gentWIRE-HERO

The gentWIRE-HERO. Allows control of stills or video capture with compatible GoPro cameras.

The unit connects to the heroBUS connector and switches the camera on and off. To operate properly the camera must be set-up as follows:

one button mode enabled, so the camera starts shooting at power-up,
default mode at power-up, to select video or stills capture at power-up.
Please see the camera operating manual for details on these set-ups.

The unit can be set-up to operate in four modes, see below for details:

1 **STANDARD RC MODE** (blue wire not connected). Plug the 3pin servo connector into a spare channel on a Radio Control system. The camera is switched on or off as the RC transmitter joystick moves from one extreme to the other. After operation; either leave the stick in the extreme position or return to the centre, this allows operation with centre biased / joystick channels or simple switches.

An alternative way to use this mode is to use gentWIRE-HERO to switch-on the camera then immediately switch it off. The camera will work through the power on & off sequence automatically resulting in 3 seconds of video or stills. This can be extended to 6 seconds by connecting the unused blue wire to black or battery –ve.

2 **EXTERNAL LOGIC MODE** Connect a supply from 3 to 5.5volts to black and red, leave the white wire disconnected. Connect the blue wire to a logic output, or a simple switch between blue and black. With the blue wire held high or disconnected the camera will turn off and stay off. With the blue wire low, or shorted to black (-ve) the camera will turn on and stay on.

TRIGGERING MULTIPLE CAMERAS
GoPro provide accessories for doing this over a short distance, but you may find these modes of interest

3 **MULTIPLE RC MODE** Trigger multiple cameras from one RC channel, by connecting multiple gentWIRE-HERO devices to the same channel, exactly as in MODE 1 above.
In this mode the syncronisation of images will drift with time, so we recommend occasionally switching the cameras off then on from the RC transmitter to re-sync them.

4 **INTERVALOMETER MODE**, is used to syncronise any number of cameras taking repeated stills. This mode does not use RC.
The cameras will naturally drift out of sync, so this configuration cycles the power for a few seconds every 2 minutes to maintain syncronisation. Each camera needs a gentWIRE-HERO, and is wired up:
all red and all black to a 3 to 5.5volt power supply.
all blue wires connected together.
all white wires not connected.
Two switches are required:
Power on /off to all gentWIRE-HEROs via common black and red wires.
Start / Stop image capture by connecting **only one** white wire to ground.

Specification

Supply Voltage	3 to 5.5V (absolute maximum voltage, 6.0V)
Supply Current	Maximum 5mA pulse when switching camera, typically 0.5mA otherwise
Servo Pulses	>=1.8mS camera switched on 1.3 and 1.8mS, camera stays in last state <=1.3mS camera switches off. Pulses should be less than supply V + 0.7V.
Weight	10 grams (includes connectors & 300mm wire)

Diagnostics
Use a servo on the RC channel output and make sure that you are getting a full 90° movement for the stick extremes. Make sure the trim on the transmitter is set correctly. Remember switching happens at RC joy-stick extremes, returning the stick to the centre position does nothing.