

Four main types of Shooting Mode:

P – Program: Camera selects a moderate combination of **f-stop (aperture)** and **shutter speed** according to the light intensity of the environment.

How P mode works from dim to bright environment:

In very dim environment, by default, the camera will use the largest f-stop possible to match with a slow shutter speed. When the lighting is bright enough for the camera to use above 1/60s, the f-stop will begin to close up (be smaller) according to the light intensity. As the light intensity gets brighter and brighter, the shutter speed and f-stop take turns to increase in succession.

Situation to apply: Good for ordinary situation such as shutter speed and depth of field (affected by f-stop) are not very critical to the photo or the available light intensity is strong.

Disadvantage: Fail to master the possibility of using faster or slower shutter speed as well as using larger or smaller aperture (depth-of-field effect).

Remedy: Manually override the default shutter-speed-and-aperture suggestion to select your own exposure combination (turn your dial!).

Tv (S) – Shutter priority: Photographer determines the **shutter speed**, the camera TRY to match with the proper **f-stop (aperture)** to achieve a proper exposure according to the light intensity of the environment.

Situation to apply: Photographer wants to be sure all photos are shot at a certain high shutter speed (e.g. 1/500s) in order to freeze the action of a sports game. It usually works if the light intensity is strong.

Common mistake1: Available lighting is not strong enough, f-stop fails to open wide enough to match with the 1/500 shutter speed, resulting in underexposure.

Common mistake2: Purposely want to use very slow shutter speed – aperture could not be small enough to match – resulting in overexposure.

Remedy: Increase or decrease ISO to allow more choice of f-stop to match with the shutter speed.

Av (A) – Aperture priority: Photographer determines the **f-stop (aperture)**, the camera TRY to match with the proper **shutter speed** to achieve a proper exposure according to the light intensity of the environment.

Situation to apply: Photographer wants to create extreme long depth of field by setting a very small aperture (e.g. f16). It usually works if the light intensity is strong.

Common mistake1: Available lighting is not strong enough, shutter speed being forced to go very slow (1/10s) to match with the f16, resulting in blurry image caused by camera or subject movement.

Common mistake2: Purposely want to use very short depth of field by setting a large aperture (e.g. f2.8) – shutter speed can't be fast enough to match with the exposure -- resulting in overexposure.

Remedy: Adjust ISO to allow more choice of shutter speed to match with the aperture. Also, when the available light is dim, use the largest f-stop to cut down camera/subject movement.

M – Manual: Require the photographer to manually set both the **f-stop (aperture)** and **shutter speed** relying on the exposure meter from the camera according to the light intensity of the environment.

Situation to apply: When lighting intensity is very low or metering become very tricky and difficult. Or you are in a very constant or controlled lighting situation (e.g. classroom or studio).

Disadvantage: Often too slow to react. As a photojournalist, you will lose a lot of photo opportunities.