

ContainerMode

December 16, 2011

1 *settings.txt*

Descriptions of variables in settings.txt file.

automatic: 0 - ignore the external signal 1 - Don't capture until external counter starts increasing. Capture for duration of increasing counter. Wait *autosecs* seconds, then stop, increment filename and wait until counter starts increasing again. 2 - Don't capture until external counter starts increasing. Stops capturing when it stops increasing.

Example:

```
name: exciting_experiment
suffix: interesting_parameter
seriesnumber: 1
experimentnumber: 1
rate: 25
resolution: 1024
shuttertime: 500
average: 0
averagestart: -1
averageend: -1
containerheight: 64
numberofprofiles: 0
measurearea: 0
automatic: 0
autosecs: 1
ledcom: 0;
note: 'Details that you would forget otherwise'
```

Table 1: Parameters description and units

Parameter	range	units	description
name	¡255 chars	alphanumeric	Experiment Name
suffix	¡255 chars	alphanumeric	Measurement Type
seriesnumber	00 - 99	Integer	Experiment Series Number
experimentnumber	00 - 99	Integer	Subexperiment Number
rate	< 1000	s^{-1} ($\in \mathbb{N}$)	Number of profiles per second
resolution	2^n $6 \leq n \leq 10$	Pixels	Number of points per profile
shuttertime	depends on rate	$10\mu s$	Exposure time
average	1 or 0	logical	Whether or not to average each profile
averagestart	0 - averageend	Integer	Point from which to average from
averageend	averagestart - resolution	Integer	Point from which to average to
containerheight	?	Integer	Number of profiles for laser to transmit to computer in packet (leave to default value)
numberofprofiles	≥ 0	Integer	How many profiles to capture ($0 = \infty$)
measurearea	0 - 95	Integer	Which area to measure - consult manual
automatic	0,1,2	logical	See below
autosecs	$0 - \infty$	integer	Time after signals stop to start capturing to another file and wait for another trigger
ledcom	0 - 1	logical	Turn on an LED connected to COM2 when autosecs have expired
note	$\leq 256(?)$ chars long	String	Note to put in header

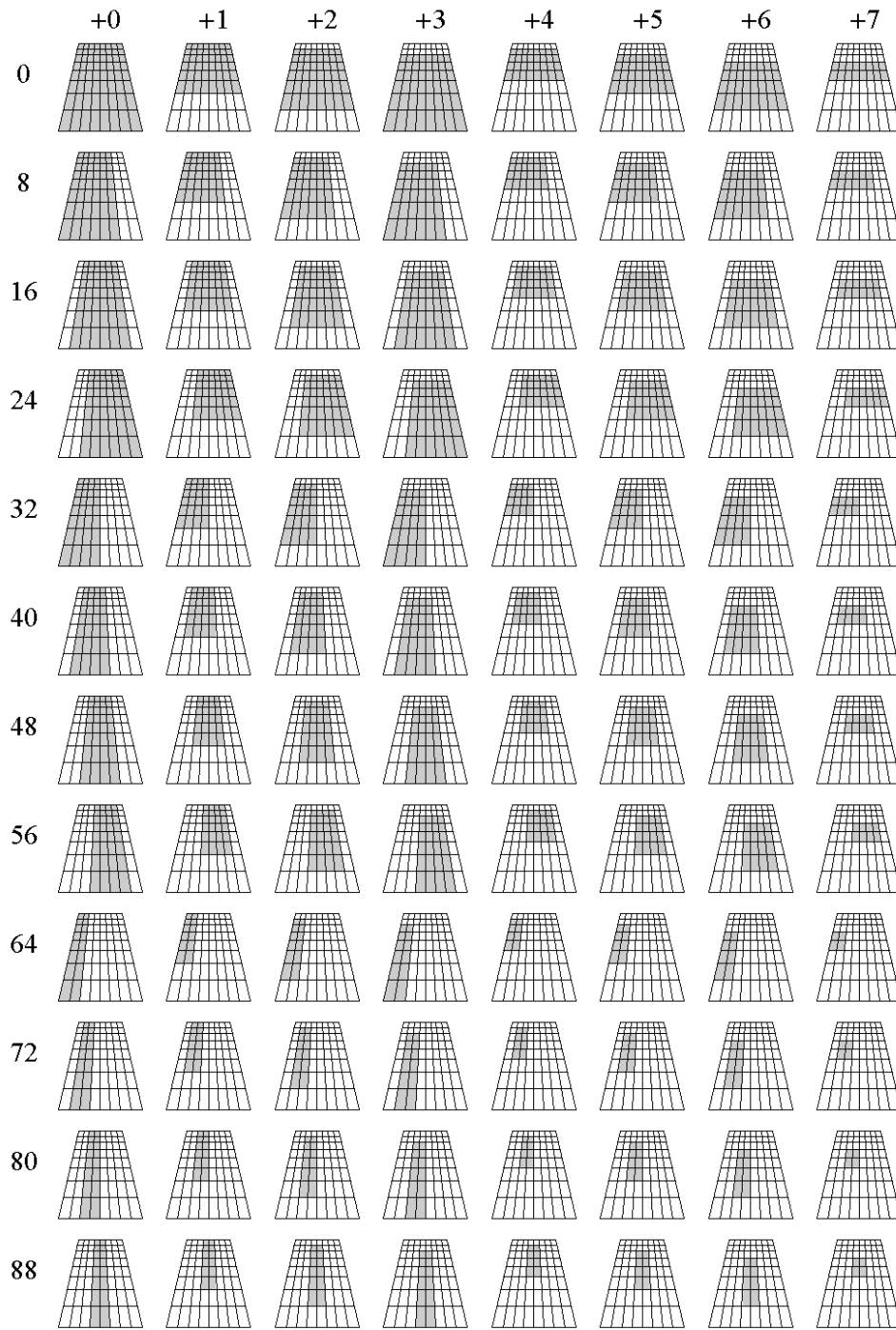


Figure 1: Measuring Fields' codes

Table 2: Command line switches

Switch	Parameter name
-nm	name
-sf	suffix
-if	input file (defaults to settings.txt)
-sn	seriesnumber
-en	experimentnumber
-rate	rate
-res	resolution
-st	shuttertime
-sa	shutter auto
-ap	average
-as	average start
-ae	average end
-ch	containerheight
-np	numberofprofiles
-no	note
-ma	measurearea
-am	automatic
-aus	autosecs
-led	led com
-h	print help
