

Stop Motion Pro™

Stop Motion Pro v6 Remote Control Interface **February 1, 2008**

Summary

Stop Motion Pro has a remote control interface that provides the following functionality:

- allows control of Stop Motion Pro from external hardware
- outputs the current state of Stop Motion Pro.

To maximise the interface possibilities, and reduce external complexity, the parallel port on the computer is used as the communication device.

Four general purpose inputs can be allocated to specific functions within Stop Motion Pro.

Outputs provide feedback that the input command has been received and actioned, monitor the capture process and display the current exposure.

This document assumes the developer has a good technical background in hardware interfacing to the PC. Stop Motion Pro can provide consulting in this area. Please email admin@stopmotionpro.com for assistance.

Stop Motion Pro™

Document version: January 30, 2008

Technical description

The Stop Motion Pro Remote Interface uses the parallel port on the computer.

The parallel port is used in 'standard mode' so the protocol will work with computers that have EPP and ECP parallel port capability.

Input control

In the normal state all bits are set to high. To set an input, set that pin to low. Stop Motion Pro will only respond to a high to low transition.

After an input transition is received by Stop Motion Pro, it sets the Actioned flag. (see outputs section below)

The following table gives the input to pin translation.

SMP Input	Parallel port pin
1	15
2	13
3	12
4	10
Reset actioned and capture flags	11

Stop Motion Pro™

Outputs

In the normal state all bits are set to low and set high for the specific output.

The following table gives the output to pin translation.

SMP Output	Parallel port pin
Input actioned	16
Capture pulse	14
Capture flag	17
High res capture will commence after Preroll	9
Current Exposure	2, 3, 4

These outputs occur on the following conditions:

Input actioned:	SMP has identified a high to low transition on one of the inputs. This is set on a software or hardware input. A high indicates a remote trigger was received.
Capture pulse	The capture process is being performed by SMP. A high indicates the capture is in process. Therefore depending on the capture and computer speed, the width of this pulse will vary.
Capture flag	The capture process has been started by SMP. A high indicates the capture has begun. This output remains high until it has been reset. This output can be reset by hardware control.
High res capture will commence after Preroll	The high res capture will commence after the user set preroll time has expired. A high indicates the preroll time will begin. A high indicates the capture is in process. Therefore depending on the capture and computer speed, the width of this pulse will vary.
Current Exposure	The current exposure is indicated in binary. Therefore if it is the first exposure pin 2 will be high. If is the third exposure, pin 2 and pin 3 will be high.

Stop Motion Pro™

