

TL-MultiCam Pro

Instruction manual

Intervalometer	Long exposure	Shutter trigger	Video trigger				
Cable	Canon	Konica	Nikon	Olympus	Pentax	Samsung	Sony

SteveMRI TL-MultiCam Pro
Intervalometer / Long exposure / Shutter + Video clip triggering

○

○

○

○

●

●

●

●

On

Off

Dim

M/Trig

PR ○ ○ PH

● ● ● Intervalometer
 ● ● ● Long exposure
 ● ● ● Shutter trigger
 ● ● ● Video trigger

Intervalometer

● ● ● Trigger
 ● ● ● Delay running

Long exposure

● ● ● Start trigger
 ● ● ● Exposing
 ● ● ● End trigger
 ● ● ● Camera recovery

External shutter triggering

● ● ● Trigger
 ● ● ● Lockout
 ● ● ● Ready

Video clip triggering

● ● ● Trigger
 ● ● ● Recording
 ● ● ● End trigger
 ● ● ● Lockout
 ● ● ● Ready

PR HR ○ ○ **Setup**

● ● ● Drive
 ● ● ● Read delay time
 ● ● ● Set delay time
 ● ● ● Extra settings

○ ○ - + **Drive**

● ● ● Cable
 ● ● ● Canon1
 ● ● ● Canon2
 ● ● ● Konica Minolta
 ● ● ● Nikon
 ● ● ● Olympus
 ● ● ● Pentax
 ● ● ● Samsung
 ● ● ● Sony

○ H M S **Time**

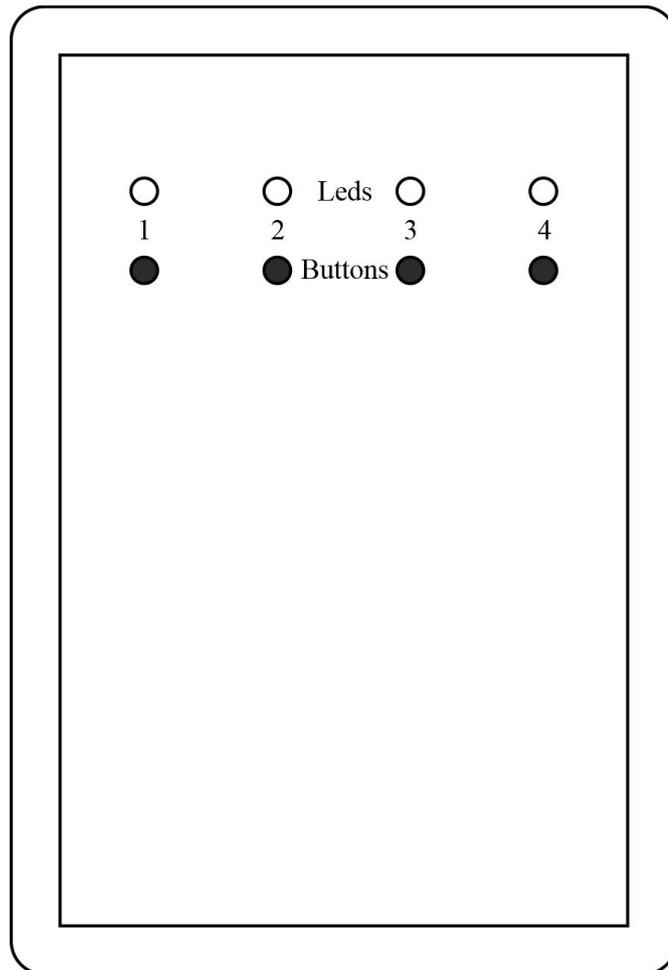
○ Ext D2 D2 **Extra settings**
Out Read Set



PR = Press & release
 PH = Press & hold
 HR = Hold & release

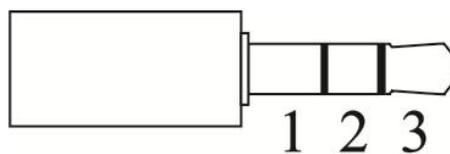
TL-MultiCam Pro
www.stevemri.no-ip.co.uk

External I/O



LED and Button numbering

IR external output 3.5mm plug



2 = IR LED Positive
3 = IR LED Negative

Batteries

The remote uses 3 AAA batteries.
 You can also use rechargeable batteries.

Remove the two screws from the back of the remote, then remove the back cover.
 Make sure you fit the batteries in the right orientation.

Negative to the sprig clips in the holder.

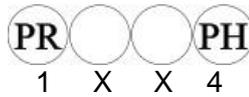
Press and release button 1 to test.

If all is well. Replace the back cover and screws.

TL-MultiCam Pro panel label

The label also serves as a handy quick guide.
The four horizontal circles represents the four black push buttons on the remote.

Mode



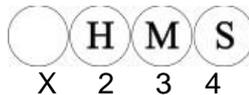
Push and hold button 4
Push and release button 1

Setup



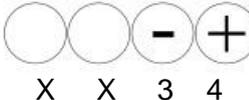
Push and hold button 2
Push and release button 1
Then release button 2 to select.

Time



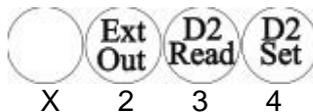
Push and release when reading time.
Push and hold, Count, Then release when setting time.

Drive



Push and release button 3 to move up the drive list.
Push and release button 4 to move down the drive list.

Extra settings



Push and release button 2 to toggle the external pluse on or off.
Push and release button 3 to read the delay2 time.
Push and hold, Count, Then release to set delay2 time.

The red, green and black dots represent the four red/green Bi coloured leds.

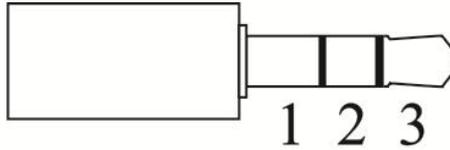
Leds 1 2 3 4



e.g. Led1 Green - Led2 Green - led3 Black - Led4 Black = Intervalometer mode.
Led1 Green - Led2 Red - led3 Black - Led4 Black = Long exposure mode.

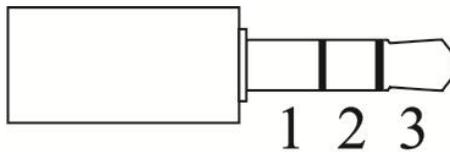
External I/O port

External
I/O



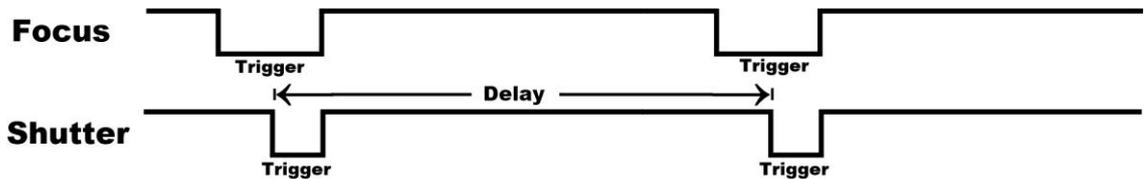
- 1 = Ground
- 2 = Pulse out
- 3 = Trigger

Camera cable output 3.5mm plug



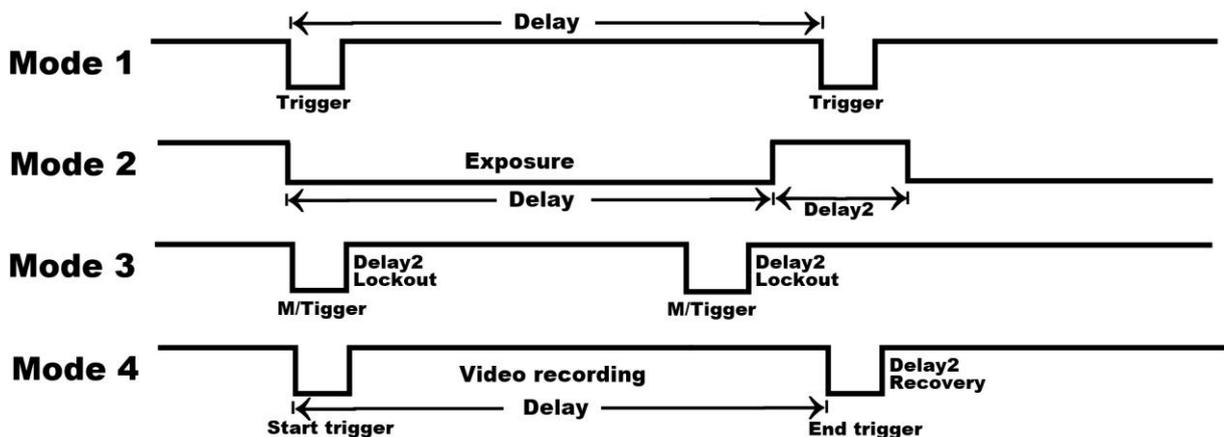
- 1 = Ground
- 2 = Focus
- 3 = Shutter

Cable drive output



A pre focus trigger will be set before the shutter trigger when using mode 1 with a delay time greater than 1 second.

Mode drive and delay usage



Cable triggered video clips will be dependent on camera model and manufacturer

The remote has four modes of operation

Mode 1 Intervalometer

You can programme a time delay of between 1 second to 24 hours 59 minutes 59 seconds. The remote will trigger the camera by cable or by Infrared repeatedly using the delay time set.

Mode 2 Long exposure

You can set an exposure time from 1 second to 24 hours 59 minutes 59 seconds.
Set your camera to bulb mode and select cable or infrared trigger.
The remote will now trigger your camera and exposure length. A user programmable delay2 can be set from 1 second to 99 seconds at the end of the exposure to allow the camera to return to a ready state for the next exposure. Ideal for catching meteors, shooting stars and other objects in the night sky and all automatically.

Mode 3 Single shutter trigger

You can remotely trigger the camera with a button on the remote or via an external event feed in to the 3.5mm socket on the bottom of the remote e.g. PIR, Light beam, Remote switch.
A lockout delay2 can be set so the remote ignores any further triggers.
This can be set from 1 second up to 99 seconds.

Mode 4 video clip record

Cable triggered video clips will be dependent on camera model and manufacturer

You can set a video clip length from 1 second up to 24 hours 59 minutes 59 seconds. This can then be triggered by a button on the remote or via an external event feed in to the 3.5mm socket on the bottom of the remote eg PIR, Light beam, Remote switch.
Delay2 can be set from 1 second to 99 seconds at the end of the clip to allow the camera to recover to a ready state for the next clip.

Switching the remote on

Press and release button 1 the remote will now indicate the currently selected mode then all four leds will flash red 8 times indicating an 8 second count down (10 seconds from releasing button 1) the remote will then enter the current mode of operation.

Switching the remote off

While the remote is running in one of its four modes.
Press and hold button 2 until all four red leds turn off.

While the remote is running

Pressing button 3 will cycle though 5 levels of led brightness.
Pressing button 4 will send a shutter trigger to the camera (only in modes 1,3 and 4).

Select operating mode

Press and hold button 4 then press and release button 1 to cycle through the four modes.
Led1 and led2 will now indicate the mode of operation.

Mode	Led1	Led2
Intervalometer	●	●
Long exposure	●	●
Single shutter trigger	●	●
Video clip record	●	●

Setup menu

Press and hold button 2 then press and release button 1.
Led 1,2,3 and 4 will now turn green one at a time in sequence.

To select the setup item required release button 2 while the corresponding led is green.

Setup	Led1	Led2	Led3	Led4
Drive	●	●	●	●
Read delay	●	●	●	●
Set delay	●	●	●	●
Extra settings	●	●	●	●

If you don't make a selection by the end of the sequence the remote will time out and switch off indicated by all 4 leds turning red and fading away.

Select "Drive"

Press and hold button 2 then press and release button 1 then release button 2 while led1 is green to select "Drive".
LEDs 1,2,3 and 4 will now indicate the camera manufacturer currently selected.

Set camera drive output

Camera drive	Led1	Led2	Led3	Led4
Cable	●	●	●	●
Canon1	●	●	●	●
Canon2	●	●	●	●
Konica Minolta	●	●	●	●
Nikon	●	●	●	●
Olympus	●	●	●	●
Pentax	●	●	●	●
Samsung	●	●	●	●
Sony	●	●	●	●

Press and release button 4 (+) to move down the list.
Press and release button 3 (-) to move up the list.

This is a binary representation of the selected Camera drive value
E.g. 1 = cable, 2 = Canon1, 3 = Canon2, up to 9 = Sony.

Select "Read delay"

Press and hold button 2 then press and release button 1 then release button 2 while led2 is green to select "Read delay".

Read delay = Read out the main delay time.
This is the delay time used for the Intervalometer delay, Long exposure time, Shutter trigger lockout time and Video trigger clip length.
This can be set from 1 second up to 24 hours 59 minutes 59 seconds.

Leds 2,3 and 4 will now flash and indicate green for a non zero value stored and red for a zero value stored.

Led2 = Hours / Led3 = Minutes / Led4 = Seconds

If a non zero value is stored in the Hour, Minutes or Seconds memory the relevant led will be green.

Press and release
button2 to display hours stored, button3 to display minutes stored, button4 to display seconds.

If a non zero value is stored its value will be displayed

A red flash indicates a value of 10 and a green flash indicates a value of 1.

E.g. If you have a delay of 5 seconds stored pressing button4 will make led4 flash green 5 times.

E.g. If you have a delay of 17 seconds stored pressing button4 will make led4 flash red once then green 7 times.

E.g. If you have a delay of 5 minutes 35 seconds stored pressing button3 will make led3 flash red 5 times then pressing button4 will make led4 flash red 3 times then flash green 5 times

E.g. If you have a delay of 1 hour stored pressing button2 will make led2 flash green once.

The remote will time out and switch off 10 seconds after the last displayed time or key pressed.
All 4 leds will turn red and fade out.

Select "Set delay"

Press and hold button 2 then press and release button 1 then
release button 2 while led3 is green to select "Set delay".

Set delay = Set the main delay time.

This is the delay time used for the Intervalometer delay, Long exposure time,
Shutter trigger lockout time and Video trigger clip length.

This can be set from 1 second up to 24 hours 59 minutes 59 seconds.

Leds 2,3 and 4 will now indicate red for a zero value stored and green for a non zero value stored.

Press and releasing buttons 2,3 or 4 will now clear the value stored in hours, minutes, seconds
memories the corresponding led will flash red to indicate this.

To set a value press and hold the relevant button.

Press and hold button 4 to set a seconds value, led4 will flash red indicating the current value has
been cleared, the led will now flash green release button 4 after counting off the required value.

e.g. to set 15 seconds press and hold button 4, led4 will flash red then release button 4 after counting
15 green flashes. You can now set minutes (button 3) / hours (button 2) in the same way.
If no other buttons are pressed the remote will store the new time values and then automatically turn
off after 8 seconds.

The new values are now stored.

Hours, Minutes and seconds Min/Max values

Hours = Button 2 + led2 Min/Max value 0/24
Minutes = Button 3 + led3 Min/Max value 0/59
Seconds = Button 4 + led 4 Min/Max value 1/59
Min/Max value 0/59 if a non 0 value is stored in hours or minutes.

Select "Extra settings"

Press and hold button 2 then press and release button 1 then release button 2 while led4 is green to select "Extra settings".

Leds 2,3 and 4 will now show. Led 1 will always be off

External output pulse	Led1	Led2	Led3	Led4
Disabled	●	●	●	●
Enabled	●	●	●	●

Press and release button 2 to toggle external pulse on/off.
(For use in future accessories)

Read delay2 stored value

Press and release button 3 to read delay2 time set.
Led3 will flash a number of times red, green or a mix of both.
Red flash = multiple of 10s
Green = 1s

e.g if delay2 = 35 seconds led3 will flash red three times then green five times.

Set a new delay2 value

Press and hold button 4 then count the green flashes to store a new delay2 value the previous value will be cleared.

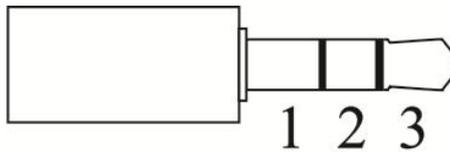
Delay2 can be set from 1 second to 99 seconds.

The remote will now time out and turn off

Delay2 is used in

Mode2 Long exposure / This is to allow the camera to return to a ready state for the next exposure.
Mode3 Shutter trigger / This is to allow the remote to ignore any further triggers during delay2.
Mode4 Video clip / This is to allow the camera to return to a ready state for the next video clip.

External I/O

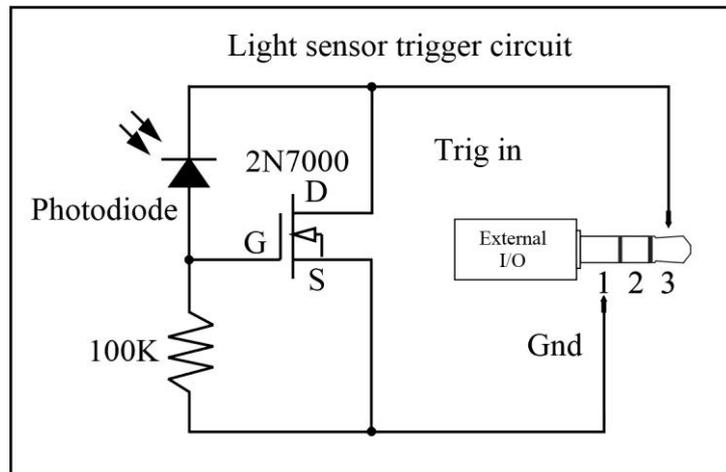


- 1 = Ground**
- 2 = Shutter trigger pulse output**
- 3 = Remote shutter trigger input**

Trigger in

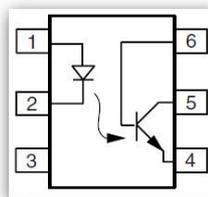
Fit a push to make switch between 1 and 3 to remotely trigger the remote. You can trigger the remote in Shutter trigger and Video trigger modes and force extra camera triggers in Intervalometer mode with a delay greater than 4 seconds.

Example external circuit diagram to trigger the MultiCam when a light is turned on



Trigger out

(For use in future accessories)



IC5 2N25

Pin 4 of opto connected to 1 of 3.5mm I/O socket
Pin 5 of opto connected to 2 of 3.5mm I/O socket

A 150ms pulse is available between (ground 1) and output of the (optocoupler 2). This output is normally high impedance and goes low during the pulse duration. Max sink current 50ma.

Intervalometer mode will pulse only on the delay driven trigger.
No pulse on manual forced triggers.

Long exposure mode will pulse only on start of exposure.

Shutter trigger mode will pulse on manual triggers.

Video trigger mode will pulse only on start of video clip.

This output can be enabled / disabled in the extra settings menu.

Button 2 will toggle this output when in extra settings.
Enabled when led 2 is green.
Disabled when led 2 red.

Mode compatibility

Camera drive	Intervalometer	Long exposure	Shutter	Video
Cable	✓	✓	✓	✓
Canon1	✓	✓	✓	✓
Canon2	✓	✓	✓	✓
Konica-Minolta	✓	✓	✓	✓
Nikon	✓	✓	✓	✗
Olympus	✓	✓	✓	✓
Pentax	✓	✓	✓	✗
Samsung	✓	✓	✓	✓
Sony	✓	✓	✓	✓

✗ Video recording cannot be triggered by Infrared remote control on Nikon and Pentax cameras.

Cable triggered video clips will be dependent on camera model and manufacturer

Infrared drive camera compatibility

Canon1 - Compatible with cameras that use the RC6 infrared remote.

EOS 450D(Rebel XSi), EOS 400D(Rebel XTi), EOS 350D(Rebel XT), EOS 300D, EOS 30/33/30V, EOS 50/55, EOS kissIII, EOS kissIIIIL, EOS 100, EOS 10, EOS 300V, EOS 300X, 300VQD, EOS IX, IXUS jr/II/III, SURESHOT, SURESHOT, ELAN7, Rebel T1 Date, Rebel T2 Date, Z180u, Z155, 120, 370Z, 370Z

Canon2 - Compatible with cameras that use the WL-DC100 infrared remote.

PowerShot Pro90, Pro 1, G1, G2, G3, G5, G6, S1 IS, S60 and S70

Konica Minolta - Compatible with cameras that use the RC3 infrared remote.

DiMAGE S304 S404 S414 F300

Nikon - Compatible with cameras that use the ML-L3 infrared remote.

D7000, D5200, D5100, D5000, D3000, D90, D80, D70S, D70, D50, D60, D40,
Nikon 1 J1 Nikon 1 V1, Nikon 1 J2, Coolpix P7100, P7000

Olympus - Compatible with cameras that use the RM-2 infrared remote.

C8080, C750, C740, C730, C720, C60, C5060, C5050, C5000, C50, C4000, C4040, C40,
C3040, C3030, C3000, C2100, C2040, C2020, C2000, C220, E10, E20, E100RS, E420, E500, E620

Pentax - Compatible with cameras that use the E and F infrared remote controls.

K-01, K100D, K110D, K200D, K10D, K20D *istDS2, *istDS, *istDL2, *istDL, *istD

Samsung - Compatible with cameras that use the SRC-A1/A3/A5 infrared remotes.

EX1, IT100, NV7, OPS, NV8, NV10, NV11, NV15, NV20, NV24HD, NV30, NV40, NV100HD,
WB500, WB550, WB1000

Sony - Compatible with cameras that use the RMT-DSLR1 and RMT-DSLR2 infrared remotes.

A6000, NEX 7, NEX 6, NEX 5, NEX 5N, NEX 5R A77, A900, A850, A700, A580, A560, A550,
A500 A450, A390, A380, A330, A290, A230, A99, A77II, A65, A57, A7, A7

Long exposure compatibility

Cameras must be infrared enabled with bulb or time drive facility, all noise reduction modes must be disabled for automated use of the remote. **Nikon** cameras will require the auto off infrared receiver to be set to 15 minutes in the cameras setup menu.

Pentax cameras will require the remote control mode to be set to mode 2, start on first trigger end on second trigger in the cameras setup menu.

When using long exposure mode by infrared remote make sure your camera starts the exposure with the double green flash and ends with the double red flash.

Direct drive (Test mode)

Press and hold button 3 then press and release button 1.
Leds 2, 3 and 4 will flash green.

This will allow you direct access to the Infra red codes stored in the remote.

Pressing button 2 will now send the “start video” code.
Pressing button 3 will now send the “stop video” code.
Pressing button 4 will now send the “shutter trigger” code.

You can also use the external I/O as the trigger.
The last button used on the remote will be linked to the external I/O.

A heart beat indicator will now flash every 15 seconds to remind you that you are in this mode.

It will also indicate the last button / code used.

Leds 2,3 and 4 will flash red/green the last use buttons led will be green the other two red.
The remote will not auto switch off in this mode.

To turn the remote off press and release button 1 then wait for the first shutter trigger then press and hold button 2 to turn the remote off as usual.

Direct drive equivalent Infra red remote code

Camera drive	Start video	Stop video	Shutter
Cable	Wired trigger	Wired trigger	Wired trigger
Canon1	S2 trigger	S2 trigger	Shutter trigger
Canon2	Shutter trigger	Shutter trigger	Shutter trigger
Konica-Minolta	Shutter trigger	Shutter trigger	Shutter trigger
Nikon	Shutter trigger*	Shutter trigger*	Shutter trigger
Olympus	Shutter trigger	Shutter trigger	Shutter trigger
Pentax	Shutter trigger*	Shutter trigger*	Shutter trigger
Samsung	Shutter trigger	Shutter trigger	Shutter trigger
Sony	Video trigger	Video trigger	Shutter trigger

***Nikon / Pentax cameras video can not be triggered with the Infra red code.**

