

Seagull #REC2

User Manual



Product: Seagull #REC2
Released: 2026-09-25
FW: 1.5

CONTENTS

- GENERAL INFORMATION3
- CONFIGURING #REC2.....4
 - GENERAL 4
- SETTINGS AND VALUES TABLE4
- #REC2 CHANNEL VALUE TABLE5
- FLIGHT CONTROLLER / TRANSMITTER INTEGRATION6
 - TRANSMITTER 6
 - PIXHAWK / PIXRACER / ARDUPILOT BASED FC6
 - MISSION PLANNER 7
 - DJI FLIGHT CONTROLLERS / A3..... 8
- AUTOMATED CAMERA ON / OFF8
- PORT / PIN DEFINITIONS9
- TROUBLESHOOTING9
- TECHNICAL SPECIFICATIONS.....9

GENERAL INFORMATION

***** Please read this manual thoroughly before connecting and configuring Seagull #REC2 *****

Seagull #REC2 is a camera controller, specially designed for Sony branded cameras. For full compatibility list please visit the following page: <https://www.seagulluav.com/rec-compatibility-list/>

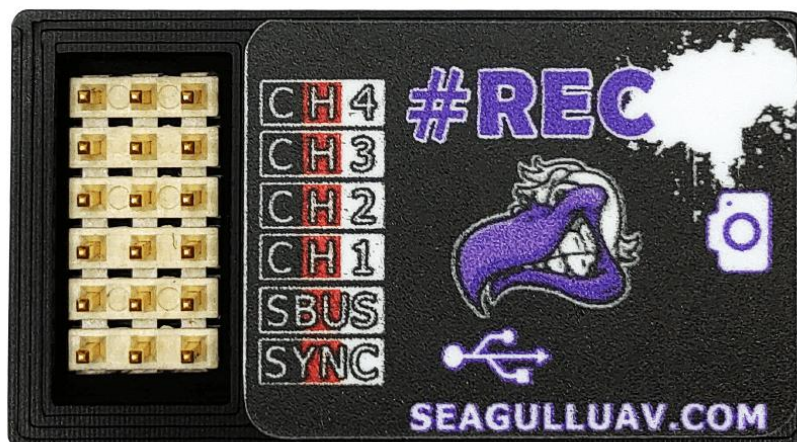
#REC2 supports PWM / SBUS input to control its functions. It is a perfect tool for Aerial Photography, Videography, Surveillance and more - where utmost control is required of your camera.

#REC2 has integrated circuitry to allow power supply to the camera through USB interface – which is extremely useful for all sorts of usage scenarios! (*only for cameras that support power supply via USB interface)

There is a possibility of integrating camera shutter feedback for photo Timelapse function – with precision down to microseconds between photos!

#REC2 features:

- **USB Power Supply** – extend the usage time of your camera!
- **Video Record** – START / STOP
- **Zooming** – IN / OUT with variable speeds
- **Shutter Release** – with user definable focus time
- **Manual Photo** – stages for focus and shutter release
- **Timelapse** – user defined interval for shutter release
- **Shutter Feedback** – #SYNC2 support for microsecond Timelapse precision
- **Camera ON / OFF**
- **PWM / SBUS INPUT**
- **Digital Capture** – *shutter release only for Sony camcorders



CONFIGURING #REC2

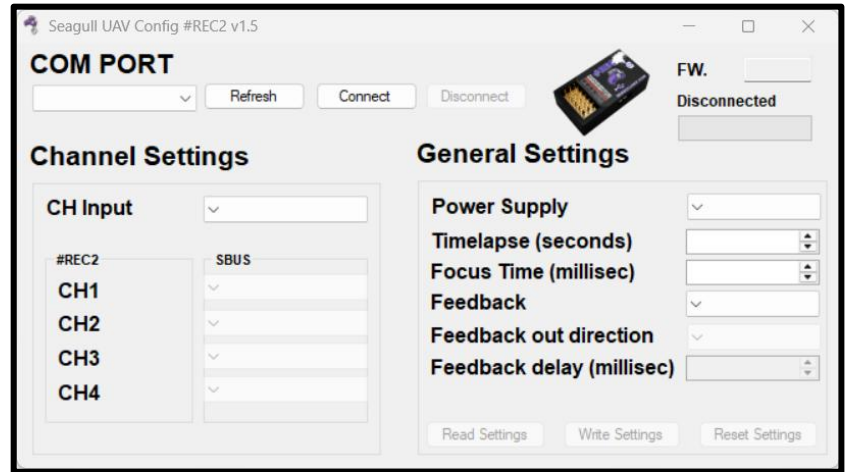
GENERAL

#REC2 can be configured by "Seagull-REC2-Config.exe" that can be downloaded via the following link:

https://www.seagulluav.com/software/Seagull-REC2-Config_1.5.exe

Seagull #REC2 Configurator example photo

Settings can be read and written in any #REC2 state – the camera does not need to be connected or powered on. Connect #REC2 to the computer via Micro USB, select its COM port, press Connect and then Read Settings. Write Settings becomes available once the settings have been read. Decimal values use "." as the decimal point – a typed "," is converted automatically.



SETTINGS AND VALUES TABLE

SETTING NAME	SETTINGS	RANGE	DEFAULT	DESCRIPTION
COM PORT	*Port number of #REC2*	n/a		Select the port corresponding to #REC2 when plugged into the computer
CH INPUT	PWM / SBUS	n/a	PWM	Defines whether PWM or SBUS input is to be listened to control #REC2 functions
CH1	Select SBUS CH	1 - 16	n/a	Selectable SBUS CH to control CH1 functions
CH2	Select SBUS CH	1 - 16	n/a	Selectable SBUS CH to control CH2 functions
CH3	Select SBUS CH	1 - 16	n/a	Selectable SBUS CH to control CH3 functions
CH4	Select SBUS CH	1 - 16	n/a	Selectable SBUS CH to control CH4 functions
POWER SUPPLY	DISABLED / ENABLED	n/a	DISABLED	Power supply to the camera via integrated #REC2 circuitry (*only works for cameras supporting USB Power Supply feature which needs to be enabled in settings menu). When changed and written as new settings requires power cycle reset for #REC2 and camera to confirm functionality.
TIMELAPSE	User defined interval	0-86400	3	Interval definition in seconds, supporting decimal point values (up to 3 decimals, e.g. 2.345)
FOCUS TIME	User defined interval	0-65535	20	Interval definition in milliseconds
FEEDBACK	DISABLED / ENABLED / OUTPUT	n/a	DISABLED	When set to ENABLED it gives microsecond precision for Timelapse function when utilizing #SYNC2 connected to hotshoe interface. When set to OUTPUT the SYNC port becomes an output allowing to simulate hotshoe/feedback event to devices that are capable of logging data based on shutter events. This feature is very usefull for cameras not featuring a hotshoe/feedback interfcie.
FEEDBACK OUT DIRECTION	LOW (0V) / HIGH (3.3V)	n/a	LOW	When feedback is set to OUTPUT - it enables the choice for output direction either pull LOW (0V) or HIGH (3.3V) logic. Depending on the logging devices requirement.

FEEDBACK DELAY	User defined interval	0-65535	0	When feedback is set to OUTPUT - it enables the feedback delay option. User can input desired delay to output after the shutter activation in order to get closer to real actual feedback to increase precision of the logging device.
Miscellaneous				
FW.	n/a	n/a	n/a	Displays current firmware version of #REC2 – after clicking “Read Settings” button
Read Settings	n/a	n/a	n/a	Loads current settings from #REC2 into the Configurator application
Reset Settings	n/a	n/a	n/a	Resets #REC2 back to DEFAULT values. Takes effect immediately (POWER SUPPLY after a power cycle).
Write Settings	n/a	n/a	n/a	Writes user defined settings into #REC2. Takes effect immediately (POWER SUPPLY after a power cycle).

#REC2 CHANNEL VALUE TABLE

Setting up and using #REC2 is very simple. It can be controlled via transmitter or flight controller. Below you will find a table that illustrates #REC functions, which channels they are allocated to and the values for engaging the functions.

CH.	State / Mode	Value	Range
1	Record Video	1800 μ S	1601 $\leftrightarrow$ 2050 μ S
1	Shutter Release	1325 μ S	1250 $\leftrightarrow$ 1399 μ S
1	Digital Capture	1125 μ S	950 $\leftrightarrow$ 1249 μ S
2	Zoom OUT **** - Speed 1 - Speed 2 - Speed 3 - Speed 4 - Speed 5 - Speed 6 - Speed 7	1369 μ S 1308 μ S 1247 μ S 1186 μ S 1125 μ S 1064 μ S 1016 μ S	1339 $\leftrightarrow$ 1399 μ S 1278 $\leftrightarrow$ 1338 μ S 1217 $\leftrightarrow$ 1277 μ S 1156 $\leftrightarrow$ 1216 μ S 1095 $\leftrightarrow$ 1155 μ S 1034 $\leftrightarrow$ 1094 μ S 950 $\leftrightarrow$ 1033 μ S
	Zoom IN **** - Speed 1 - Speed 2 - Speed 3 - Speed 4 - Speed 5 - Speed 6 - Speed 7	1631 μ S 1692 μ S 1753 μ S 1814 μ S 1875 μ S 1936 μ S 1983 μ S	1601 $\leftrightarrow$ 1661 μ S 1662 $\leftrightarrow$ 1722 μ S 1723 $\leftrightarrow$ 1783 μ S 1784 $\leftrightarrow$ 1844 μ S 1845 $\leftrightarrow$ 1905 μ S 1906 $\leftrightarrow$ 1966 μ S 1967 $\leftrightarrow$ 2050 μ S
3	Manual Photo - Neutral ** - Focus - Shutter release	1175 μ S 1500 μ S 1800 μ S	950 $\leftrightarrow$ 1350 μ S 1351 $\leftrightarrow$ 1650 μ S 1651 $\leftrightarrow$ 2050 μ S
4	Timelapse	1175 μ S	950 $\leftrightarrow$ 1399 μ S
4	Camera On/Off	1800 μ S	1601 $\leftrightarrow$ 2050 μ S
1, 2, 4	Neutral *	1500 μ S	1400 $\leftrightarrow$ 1600 μ S
3	Neutral **	1175 μ S	950 $\leftrightarrow$ 1350 μ S
1, 2, 4, 3	Signal out of scope	n/a	1 $\leftrightarrow$ 949 μ S / 2051 $\leftrightarrow$ ∞ μ S
1, 2, 4, 3	No signal ***	n/a	0 μ S

* Neutral state has a value of 1500 μ S for all modes/states (except "Manual Photo" mode !)

** Neutral state for "Manual Photo" has value of 1175 μ S

*** No signal state will occur when there are no SIGNAL INPUTS into the #REC2's channels.

**** Zoom is limited to "Speed 1" while recording video with a still camera because of legal reasons from Sony Corp.

FLIGHT CONTROLLER / TRANSMITTER INTEGRATION

TRANSMITTER

#REC2 can be controller via transmitters PWM output interface or SBUS interface if the receiver supports such output.

If utilizing PWM based receivers simply plug in the channels that you wish to control on #REC into the receiver and adjust the output values required for activating the functions.

Conversion tables for most common transmitter brands can be found on the following link:

PIXHAWK / PIXRACER / ARDUPILOT BASED FC

#REC2 can be connected to a Flight Controller to control functions automatically or setting the Flight Controller to act as a passthrough for the signal activated by transmitter.

Please note that none of the Ardupilot based flight controllers output power through the rails - therefore #REC2 needs a power supply. To achieve this, it is recommended to utilize an external BEC of 5V to ensure proper functionality for #REC2 or any other accessories.

Below is an illustration of usable channels for connecting #REC2 for AUTOMATED TRIGGERING:

Flexible trigger port selection from RC5 to R11



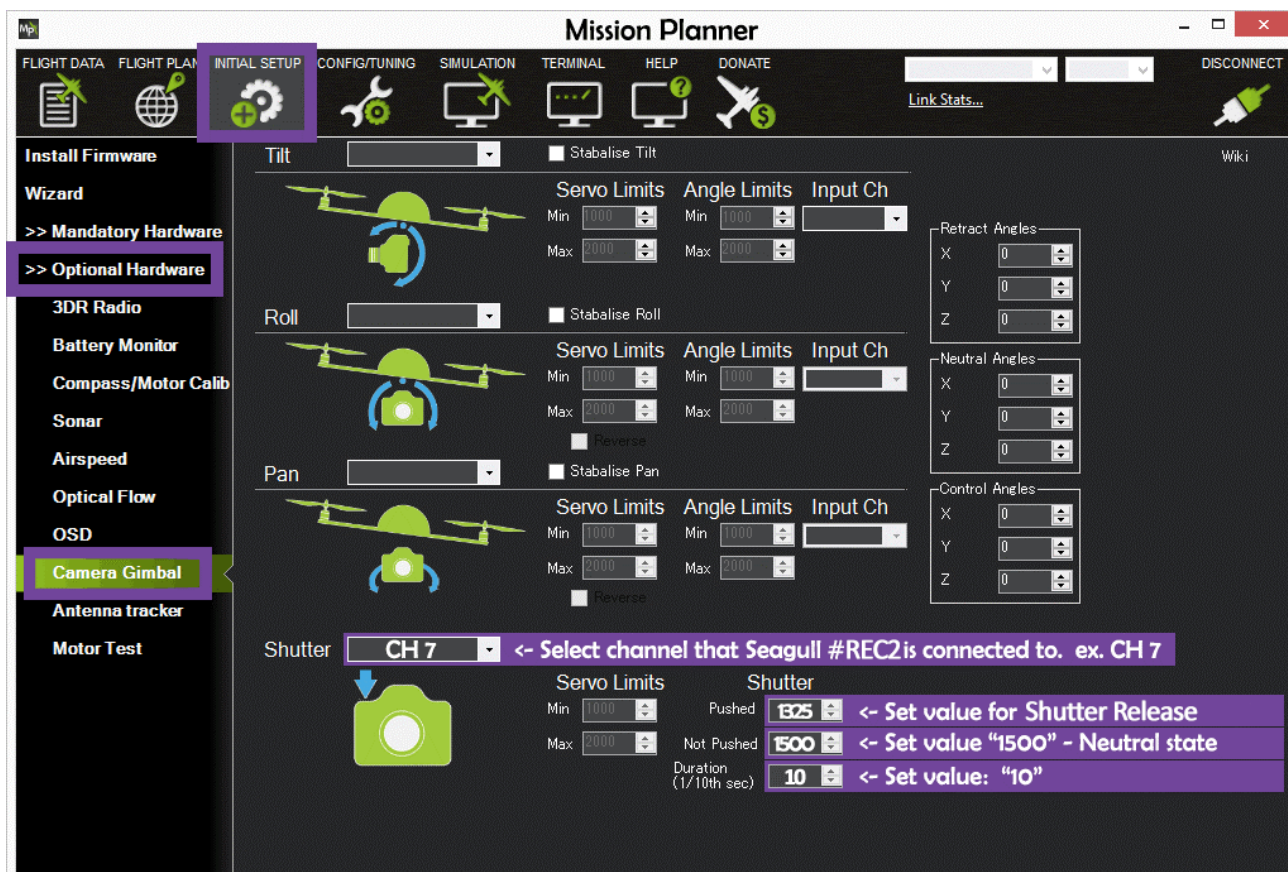
MISSION PLANNER

If you wish to trigger Seagull #REC2 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 that Seagull #REC2 CH1 SHUTTER RELEASE channel is connected to.
3. **"PUSHED"** - Set the "Value" as in the table:

State / Function	Value	Range
NEUTRAL	1500 μ S	1400 $\leftrightarrow$ 1600 μ S
SHUTTER RELEASE	1325 μ S	1250 $\leftrightarrow$ 1399 μ S

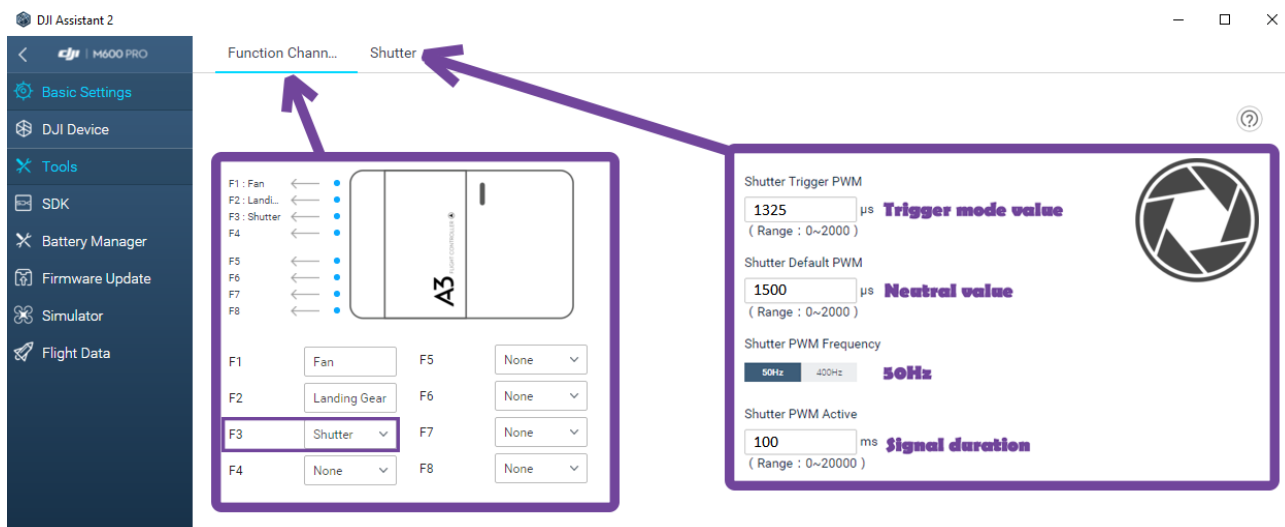
4. **"NOT PUSHED"** – Set the value "1500" (Neutral state – see table above)
5. **"DURATION"** – Set the value "10"



DJI Flight Controllers / A3

#REC2 can be controller via DJI A3 flight controller. It is very easy to setup automated flight photo capturing via DJI Assistant 2 software. For controlling more features of #REC2 an expansion kit is required, since by default it is not possible to utilize other F ports and bind them to the channels of LB transmitters.

Below is an example of integrating #REC2 and configuring via DJI Assistant 2:

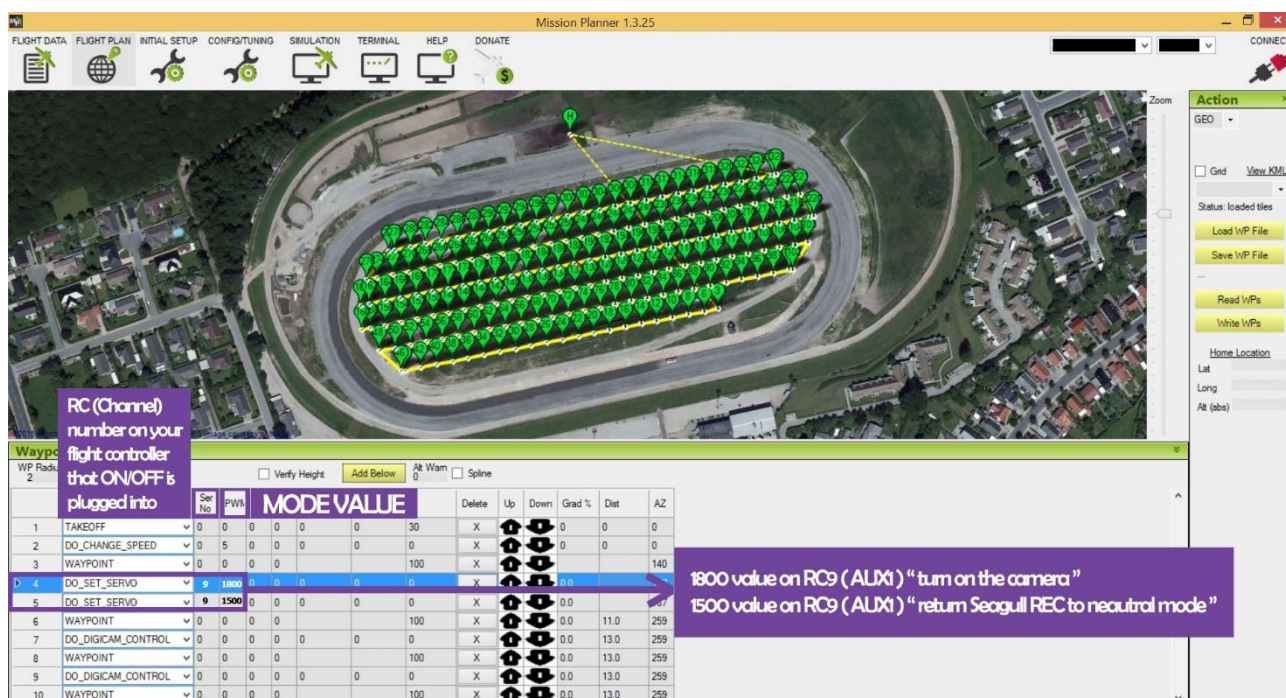


* Please note that A3 flight controller does not output power through the rails - therefore #REC2 needs a power supply. To achieve this, it is recommended to utilize an external BEC of 5V to ensure proper functionality for #REC2 or any other accessories.

AUTOMATED CAMERA ON / OFF

If you wish to integrate "Camera On/Off" into your Survey / Mission plan with Ground control or Mission Planner software, simply follow the steps below. (Please note that you might need to setup the Flight Controllers channels in the parameters to function as SERVO/PWM OUTPUT. As well as some of the Sony cameras require the power switch to be set onto ON position – then powered OFF via #REC2 command for below scenario to work)

In this scenario we want to turn on the camera after take-off.



NOTE: Repeat the sequence at the end of the mission in order to retract the lenses to protect the mechanism before landing. Very helpful on plane platforms as well as multirotor platforms in order to prevent dust getting into a retractable lens mechanism on a compact camera

PORT / PIN DEFINITIONS

PORT	DEFINITION	PINS		
CH1	CH1 PWM INPUT Shutter Release and Video	GND	INTERCONNECTED VIN (3.9V – 12V)	PWM SIGNAL IN
CH2	CH2 PWM INPUT Zoom IN / OUT	GND	INTERCONNECTED VIN (3.9V – 12V)	PWM SIGNAL IN
CH3	CH3 PWM INPUT Manual Focus / Shutter Release	GND	INTERCONNECTED VIN (3.9V – 12V)	PWM SIGNAL IN
CH4	CH4 PWM INPUT Timelapse and Camera ON / OFF	GND	INTERCONNECTED VIN (3.9V – 12V)	PWM SIGNAL IN
SBUS	SBUS INPUT Interface	GND	INTERCONNECTED VIN (3.9V – 12V)	#REC2 RX PIN FOR SBUS
SYNC	#SYNC2 / Camera Feedback	GND	3.3V OUTPUT ONLY *DO NOT CONNECT ANY INPUT V !	FEEDBACK SIGNAL PIN (ACTIVED @ LOW 0V)
	Cable connection between #REC2 and the CAMERA	n/a	n/a	n/a
	Micro USB connection to write Settings for #REC	n/a	n/a	n/a

*Do not exceed the voltages specified for the **VIN PIN** and **DO NOT CONNECT** any voltage input to the **SYNC PORT** (only to be used with #SYNC2 or other hardware meant to interface with the port)

TROUBLESHOOTING

To determine the current state of Seagull #REC2 - simply read the output of the LED and reference it to the table below:

"2" REC2	ACTION
Off	The unit is powered OFF
Blinking (1s interval)	Camera RECORDING VIDEO
2x Blink - OFF	CH INPUT is not present
Blinking Fast	Camera is OFF or NOT CONNECTED
Flashing Rapidly	CH INPUT is out of range <950uS or >2050uS
Faded	Inside a function
Solid On	Inside a function
Fading	NEUTRAL

TECHNICAL SPECIFICATIONS

- Supply voltage: 3.9 – 12v (5v recommended – do **NOT** exceed 12v!)
- Current draw: 30.6mA (PS-DISABLED)
- Dimensions: 39.5mm x 21.5mm x 10.5mm
- Weight: 8g (without cables)