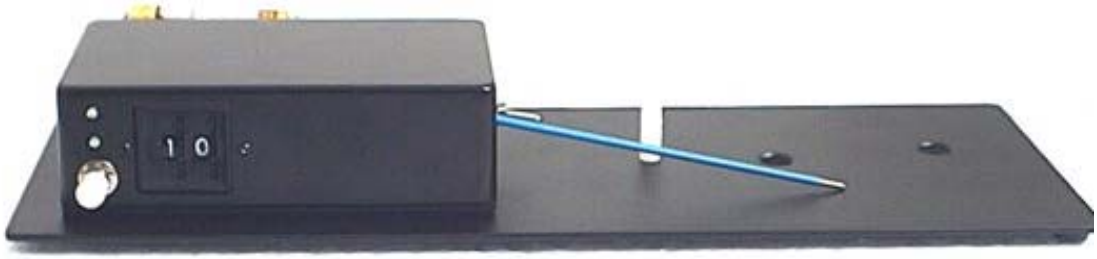
TimeFlow™ Intervalometer



Operating Instructions

Manufactured by
NCS Products, New York, New York
http://www.intervalometers.com | ncs2009@ncspro.com

Chart for specifying ***Interval*** **(TIV-300)**	
Thumbwheel Setting	**Interval Between Exposures**
1-49	1 to 49 seconds in 1 seconds increments
60-70	2/3 second to 4 seconds in 1/3 second increments
71-89	1 to 19 minutes in 1 minute increments

Chart for programming ***Frames*** **(TIV-300)**	
Thumbwheel Setting	**Frames to Expose**
1-50	1 to 50 seconds of film (24-1200 frames) in 1 second (24 frame) increments
51-89	1 to 39 quarter seconds of film (6 to 234 frames) in quarter second (6 frame) increments

Special Functions **(TIV-300)**	
Thumbwheel Setting	**Setting affected**
50	Time Delay, 15 minute increments
51	Interval, in 1/3 second increments
52	Interval, in second increments
53	Interval, in minute increments
54	Time Exposure, in ½ second increments
55	Time Exposure, in second increments
56	Time Exposure, in minute increments
57	Burst, number of frames

Chart for specifying ***Interval*** **(TIV-140)**	
Thumbwheel Setting	**Interval Between Exposures**
1-15	1 to 15 seconds in 1 seconds increments

Chart for programming ***Frames*** **(TIV-140)**	
Thumbwheel Setting	**Frames to Expose**
1-50	1 to 50 seconds of film (24-1200 frames) in 1 second (24 frame) increments
51-89	1 to 39 quarter seconds of film (6 to 234 frames) in quarter second (6 frame) increments

Special Functions **(TIV-140)**	
Thumbwheel Setting	**Setting affected**
50	Normal Exposure
51	1 second exposure
52	½ second exposure

Operating your *TimeFlow*™ Intervalometer

Introduction

Congratulations on your purchase of a *TimeFlow*™ Intervalometer (TIV)! On the outside, your TIV has a durable powder-coat finish, two daylight-visible LED indicators, and two easy-to-read thumbwheel switches.

On the inside, your TIV uses the latest in surface-mount and microprocessor technology. The end result of nearly three years of development, your TIV is a rugged, dependable accessory that will allow you to create compelling time lapse footage.

It is suggested that you read this entire document before using your *TimeFlow*™ Intervalometer. The best way to familiarize yourself with the controls and operation of the TIV is to experiment with it while it is not attached to your camera.

This document contains instructions for the use of the TIV models 140B and 300B for the Bolex camera. The chart in red refers to the TIV-140B model. The chart in blue and the chart at the end of the manual are for the TIV-300B.

Controls and Indicators

The *base plate* has two 3/8" holes at one end. It is held between camera and tripod by the center hole. The *pushrod* sticks out the front of the *control box*. The pushrod is threaded into the *actuator*, which is not visible. If you gently push and pull on the pushrod you can hear the gears of the actuator whir.

On one side of the control box are the two *thumbwheels*, the *idle light* (red), the *run light* (green), and the *run/idle pushbutton*. On some TIVs the *idle/run* light is a dual-color light that will light both red and green.

On the other side is the 4AA battery pack. Do not connect a 9V battery to the battery pack snap, or your TIV will be transformed into a fancy paperweight. Do not use any external wall-transformer, as the voltage will be too high and may damage the TIV. On the front of the unit is the on-off switch. Up is on.

The "brain" of the TIV draws so little power that it will keep running from parasitic currents even after the power has been turned off. If you turn the TIV off then on within 5-seconds or so, make sure it goes through the power-on sequence of both lights flashing on. Otherwise, your TIV may not respond properly to input.

If it doesn't go through the flashing lights power-on sequence, turn it off, wait a few more seconds , then turn it back on again.

The batteries will last a very long time. When they need replacing, the TIV will let you know by running sluggishly.

Installation

The base plate of the TIV is held between camera and tripod. The guidepost holds the camera in proper alignment. If your Bolex has a flat base, with *two* 3/8" tripod holes, you can remove the guidepost, and use the included 3/8" bolt to hold the camera and TIV in alignment (after installing the TIV as detailed below, lock the TIV and Bolex in alignment with the bolt through the 3/8" hole at the front of the TIV).

Remove the head from the tripod. Turn the camera over. Turn the TIV over and align the middle hole in the base plate with the threaded hole in the bottom of the camera.

Screw them together with the tripod head. Now you can mount the assembly on top of your tripod.

If the 3/8" screw in your tripod is not long enough, you can either get a longer screw, or, if your tripod head lets you switch to a ¼" screw, try using that with a thread adapter.

Pushrod Coupler Attachment

To attach the pushrod coupler, first remove the side release button on the Bolex (use a small flathead screwdriver).

Attach the coupler to the side release using either the screw you removed or the included 2mm screw.

Make sure the little hole in the coupler faces the nine-o'clock position (toward the back of the camera). Actually, it should be a little bit before nine-o'clock, since the pushrod comes up at an angle. Leave the screw a little loose then tighten it once you see the proper orientation for the hole.

The pushrod will fit into the hole on the nylon post and push it forward to trigger a frame.

Adjusting the Pushrod

The length of the pushrod is pre-adjusted at the factory. However, it will probably need to be adjusted more precisely for your camera. Fortunately, you only have to do this once.

There is a threaded fitting that attaches the pushrod to the actuator. This is hidden inside the control box and can be seen if you gently pull the pushrod.

You will hear the whirring of gears inside the actuator. There are many small nylon gears, so be gentle.

The pushrod can be screwed in and out of this threaded fitting to adjust its length. There is a nut (size 2-56) that locks the pushrod and coupler together so the pushrod doesn't rotate while filming.

To adjust the length, install the TIV and wind the camera. Make sure the nut on the pushrod is loose. Take the pushrod, and position it so it is resting *on top* of the nylon post

Turn on the TIV and set the thumbwheels to 00. The lights will flash in an alternating pattern, indicating that the TIV is in the manual triggering mode. Each time you press the pushbutton the pushrod will pulse outward, then return to the neutral position.

Press the pushbutton.

Adjust the length of the pushrod until the pushrod reaches to the *right* side of the nylon post.

Gently push the pushrod in (or push the nylon post to the right) and insert the pushrod into the hole in the nylon post. Press the pushbutton. Was a frame exposed?

If not, you'll probably have to make the pushrod a bit longer.

If the pushrod is not the correct length the side release might jam and not return to the center. If this happens, free the side release by hand and keep adjusting the pushrod.

For a final test, change the thumbwheel setting to 01. Press **and release** the pushbutton, and the TIV will start exposing frames, one per second. To stop, **press and hold** the pushbutton until both lights come on, then release.

Generally if frames are not being exposed properly it is because the pushrod is too short. Lengthen a turn at a time. Once you get it to the correct length, tighten up the 2-56 nut onto the coupler.

Changing the thumbwheel setting away from 00 takes the TIV out of manual triggering mode places it into idle mode. To change back to manual triggering mode turn the thumbwheels to 00.

Changing the Pushrod Throw

The throw of the pushrod, i.e. how far it moves out when triggering a frame, can be changed if necessary. This generally **will not** be necessary.

When filming with long exposures, the pushrod moves to two distinct locations. First it moves all the way out, to open the shutter, then it backs up a small distance, to hold the shutter open. This backing-up reduces current draw from the battery and helps preserve the actuator.

It is possible that the pushrod will back up too far, and not hold the shutter open on your particular Bolex.

There are two timing values that control the pushrod throw. The first is called *right_time*. It is set to 71. The second is called *right_hold*. It is set to 66. Both can be changed.

When the pushrod is not extended, a timing value of 58 is used.

The value of *right_time* controls how far the pushrod moves out when triggering a frame. Larger numbers means it moves further. The value of *right_hold* controls how far the pushrod is out when holding the shutter open. It only comes into use during time-exposures.

Right_time can be changed to any number between 59 and 80. *Right_hold* can be changed to any number greater than 59 and lower than *right_time*.

To change one or both of these values, turn off the TIV and keep it off for a few minutes. Turn the thumbwheels to 01, and turn on the TIV while holding down the pushbutton. Both lights will start flashing. Turn the thumbwheels to the desired value of *right_time*, and press the pushbutton. Then, change the thumbwheels to the desired value of *right_hold*, and press the pushbutton.

The new values are stored in the TIVs permanent memory, and will be used from now on.

Filming with the TIV-140/300

The TIV-140/300 has two modes, idle and run.

When the TIV is in *idle mode*, no frames are exposed. In *run mode*, the single-frame release is triggered

Switching between these two modes is done by the Run/Idle pushbutton.

When power is first applied, the lights will flash and the TIV will go into idle mode. In idle mode, the idle light will flash every ½ second. This is an indication that the TIV is working correctly and is ready to receive your input.

(Note that if the thumbwheels are set to 99 when power is applied, the TIV-300 will start filming using the contents of Preset 99. Refer to the information on presets toward the end of this document.)

The TIV allows you to program both the number of frames to expose (*frames*) as well as specify the interval between exposures (*interval*). (You can also program *duration* for time exposures, and *burst* for multiple frame exposures, but those are discussed later)

When power is applied to the TIV, *frames* is set to 20 seconds (480 frames of film).

To program *frames*, dial in the seconds of film you wish to expose on the thumbwheels. Refer to the chart at the end of this manual.

Then **press and hold** the pushbutton until both lights flash in an alternating pattern. Release the pushbutton. *Frames* is now set, and the TIV will return to idle mode.

To set the *interval*, refer to the interval chart. For example, if you would like one frame to be exposed every 5 seconds, turn the thumbwheels to 05

To start filming, **press and release** the pushbutton. The idle light will flash each time a frame is exposed. The run light will start flashing on and off.

If you have the I-T lever (or knob) on your Bolex set to "I" you will get fast 1/30th of a second exposures. Flip it over to "T" to get a ¼-second exposure time.

After the programmed number of frames have been exposed, the TIV will automatically return to idle mode.

If you wish to stop the TIV before the programmed number of frames have been exposed, press and hold the pushbutton until both lights come on. Release and the TIV will return to idle mode.

Changing the setting on the thumbwheels while the TIV is filming will have no effect on the *interval*. You must press the pushbutton twice (going to idle mode, then back to run mode) to register the change.

Setting the *Interval* and Filming (TIV-140B)

Turn the thumbwheels to the desired *interval* in seconds, any number from 1-15. Press and release the pushbutton, and the TIV will start exposing frames. To stop filming, press the pushbutton.

Time-Exposures (TIV-140B)

The TIV-140B can hold the shutter open for ½ second or 1 second. You have to set the I-T lever (or knob) on the side of your Bolex to T for long exposures.

To set 1 second exposures, turn the thumbwheels to "51" and press and release the pushbutton. To set 1/2 second exposures, turn the thumbwheels to "52" and press and release the pushbutton.

To return back to instantaneous exposures, turn the thumbwheels to "50" and press and release the pushbutton.

When time-exposures are set, the light will flash green at idle instead of red.

Note that for time exposures, *interval* now refers to the time between exposures.

Time-Exposures (TIV-300B)

Setting the *duration* for time-exposures is a two step process. To set the *duration* in seconds, turn the thumbwheels to 55**. Press and release** the pushbutton. Both lights will start flashing. Then, turn the thumbwheels to the desired exposure length and press the pushbutton once more.

To inform you that *duration* has been programmed, the green *run light* will flash instead of the red *idle light*. Don't be alarmed—your TIV has returned to idle mode. Filming will commence when you press and release the pushbutton.

You can program *duration* in half-seconds, seconds, or minutes. To program half-second increments, turn the thumbwheels to 54 instead of 55. To program minute increments, turn the thumbwheels to 56.

To turn off the time-exposure feature, turn the thumbwheels to 54, 55 or 56 and press the pushbutton twice.

When running in time-exposure mode, *interval* is handled somewhat differently. The *interval* now refers to the length of time from the end of one exposure to the start of the next. For example, if you set *duration* to 5 seconds, and the *interval* to 1 second, the TIV

will hold the shutter open for 5 seconds, delay for 1 second, and then repeat.

Remember to set the I-T switch or lever on your Bolex to T, for time exposures. If the pushrod assembly length is not adjusted correctly (usually if it is too short), the shutter may not be held open properly. Check to make sure the shutter is held open for the duration of the exposure, and if it is not, lengthen the pushrod assembly a turn or two.

To shoot long-duration single-frames, turn the thumbwheels to 00 and press the pushbutton. One frame will be exposed.

Time Delay Mode (TIV-300B)

The TIV-300 allows you to set a delay time before filming. The delay can be from 15 minutes to 1485 minutes (24 hours, 45 minutes).

To use this mode, first program *frames*, *duration* and *burst* to the desired values.

Turn the thumbwheels to 50 and press the pushbutton. Both lights will start flashing. Change the thumbwheels to the number of 15 minute increments you wish to delay.

For example, for a one-hour delay, turn the thumbwheels to 04. For a 20-hour delay, turn the thumbwheels to 80.

Press and release the pushbutton. The lights will flash in a slower alternating pattern. This indicates that the timer is running. You can now turn the thumbwheels to the desired interval.

Whatever interval is set on the thumbwheels at the end of the delay is the interval that will be used for filming.

To exit from delay mode, press and hold the pushbutton until both lights come on. Release the pushbutton and the TIV will be back in idle mode.

Another way to program *Interval* (TIV-300B)

There is another way to tell the TIV the *interval* you wish to use. This method is useful when you are programming the TIVs presets (next topic). It also allows for intervals of up to 99 minutes to be entered.

To program *interval* in seconds, turn the thumbwheels to 52. Press and release the pushbutton. Then, turn the thumbwheels to the desired *interval*, and press and release the pushbutton once more.

You can also program *interval* in 1/3 seconds increments or in minutes, by turning the thumbwheels to 51 or 53 respectively.

For example, if you turn the thumbwheels to 51, press the pushbutton, then turn the thumbwheels to 01 and press the pushbutton, *interval* will be 2/3 of a second. If you turn the thumbwheels to 02, *interval* will be 1 second, if you turn the thumbwheels to 03, then *interval* will be 1 and 1/3 second, etc.

To film with the *interval* you just entered in using this method, turn the thumbwheels to 90 and press the pushbutton.

Burst Mode (TIV-300B)

The TIV-300B can be programmed to expose more then one frame at each *interval*. This is called burst mode, where *burst* can be from 2-99 frames. The frames are exposed one after another at the fastest rate, which is 2/3 second for each exposure.

For example, a *burst* of 6 will expose six frames in four seconds, with a delay of *interval* between each set of exposures.

To set *burst*, turn the thumbwheels to 57 and press the pushbutton. Both lights will flash. Change the thumbwheels to the desired *burst* and press the pushbutton again..

Burst is now programmed. To turn off burst mode, program *burst* to one or fifty-seven (i.e., press the pushbutton twice after turning the thumbwheels to 57).

The value of 50 for *burst* has special consequences, discussed later in this document.

Presets (TIV-300B)

The TIV-300 has 10 memory locations. These locations store combinations of *interval*, *frames*, *duration*, and *burst* values. These memory locations are referred to as presets.

You can program nine of these presets, accessed by thumbwheel settings of 91 to 99. Preset 90 is special—it stores the values used the last time the TIV was run.

Preset 90 is also updated with the values of *interval*, *duration* and *burst* that you set using the special thumbwheel settings between 51-57, and with the value of *frames* you set by pressing and holding the pushbutton.

To program a Preset with the current settings of *interval*, *frames*, *duration*, and *burst*, first turn the thumbwheels to the desired Preset number (between 91 and 99). Then, press and hold the pushbutton until both lights flash. Release, and the settings are programmed.

To use one of the Presets, turn the thumbwheels to the desired Preset. Press and release the pushbutton, and the TIV will flash the run light three times, and then start filming using the values in the Preset location.

This slight delay before filming allows you to read the contents of the Preset into *interval*, *frames*, *duration* and *burst* without actually exposing any frames. You then can change any one of these values, and then film with the new setting, or program it back into a Preset.

Note: there will not be this delay when using Preset 90.

If you try to use a Preset where you haven't stored anything, the run light will flash once and the TIV will return to idle mode. *Burst* will be reset to 1, and *frames* will be reset to 480.

Automatic Running using Preset 99

If you set the thumbwheels to 99 and apply power to the TIV-300, it will start running using the contents of this Preset. This can be useful when you have your TIV hooked up to a power source controlled by a timer or switch of some kind.

Automatic Filming of Multiple Presets

The TIV-300 allows you to tell it to film using the contents of multiple Presets, one after the other. This is called *chaining*.

For example, let us say Preset 91 contains an *interval* setting of 1 second and a *frames* setting of 120 (10 seconds of film). Preset 92 contains an *interval* setting of 5 seconds and a *frames* setting of 60 (5 seconds of film). To chain from Preset 91 to Preset 92, so that first 10 seconds of film are exposed with an interval of 1 second, and then 5 seconds of film are exposed with an interval of 5 seconds, do the following.

Turn the thumbwheels to 91 and press and release the pushbutton. Quickly turn the thumbwheels to 92, before the final blink of the run light. Both lights will flash an additional six times, indicating that your chaining command was successful, and filming will commence.

You can chain from any Preset to any higher Preset, for example, 91 to 99, or 93 to 96, but not from a higher Preset to a lower Preset. Also, you cannot start chaining from Preset 90.

Although you must change the thumbwheels away from the first Preset before the third blink of the run light, the value used for the final Preset will be whatever is on the thumbwheels after the sixth blink of both lights (right before filming commences).

Canceling a Chaining Sequence

If you press the pushbutton while filming in a chaining sequence, the TIV will cancel the entire chain and return to idle mode. To finish with the current exposure sequence, but cancel pending exposure sequences, turn the thumbwheels to 00.

Delaying between Exposure Sequences

There are two ways to put a delay between chained exposure sequences. For example, let's say you would like to film 10 seconds of film with a 1-second interval, delay for two hours, and then film 10 seconds of film with a 4-second interval.

Program Preset 91 with a 1-second interval. Then program Preset 92 with *frames* equal to 6, and *interval* equal to 24 minutes. This will "delay" for 5 times 24 minutes, or exactly two hours, while a quarter-second of film is exposed. Finally, program Preset 93 with a 4-second interval.

Chain from Preset 91 to 93, and your two sequences will be filmed without any further effort on your part. Of course, a quarter-second of film will be wasted.

The second method is to use the special setting of 50 for *burst*. Right before the TIV starts filming using the values in a Preset, it checks the value of *burst*. If *burst* is equal to 50, the TIV doesn't film.

Instead, it uses the value stored in *interval* as a delay, according to the following formula. Delay (in minutes) is equal to *interval* (in seconds) times three.

So for example, if *interval* is set to 2/3 second, the TIV will do nothing (other then flash its lights) for two minutes. If *interval* is set to 10 minutes, the TIV will delay 600 times 3 (1800) minutes, or 30 hours.

(If you do not start filming using one of the Presets, and you have programmed *burst* to 50, the TIV will film normally, re-setting *burst* to 1.)

Using Presets to delay, you could conceivably shoot 5 different sequences with 4 different delay times in between.

Tips and Conclusion

With both the TIV-140 and TIV-300 models, you can get a consistent ¼ second exposure by keeping the TIV on normal exposures, but flipping the I-T switch on your Bolex to T.

Try using long-duration exposures during daytime! You'll have to use a lot of neutral density filters to cut down on the light coming into the camera, but you'll get a nice blur on objects moving in the scene.

Film, experiment, and let us know if you have any problems, or any suggestions for improvement.

June 2006

Thumb. Setting	Interval		Frames			Delay	
						Minutes	Hours
1	1	second	1	second	24 frames	15	0.25
2	2	seconds	2	seconds	48 frames	30	0.50
3	3	seconds	3	seconds	72 frames	45	0.75
4	4	seconds	4	seconds	96 frames	60	1.00
5	5	seconds	5	seconds	120 frames	75	1.25
6	6	seconds	6	seconds	144 frames	90	1.50
7	7	seconds	7	seconds	168 frames	105	1.75
8	8	seconds	8	seconds	192 frames	120	2.00
9	9	seconds	9	seconds	216 frames	135	2.25
10	10	seconds	10	seconds	240 frames	150	2.50
11	11	seconds	11	seconds	264 frames	165	2.75
12	12	seconds	12	seconds	288 frames	180	3.00
13	13	seconds	13	seconds	312 frames	195	3.25
14	14	seconds	14	seconds	336 frames	210	3.50
15	15	seconds	15	seconds	360 frames	225	3.75
16	16	seconds	16	seconds	384 frames	240	4.00
17	17	seconds	17	seconds	408 frames	255	4.25
18	18	seconds	18	seconds	432 frames	270	4.50
19	19	seconds	19	seconds	456 frames	285	4.75
20	20	seconds	20	seconds	480 frames	300	5.00
21	21	seconds	21	seconds	504 frames	315	5.25
22	22	seconds	22	seconds	528 frames	330	5.50
23	23	seconds	23	seconds	552 frames	345	5.75
24	24	seconds	24	seconds	576 frames	360	6.00
25	25	seconds	25	seconds	600 frames	375	6.25
26	26	seconds	26	seconds	624 frames	390	6.50
27	27	seconds	27	seconds	648 frames	405	6.75
28	28	seconds	28	seconds	672 frames	420	7.00
29	29	seconds	29	seconds	696 frames	435	7.25
30	30	seconds	30	seconds	720 frames	450	7.50
31	31	seconds	31	seconds	744 frames	465	7.75
32	32	seconds	32	seconds	768 frames	480	8.00
33	33	seconds	33	seconds	792 frames	495	8.25
34	34	seconds	34	seconds	816 frames	510	8.50
35	35	seconds	35	seconds	840 frames	525	8.75
36	36	seconds	36	seconds	864 frames	540	9.00
37	37	seconds	37	seconds	888 frames	555	9.25
38	38	seconds	38	seconds	912 frames	570	9.50
39	39	seconds	39	seconds	936 frames	585	9.75
40	40	seconds	40	seconds	960 frames	600	10.00
41	41	seconds	41	seconds	984 frames	615	10.25
42	42	seconds	42	seconds	1008 frames	630	10.50
43	43	seconds	43	seconds	1032 frames	645	10.75
44	44	seconds	44	seconds	1056 frames	660	11.00
45	45	seconds	45	seconds	1080 frames	675	11.25
46	46	seconds	46	seconds	1104 frames	690	11.50
47	47	seconds	47	seconds	1128 frames	705	11.75
48	48	seconds	48	seconds	1152 frames	720	12.00
49	49	seconds	49	seconds	1176 frames	735	12.25

Thumb. Setting	Interval		Frames			Delay	
						Minutes	Hours
50	(delay mode)		50	seconds	1200 frames	750	12.50
51	(interval, .3 sec)		0.25	seconds	6 frames	765	12.75
52	(interval, secs)		0.50	seconds	12 frames	780	13.00
53	(interval, min)		0.75	seconds	18 frames	795	13.25
54	(time exp,.5 sec)		1.00	seconds	24 frames	810	13.50
55	(time exp, secs)		1.25	seconds	30 frames	825	13.75
56	(time exp, min)		1.50	seconds	36 frames	840	14.00
57	(burst frames)		1.75	seconds	42 frames	855	14.25
58			2.00	seconds	48 frames	870	14.50
59			2.25	seconds	54 frames	885	14.75
60	0.7	seconds	2.50	seconds	60 frames	900	15.00
61	1.0	seconds	2.75	seconds	66 frames	915	15.25
62	1.3	seconds	3.00	seconds	72 frames	930	15.50
63	1.7	seconds	3.25	seconds	78 frames	945	15.75
64	2.0	seconds	3.50	seconds	84 frames	960	16.00
65	2.3	seconds	3.75	seconds	90 frames	975	16.25
66	2.7	seconds	4.00	seconds	96 frames	990	16.50
67	3.0	seconds	4.25	seconds	102 frames	1005	16.75
68	3.3	seconds	4.50	seconds	108 frames	1020	17.00
69	3.7	seconds	4.75	seconds	114 frames	1035	17.25
70	4.0	seconds	5.00	seconds	120 frames	1050	17.50
71	1	minute	5.25	seconds	126 frames	1065	17.75
72	2	minutes	5.50	seconds	132 frames	1080	18.00
73	3	minutes	5.75	seconds	138 frames	1095	18.25
74	4	minutes	6.00	seconds	144 frames	1110	18.50
75	5	minutes	6.25	seconds	150 frames	1125	18.75
76	6	minutes	6.50	seconds	156 frames	1140	19.00
77	7	minutes	6.75	seconds	162 frames	1155	19.25
78	8	minutes	7.00	seconds	168 frames	1170	19.50
79	9	minutes	7.25	seconds	174 frames	1185	19.75
80	10	minutes	7.50	seconds	180 frames	1200	20.00
81	11	minutes	7.75	seconds	186 frames	1215	20.25
82	12	minutes	8.00	seconds	192 frames	1230	20.50
83	13	minutes	8.25	seconds	198 frames	1245	20.75
84	14	minutes	8.50	seconds	204 frames	1260	21.00
85	15	minutes	8.75	seconds	210 frames	1275	21.25
86	16	minutes	9.00	seconds	216 frames	1290	21.50
87	17	minutes	9.25	seconds	222 frames	1305	21.75
88	18	minutes	9.50	seconds	228 frames	1320	22.00
89	19	minutes	9.75	seconds	234 frames	1335	22.25
90	(last run)					1350	22.50
91	(Preset 1)					1365	22.75
92	(Preset 2)					1380	23.00
93	(Preset 3)					1395	23.25
94	(Preset 4)					1410	23.50
95	(Preset 5)					1425	23.75
96	(Preset 6)					1440	24.00
97	(Preset 7)					1455	24.25
98	(Preset 8)					1470	24.50
99	(Autorun preset)					1485	24.75