Issues for Warren:

- IR switch on Right DPI does not work
- Binocular interference
- The vertical amplitude in Left DPI is smaller than horizontal
- Vertical dynamics faster in Left DPI

Right DPI

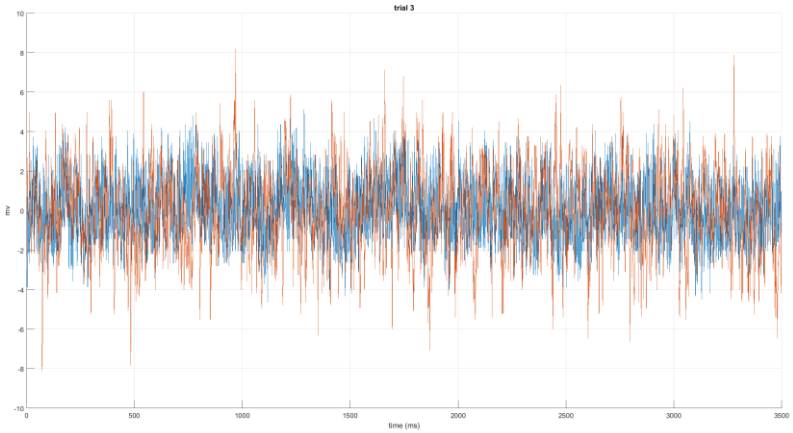
Warren adjusted the gain on the 1st image today but the noise levels and dynamics of the DPI still look good. We were able to track many different human eyes so it seems great for now!

Note: The BNC caps seemed to introduce different gains to the horizontal and vertical channels. We have removed them for now but we should investigate further.

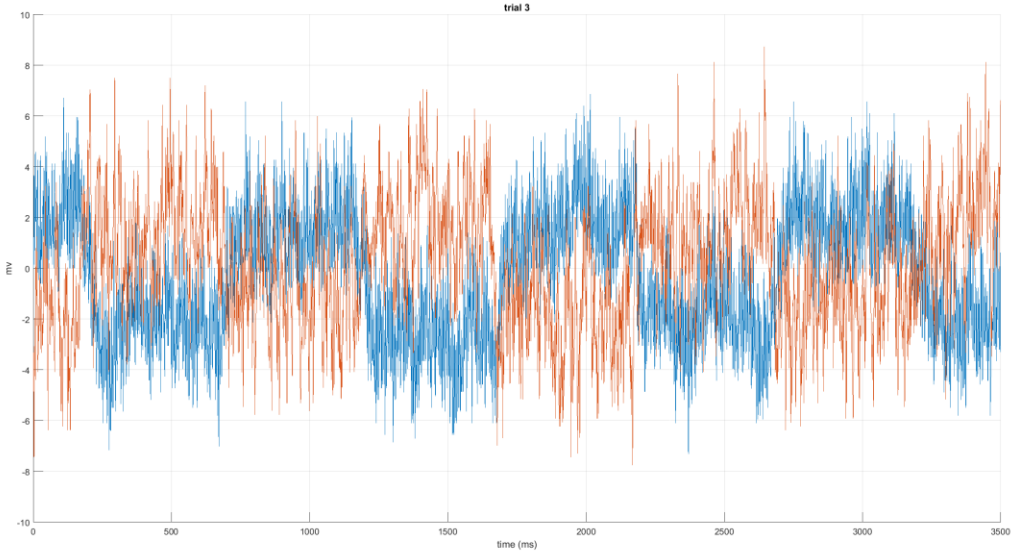
Left DPI

It still needs adjustments, but the left eye tracker has okay performance right now. The noise levels are a little high but aren't too far off from the right eye tracker. The dynamics of the vertical are faster than the horizontal and there seems to be a difference the horizontal and vertical gains as well.

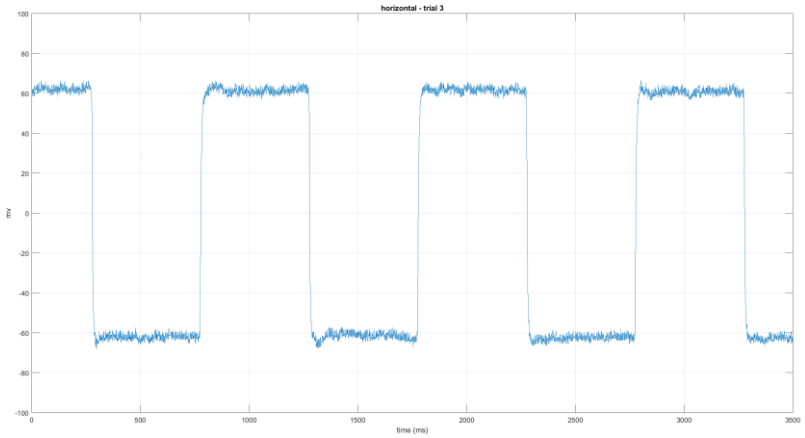
	Trial 1	Trial 2	Trial 3	
Std_Hor(mv)	2.021	1.764	1.791	1
Std_Ver(mv)	2.257	2.104	2.106	2
Std_Hor(arcmin)	0.404	0.353	0.358	0
Std_Ver(arcmin)	0.451	0.421	0.421	0
rms_Hor(mv)	3.299	1.830	1.802	1
rms_Ver(mv)	3.024	2.107	2.123	2
rms_Hor(arcmin)	0.660	0.366	0.360	0
rms_Ver(arcmin)	0.605	0.421	0.425	0

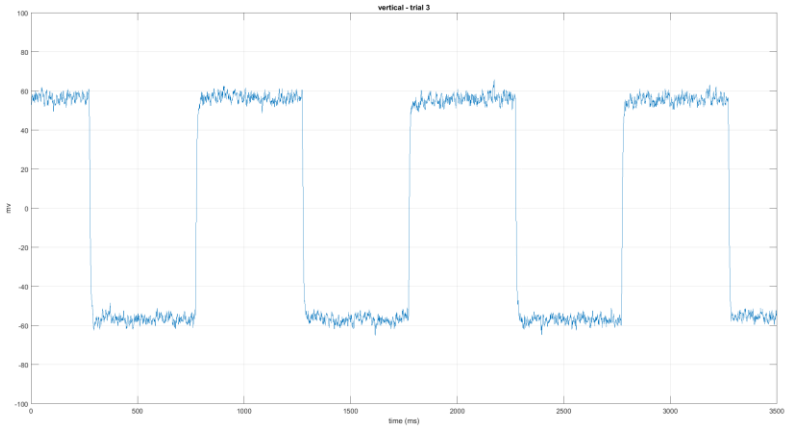


1Hz 0.1V square wave

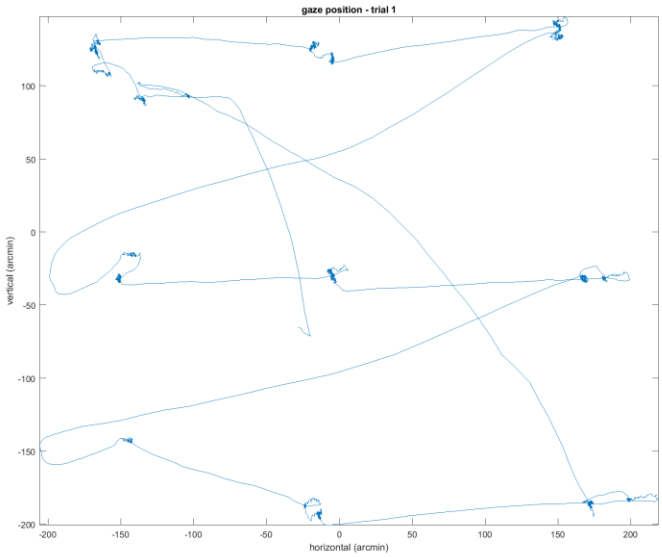


3V 1Hz square wave





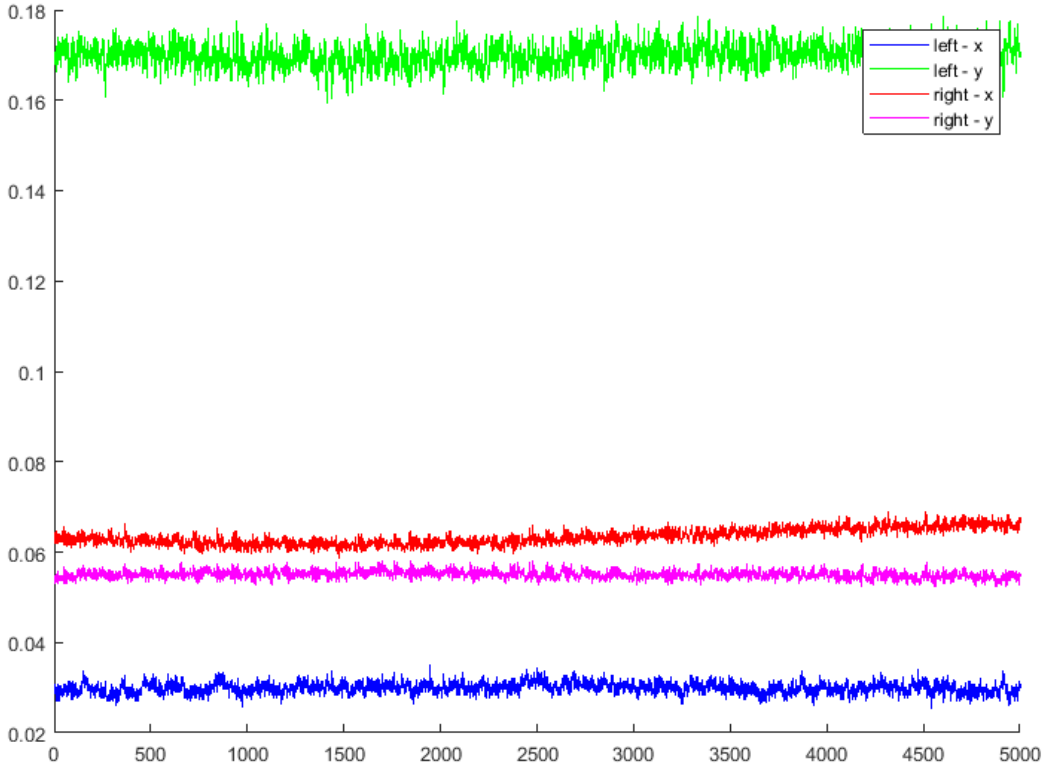
We were able to track a real eye in the left eye tracker – it looks pretty good but Warren says that the range of tracking needs to be improved on the vertical.



Binocular Tracking

When recording from only one eye tracker, there is interference from the other if both are on – a very low frequency (16sec cycle) signal is visible.

We also recorded simultaneously from both eye trackers (static artificial eyes) and this interference is not visible (though they were placed at the same depth and height. We should do a longer recording to check that the interference is still there.


0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
500
1000
1500
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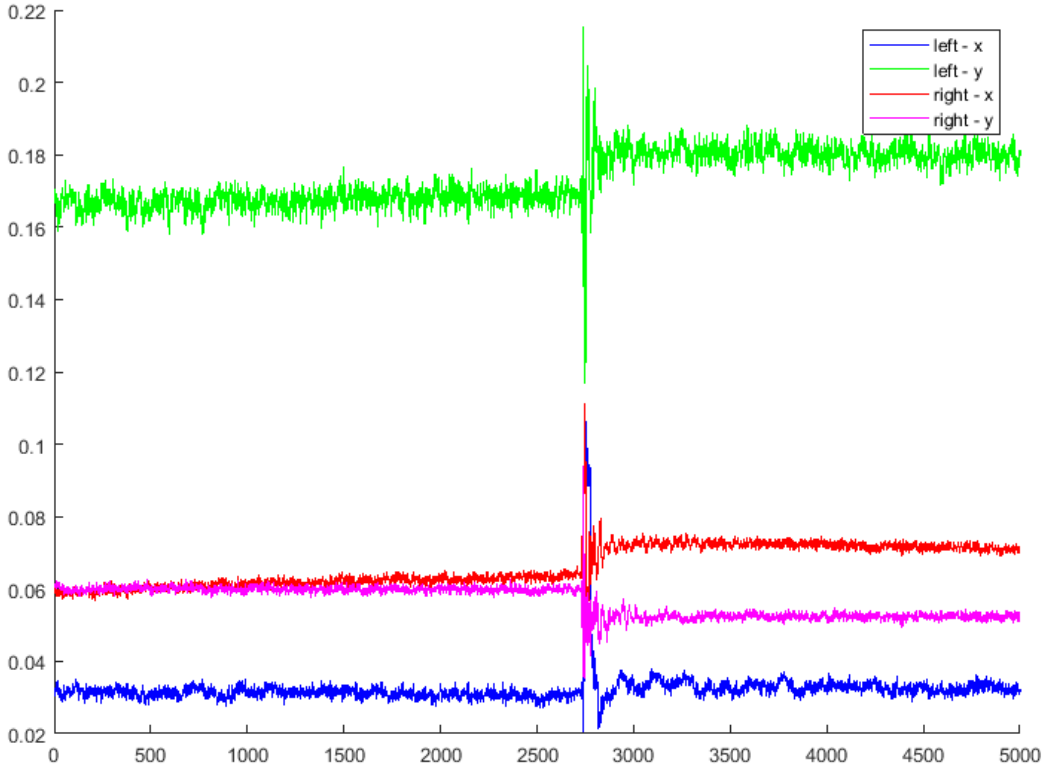
left - y
right - x
right - y

Knocked the table to check that correct signals were recorded.