seconds.

Mind that if you set the delay timing to 15 to 99 seconds, you will have to make an activating shot 16-100 seconds long to enter the program mode. Not all cameras will allow you to do that. Then use the bulb mode.