Seagull #MAP - Manual

General information

With Seagull #MAP you can easily trigger your camera from any UAV platform – either with your R/C transmitter from the ground, or let your Flight Controller do the job.

Seagull #MAP is designed to connect your UAV mounted camera to an R/C receiver or Flight Controller and be able to trigger the camera either from a dedicated switch on your R/C transmitter - or automated by your Flight Controller for doing for example image mapping, agriculture analysis, 3D modelling and more.

Seagull #MAP features 3 modes:

AF-T (Autofocus-Trigger, 1 sec pre-AF then trigger)
IS-T (Instant-Trigger, instant trigger as soon as camera locks focus)
Camera On/Off (Turn camera power on/off – only with Sony "Multi" cameras!)

Please read this manual thoroughly before connecting and configuring Seagull #MAP !

Configuring your Transmitter

Setting up Seagull #MAP could not be easier!
Simply select the channel that the device is plugged into and trim the LOW/HIGH values for that channel, until desired modes are met – refer to the table below:

State / Mode	Value	Range
Neutral	1500 µS	1400 <> 1600 µS
AF-T	1300 µS	1200 <> 1400 µS
IS-T	1700 µS	1600 <> 1800 µS
Camera On/Off *	1100 / 1900 µS	1000 <> 1200 µS / 1800 <> 2000 µS
No signal **	n/a	0 <> 1000 µS / 2000 <> ∞ µS

* Only with Sony "Multi" cameras !
On/Off function is placed at either extremes of the signal range to be able to utilize a 3-position switch and still reach both trigger functions.

** Signal out of scope or no input signal !
No signal state will occur when signal is out of the standard R/C PWM signal range or if no signal is received.

Example with Seagull #MAP configured to CH7 on a Taranis X9D transmitter:

Connecting to your Receiver / Flight Controller

Connect the servo cable by following the polarity markings on Seagull MAP and connect the other end of servo cable to your Receiver / Flight Controller, with the correct polarity.
("Otherwise the magic smoke escapes!! - don't worry, it's protected against reversed connection ☺")

Please refer to the manual of your specific R/C radio system or Flight Controller to find out more about how to connect accessories and what ports to utilize.

NOTE: for Pixhawk users – #MAP is powered by Pixhawks power rail (the middle pin +).
Ensure that the rail is powered by BEC or other power source ranging from 3.5-5.5 volts in order for Seagull #MAP to function properly.

Flexible trigger port selection: from RC5 to RC11

Setting up Mission Planner / Ground Control

If you wish to trigger Seagull #MAP from a Flight Controller, setting it up in Mission Planner is also straight forward.
Start Mission Planner and follow the steps below.

1. Click on **INITIAL SETUP** >> **OPTIONAL HARDWARE** >> **CAMERA GIMBAL**

2. **"SHUTTER"** - in the drop down list, chose the channel tha11t Seagull #MAP is connected to.

3. **"PUSHED"** - Set the "Value" for the desired trigger mode (AF-T or IS-T see table below)

State / Mode	Value	Range
Neutral	1500 µS	1400 <> 1600 µS
AF-T	1300 µS	1200 <> 1400 µS
IS-T	1700 µS	1600 <> 1800 µS

4. **"NOT PUSHED"** – Set the value "1500" (Neutral state – see table above)

5. **"DURATION"** – Set the value "1" for AF-T mode or "10" for IS-T mode
   (values may vary depending on how long it takes for your specific camera model and lens configuration to lock focus. Try increasing or decreasing the values to find the sweet spot where the camera can keep up with the duration time that the shutter is held pushed/triggered for)

Example from Mission Planner:

Troubleshooting

To determine what state Seagull #MAP is currently in - simply read the output of the "STATE LED" and match it with the "Action" in the table below.

The following table shows the STATE LED readout for the different states / modes.

STATE LED	Action
Blinking	No Signal - check connections and mode values
Fading	Ready - waiting for next command
Solid on	Active in one of the 3 modes – return to "Neutral" before next command
Fade >> Solid on	AF-T mode activated - return to "Neutral" before next command
Blink >> Solid on	IS-T mode activated - return to "Neutral" before new command
Blink >> Solid on	Camera On/Off activated (Only Sony "Multi" cameras)

Technical specifications

- Dimensions: 33.5 x 11.3 x 7.5 mm

- Camera cable length: 12-17cm (varies by cable type)

- Weight: 1.9g (~ 12g with cables - depending on cable type)

- Voltage: 3.5 – 5.5 volts (5 volts recommended – do NOT exceed 5.5 volts !!)

- Current: 30mA max (when STATE LED is Solid ON - varies when Fading)

- Input signal: Standard R/C PWM between 1000 – 2000µS