

# DOCUMENTATION

Functionality	Wave form	Using verilator																								
Start -> Pause -> Resume	<table border="1"> <tr> <td>tb/dk</td> <td>0</td> <td></td> </tr> <tr> <td>tb/rst_n</td> <td>1</td> <td></td> </tr> <tr> <td>tb/start</td> <td>0</td> <td></td> </tr> <tr> <td>tb/stop</td> <td>0</td> <td></td> </tr> <tr> <td>tb/reset</td> <td>0</td> <td></td> </tr> <tr> <td>tb/seco...</td> <td>0</td> <td></td> </tr> <tr> <td>tb/minu...</td> <td>0</td> <td></td> </tr> <tr> <td>tb/status</td> <td>00</td> <td></td> </tr> </table>	tb/dk	0		tb/rst_n	1		tb/start	0		tb/stop	0		tb/reset	0		tb/seco...	0		tb/minu...	0		tb/status	00		<pre> STOPWATCH IDLE   T= 1   TIME=00:00 STOPWATCH IDLE   T= 2   TIME=00:00 STOPWATCH RUNNING   T= 3   TIME=00:00 STOPWATCH RUNNING   T= 4   TIME=00:01 STOPWATCH PAUSED   T= 23   TIME=00:20 STOPWATCH PAUSED   T= 24   TIME=00:20 STOPWATCH PAUSED   T= 32   TIME=00:20 STOPWATCH RUNNING   T= 33   TIME=00:21 STOPWATCH RUNNING   T= 34   TIME=00:22 STOPWATCH RUNNING   T= 35   TIME=00:23 </pre>
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Rollover from 59->0 and minute increment	<table border="1"> <tr> <td>tb/dk</td> <td>0</td> <td></td> </tr> <tr> <td>tb/rst_n</td> <td>1</td> <td></td> </tr> <tr> <td>tb/start</td> <td>0</td> <td></td> </tr> <tr> <td>tb/stop</td> <td>0</td> <td></td> </tr> <tr> <td>tb/reset</td> <td>0</td> <td></td> </tr> <tr> <td>tb/seco...</td> <td>1</td> <td></td> </tr> <tr> <td>tb/minu...</td> <td>7</td> <td></td> </tr> <tr> <td>tb/status</td> <td>01</td> <td></td> </tr> </table>	tb/dk	0		tb/rst_n	1		tb/start	0		tb/stop	0		tb/reset	0		tb/seco...	1		tb/minu...	7		tb/status	01		<pre> STOPWATCH RUNNING   T= 70   TIME=00:58 STOPWATCH RUNNING   T= 71   TIME=00:59 STOPWATCH RUNNING   T= 72   TIME=01:00 STOPWATCH RUNNING   T= 73   TIME=01:01 STOPWATCH RUNNING   T= 74   TIME=01:02 STOPWATCH RUNNING   T= 75   TIME=01:03 </pre>
tb/dk	0																									
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Running -> Reset -> Start again	<table border="1"> <tr> <td>tb/dk</td> <td>0</td> <td></td> </tr> <tr> <td>tb/rst_n</td> <td>1</td> <td></td> </tr> <tr> <td>tb/start</td> <td>0</td> <td></td> </tr> <tr> <td>tb/stop</td> <td>0</td> <td></td> </tr> <tr> <td>tb/reset</td> <td>0</td> <td></td> </tr> <tr> <td>tb/seco...</td> <td>1</td> <td></td> </tr> <tr> <td>tb/minu...</td> <td>7</td> <td></td> </tr> <tr> <td>tb/status</td> <td>01</td> <td></td> </tr> </table>	tb/dk	0		tb/rst_n	1		tb/start	0		tb/stop	0		tb/reset	0		tb/seco...	1		tb/minu...	7		tb/status	01		<pre> STOPWATCH RUNNING   T= 74   TIME=01:02 STOPWATCH RUNNING   T= 75   TIME=01:03 STOPWATCH RUNNING   T= 76   TIME=01:04 STOPWATCH IDLE   T= 77   TIME=00:00 STOPWATCH IDLE   T= 78   TIME=00:00 STOPWATCH RUNNING   T= 79   TIME=00:00 STOPWATCH RUNNING   T= 80   TIME=00:01 STOPWATCH RUNNING   T= 81   TIME=00:02 </pre>
tb/dk	0																									
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