**‘Seagull #REC2 V1’ LUA Script Setup**

This script has been adapted from ‘Seagull v2 zoom.lua’ which was written by Ian Lewis with a little help from Peter Hall and is designed to allow the Herelink to control a Seagull camera trigger. It was adapted by Peter Arnold for the Seagull #REC2 and includes Manual Photo, Camera on/off and Timelapse.

**#REC and #REC2 Differences**

Shutter Release  
#REC Ch1 has IS-T (Autofocus – Trigger)  
#REC2 has Shutter Release but no focus. Ch3 Manual Focus is recommended instead for single images.

Record Video   
#REC records video when the pwm is 1800 i.e. needs a toggle action  
#REC2 Video recording uses a momentary action, i.e. Video recording is started or stopped when the pwm signal moves from neutral (1500) to 1800 then back to 1500

SBUS input added

USB Power Supply added which powers the camera inflight.

**How the Script works.**

The script overcomes the present apparent Herelink limitation of only allowing one Herelink button to directly control one Cube servo channel. As an example, two buttons are needed to control Seagull #REC2 Ch 2 Zoom. One button to zoom in and another to zoom out. If Seagull #REC2 Ch 2 Zoom connected to servo 12 only one Herelink button could be assigned to channel 12 which means you could zoom in but not out or vis versa. The LUA script overcomes this limitation.

Except for Zoom the Herelink buttons are set to Toggle. The toggle settings are either High (true) when the pwm >= 1501 or Low (false) when the pwm < 1500. The script monitors the pwm of the channels and when they change from High to low or Low to High then an action is triggered. As an example, if Button D is Long Pressed then Timelapse is either started or stopped (if running).

Herelink Zoom buttons use a momentary action and the amount of zoom depends on how long the button is pressed.

The script uses Herelink channels 11 to 16 on Bus 1 and Cube Servo channels 11 to 14 or AUX 3 to AUX 6. Note the Herelink channels are not related to the servo channels.

The script sends message to the ground station when an action triggered.

**Seagull #REC2 Setup**

Use the Seagull-REC2-Config Tool to set PWM or SBUS as per the manual.

SBUS

The #REC2 SBUS can be connected to the CUBE via the SBUSo pins. The rear pin is the signal pin or white wire.   
Set the Mission Planner parameter BRD\_SBUS\_OUT = 1.

#REC2 SBUS Channels  
Set #REC2 Ch1 to SBUS CH11  
Set #REC2 Ch2 to SBUS CH12  
Set #REC2 Ch3 to SBUS CH13  
Set #REC2 Ch4 to SBUS CH14

PWM

Connect #REC2 Ch1 wire to Cube AUX 3 (CH11)  
Connect #REC2 Ch2 wire to Cube AUX 4 (CH12)  
Connect #REC2 Ch3 wire to Cube AUX 5 (CH13)  
Connect #REC2 Ch4 wire to Cube AUX 6 (CH14)

USB Power Supply

To use the #REC2 to power the camera via the servo pins or SBUSo pins, the servo bus needs to be powered. (5 Volts suggested?)

Sony Cameras set ‘USB Power Supply’ to ON

A small power plug symbol will appear beside the battery icon when the camera is being powered via the #REC2

**Mission Planner Parameter Settings**

Set SCR\_ENABLE to 1. This enables LUA scripts

Adjusted SCR\_HEAP\_SIZE  to increase or decrease the amount of memory available for scripts. 150,000 works?

Set the following Values

SERVO11\_FUNCTION Value to 94  
SERVO12\_FUNCTION Value to 95  
SERVO13\_FUNCTION Value to 96  
SERVO14\_FUNCTION Value to 97

Use MAVFtp to copy the LUA script to the SD Card scripts folder.

HereLink Button Setup

REC, Cam Long Press, Toggle, Default Value 1100, Active Value 2000, Ch 11, Bus 1  
Zoom Out, B Short Press, Momentary, Default Value 1100, Active Value 2000, Ch 12, Bus 1  
Zoom In, C Short Press, Momentary, Default Value 1100, Active Value 2000, Ch 13, Bus 1   
Manual Photo, Cam Short Press, Toggle, Default Value 1100, Active Value 2000, Ch 14, Bus 1  
On/Off, D Short Press, Toggle, Default Value 1100, Active Value 2000, Ch 15, Bus 1  
Timelapse, D Long Press, Toggle, Default Value 1100, Active Value 2000, Ch 16, Bus 1

On/Off Function

On some Sony camera models, the On/Off function will not turn the camera back on. For example, soft ON models like HX series it works, but on QX it doesn't turn the camera it back ON. The RX100 works OK but not the A6300. If the camera isn’t compatible then delete the Herelink On/Off, D Short Press button setting and use normal camera on/off.

## HereLink Channels Seagull #REC2 Summary

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Device** | **Neutral** | **Trigger** | **Cube Ch** | **Cube AUX Ch** | **Servo** | **Script** | **Script Code** | **HereLink**  **Button** | **HereLink**  **Acton** | **HereLink**  **M/T** | **Herelink Default Value** | **Herelink Active Value** | **HereLink**  **Channel** | **HereLink**  **Bus** |
| Seagull Ch 1 Shutter |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Seagull Ch 1 REC | 1500 | 1800 | 11 | 3 | 11 | 1 | 94 | CAM | Long Press | T | 1100 | 2000 | 11 | 1 |
| Seagull Ch 2 Zoom Out | 1500 |  | 12 | 4 | 12 |  | 95 | B | Short Press | M | 1100 | 2000 | 12 | 1 |
| Seagull Ch 2 Zoom IN | 1500 |  | 12 | 4 | 12 |  | 95 | C | Short Press | M | 1100 | 2000 | 13 | 1 |
| Seagull Ch 3  Man Photo | 1175 | F 1500  S 1800 | 13 | 5 | 13 | 2 | 96 | CAM | Short Press | T | 1100 | 2000 | 14 | 1 |
| Seagull Ch 4  On/Off | 1500 | 1800 | 14 | 6 | 14 | 4 | 97 | D | Short Press | T | 1100 | 2000 | 15 | 1 |
| Seagull Ch 4  TimeLapse | 1500 | 1175 | 14 | 6 | 14 |  |  | D | Long Press | T | 1100 | 2000 | 16 | 1 |