Seagull #HUB - Manual

General information

Please read this manual thoroughly before connecting and configuring Seagull #HUB

CAUTION: Do not exceed the allowed maximum voltage input to the unit.

Seagull #HUB is designed to be able to control up to 8 units whether they are servos, Seagull camera triggers or cameras that utilizes control via PWM - like Flir thermal cameras and others.

#HUB gives you power to select control of when and how your selected PWM value is outputted. Also giving you an option of timelapse and timelapse looping, meaning that by triggering once you can loop the same sequence multiple times, which all of this is configured by the user.

Seagull #HUB features:

8 PWM channels (4 fully customizable PWM output sequences per channel, up to 32 output scenarios in total)

Timelapse option (loop the desired signal value with chosen interval and number of loops)

Sweep option (sweep between MIN/MAX values with adjustable speed)

Configuring your Transmitter

Setting up Seagull #HUB is straight forward !
Simply select the channel that the device is plugged into and trim the LOW/HIGH values for that channel, until the desired modes are met – refer to the table below:

Channel	State / Mode	Value	Range
1, 2	Neutral	1500 µS	1400 <> 1600 µS
1, 2	Mode 1	1100 µS	1000 <> 1200 µS
1, 2	Mode 2	1300 µS	1200 <> 1400 µS
1, 2	Mode 3	1700 µS	1600 <> 1800 µS
1, 2	Mode 4	1900 µS	1800 <> 2000 µS
Master	Master Mode	User defined µS	User defined -100 <> User defined +100 µS

SD Card config file

Seagull #HUB features a micro SD card for configuring the units' output values and other parameters.

ATTENTION: The micro SD card has to be formatted in either FAT-16 or FAT-32 format in order for #HUB to be able to recognize it.

The micro SD card will contain 8 configuration files, one for each of the output channels.
Every output channel file will contain the following standard configuration layout:

```
------ IN ------

Enable :1
Neutral :1500
Master :0

Sweep Enable :0
Sweep MIN :1000
Sweep MAX :2000
Sweep SPD :1

------ OUT -----

# M1 #
POD :0
PWM :1200
DUR :1
T-L :0
T-DUR :0

# M2 #
POD :0
PWM :1400
DUR :1
T-L :0
T-DUR :0

# M3 #
POD :0
PWM :1600
DUR :1
T-L :0
T-DUR :0

# M4 #
POD :0
PWM :1800
DUR :1
T-L :0
T-DUR :0
```

NOTE: If one of more of the files are accidentally deleted #HUB will generate new file(s) with standard format and settings
CAUTION: Always perform a "Safe Eject" of the micro SD card from your PC/Mac to avoid data corruption on the card !

Output*.txt files

The CH*RC*.txt files are automatically generated when #HUB is powered on for the first time, if a correctly formatted micro SD card is present.
If the files are present on the micro SD card when #HUB is powered on, the parameters will be read from the files and #HUB will be configured correspondingly.

If CH*RC*.txt file(s) become corrupt or you accidentally delete one or more, don't worry - #HUB will generate the file(s) with default values if the specific file is not found on the card a power on.

Explanation of functionality and parameters/settings

Enable – enable or disable the following output channel, 1 will enable and 0 will disable the channel.

Neutral – neutral value to be outputted on the channel when not in use or after an output command has been triggered. (Note: if set to 0, the OUTPUT channel will keep the last PWM value triggered/outputted)

Master – PWM value desired for a master trigger mode activation etc. if written 1800, the master trigger mode will be entered once there is a signal of 1800 uS present on the Master INPUT of the #HUB. Please note when using the master mode trigger it will execute #MODE 1# settings that are set on the output configuration file.

Sweep Enable – enable or disable the sweep mode, 1 will enable and 0 will disable the sweep mode. (Note: when sweep is enable on the output channel other functionality and trigger modes are disable on the channel)

Sweep MIN – the minimum point value of the sweeping range. (Note: minimum value to is 550 uS)

Sweep MAX – the maximum point value of the sweeping range. (Note: maximum value is 2400 uS)

Sweep SPD – desired sweeping speed. (Note: maximum speed is dependent on the servo – recommended maximum is 10)

POD – pre-output delay is a delay before the PWM signal is outputted. The value is in measurement of seconds.

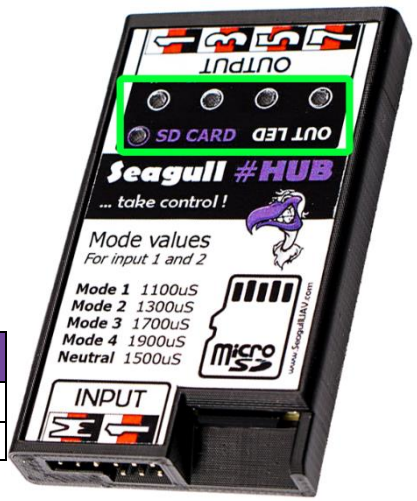
PWM – desired PWM value to be outputted.

DUR – how long the PWM value should be outputted for before returning to Neutral that is set at the top of the output file. The value is in measurement of seconds.

T-L – Timelapse-loops a number of times to execute the following mode etc. if written 10 the same loop will be executed 10 times.

T-DUR – Time interval between each loop execution to output the PWM signal. The value is in measurement of seconds.

Troubleshooting



To determine what Seagull #HUB is currently doing - simply read the output of the "SD CARD" LED and "OUT" LED then match it with the "Action" in the tables below.

The following tables show the readout for the states of the output channels and SD card.

Output channel LED's	Action
Off	Both of the output channels are disabled
Solid on	One or both of the output channels are enabled

SD Card	Action
Blinking	SD Card - is not present
Flashing rapidly	SD Card - initialization error – please check format!
Solid on	SD Card - successfully initialized and ready

Technical specifications

- Dimensions: 69 x 40 x 9,5 mm
- Weight: 26 g (w. SD card)
- Voltage: 4.5 – 15 volts (5 volts recommended – do **NOT** exceed 15 volts !!)
- Input signal: Standard R/C PWM between 1000 – 2000µS