**********Draft**********

Using GTKWave to display the CVS from the rp2040-logic-analyzer
05/10/22

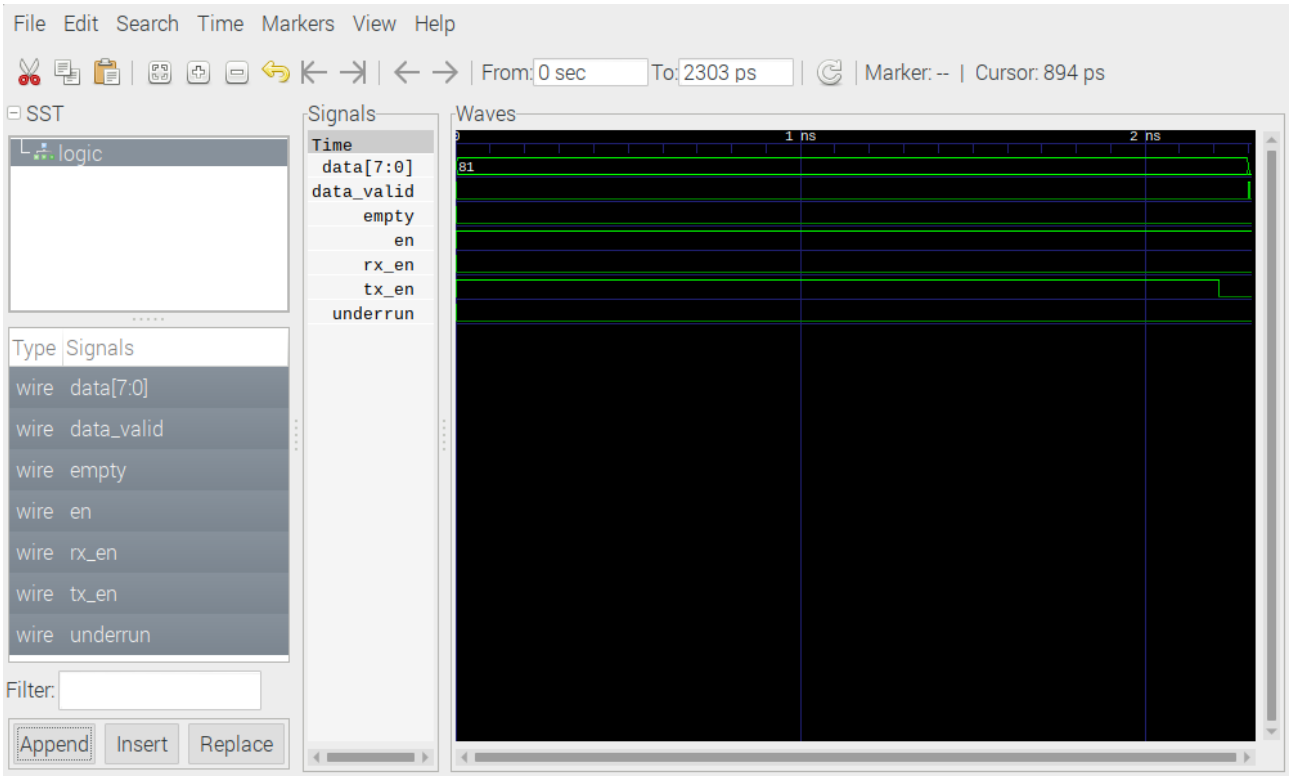
**********Draft**********

Need to reformat the data from pwm.txt
wc pwm.txt
 27801 27808 472625 pwm.txt
g
Clock speed is 125000000
Capture speed is 1000000.000000.2
Arming trigger
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
.
.
.

0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
0,1,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,
0,0,0,0,0,0,0,1,

downloaded an vcd example from https://en.m.wikipedia.org/wiki/Value_change_dump
to test.vcd

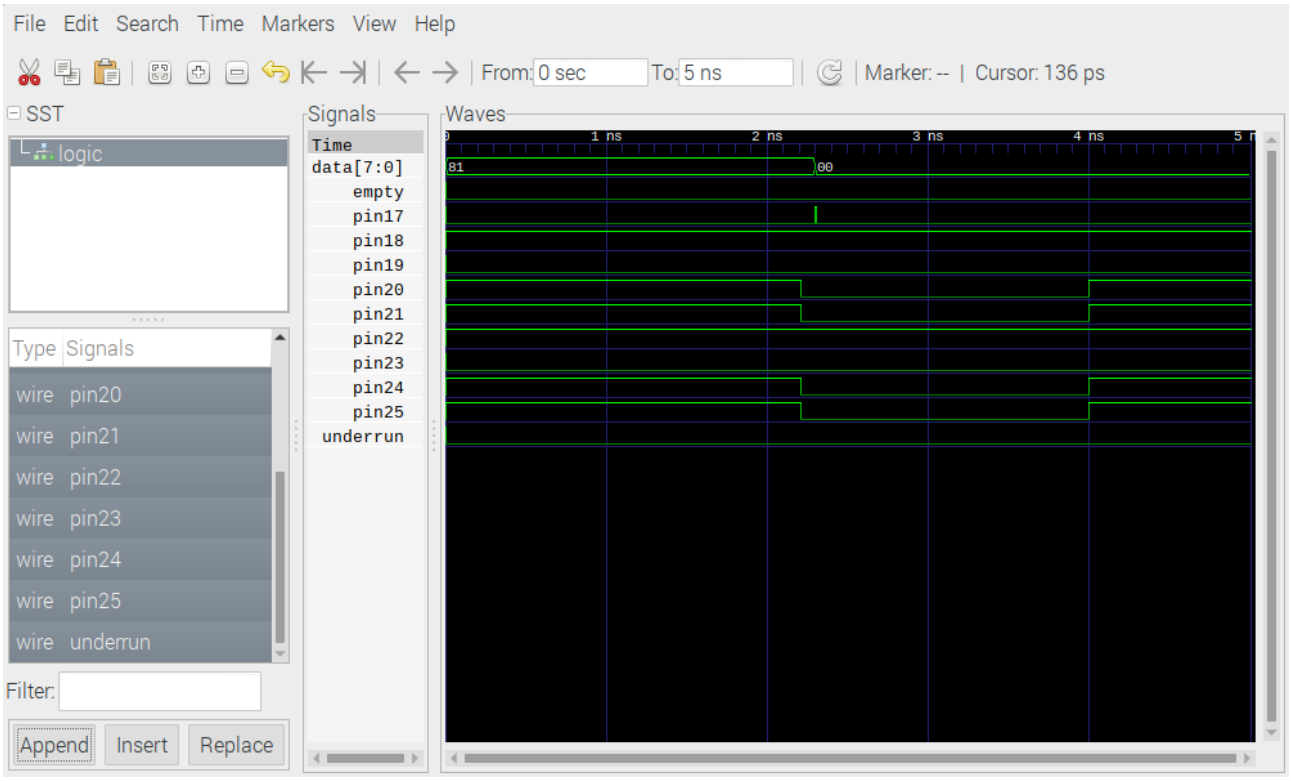
gtkwave test.vcd



Made some changes to file an saved as test1.vcd

```
13,16c13,21
<  $var wire 1 $ data_valid $end
<  $var wire 1 % en $end
<  $var wire 1 & rx_en $end
<  $var wire 1 ' tx_en $end
---
>  $var wire 1 $ pin17 $end
>  $var wire 1 % pin18 $end
>  $var wire 1 & pin19 $end
>  $var wire 1 ' pin20 $end
>  $var wire 1 ' pin21 $end
>  $var wire 1 % pin22 $end
>  $var wire 1 & pin23 $end
>  $var wire 1 ' pin24 $end
>  $var wire 1 ' pin25 $end
46c51,55
<
---
>  #4000
>  1'
>  #4010
>  0$
>  #5000
```

gtkwave test1.vcd

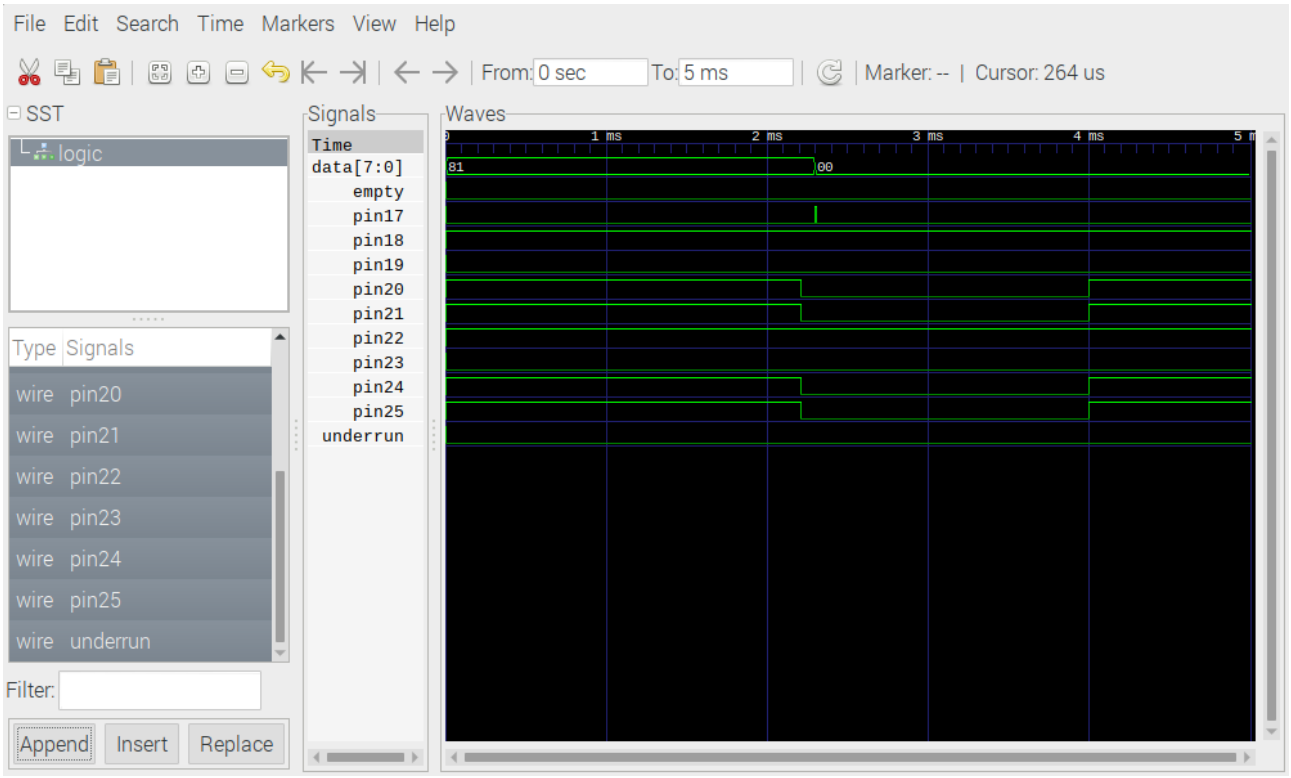


Change the timescale

< $timescale 1ps $end

> $timescale 1us $end

gtkwave test2.vcd



Changes for test3.vcd
The first is the name of module

11c11
< $scope module logic $end

> $scope module pico $end
36c36
< b10000001 #

> b00000001 #
53c53
< #4010

> #6010
55c55,62
< #5000

> #6015
> 0'
> #6020
> 1$
> #6025
> 0'
> #6030
> 1$
56a64,75
> #7000
> 1'
> #7010

> 0$
> #8000
> 0'
> #8010
> 1$
> #8020
> 0'
> #8030
> 1$

Now the time is further out to 8ms