

This series of screen shots show the effect of increasing the offset on K9 from where offset is turned up just enough so the analog pulse are not distorted inside the digital pulses.

In all the screen shots the analog signals is CH2 - blue and the digital signal is CH1 – yellow. The Math function A-B where A is CH1 and B is CH2. The Math functions is used to show the voltage across the Secondary Output (basically a differential signal made using 2 standard probes, with probe grounds on system ground. Real interest is the Math function for Secondary output

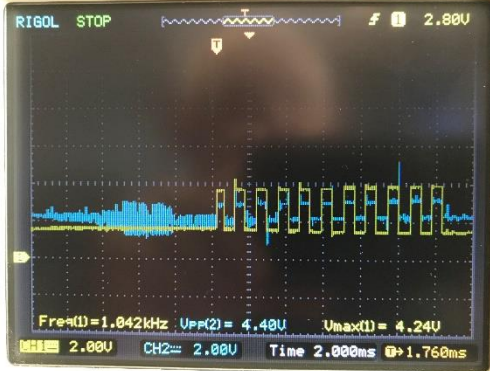

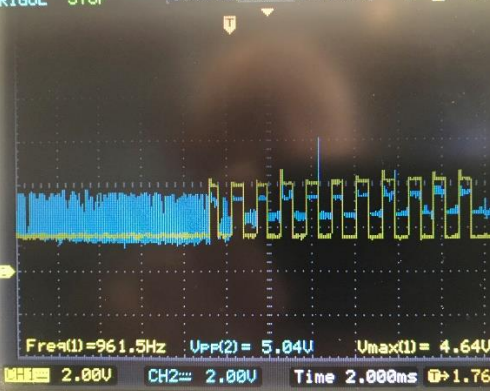
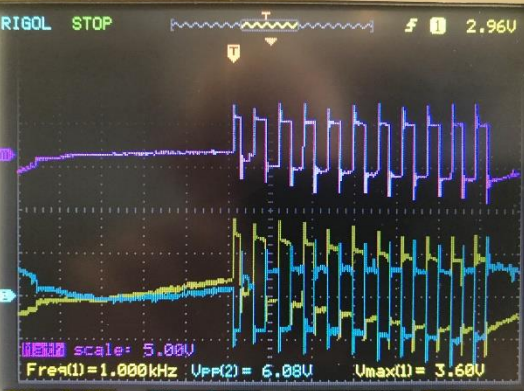
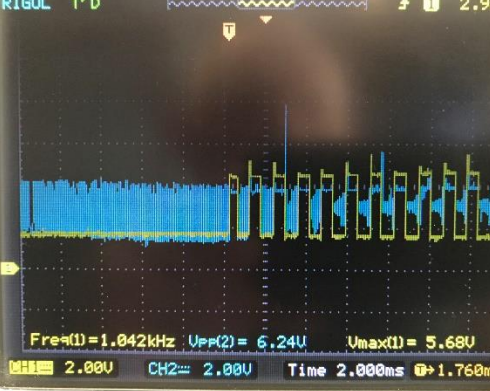
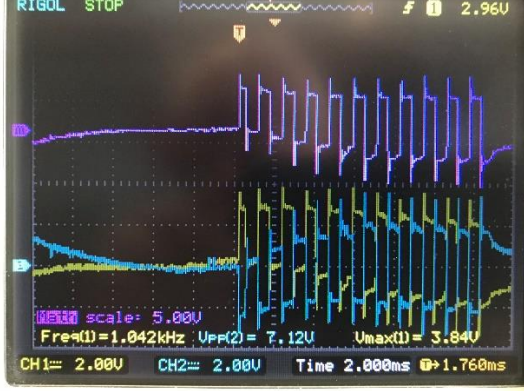
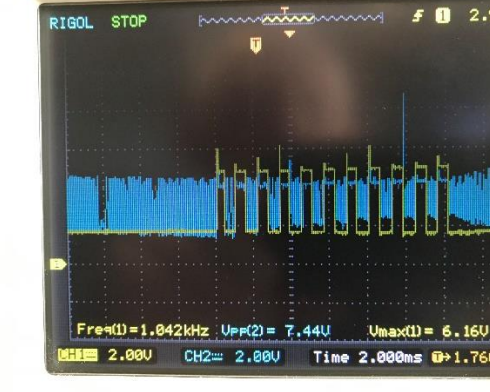
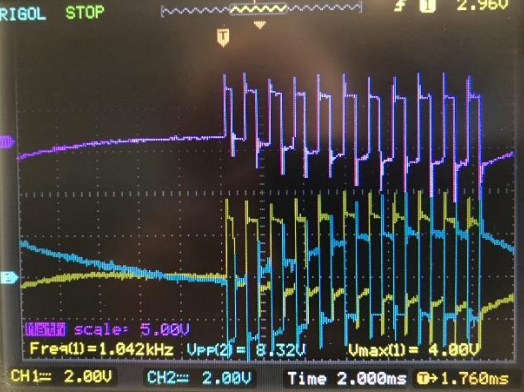
Other settings: K2 output 41.67hz, K3 is set to provide 50% duty cycle, K8 output is set to be 3.23v, Frequency of digital signal is 1.0khz out of K21. I am using an inverse of K2 to feed K8

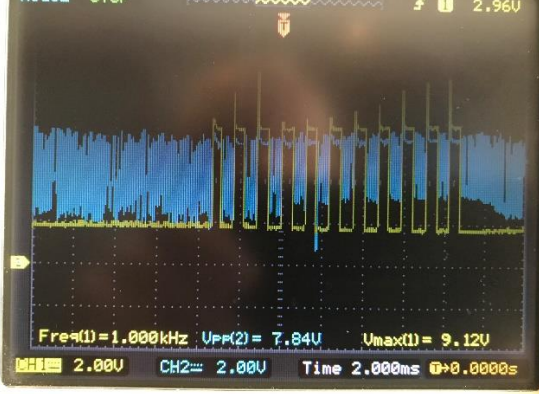
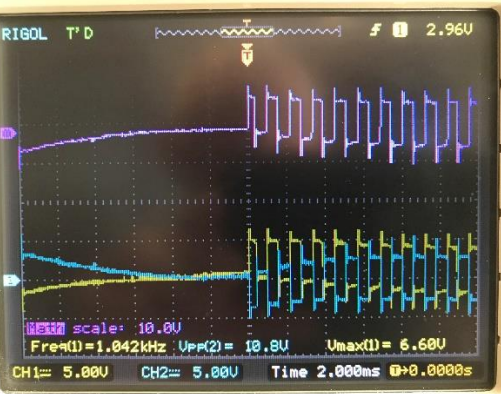

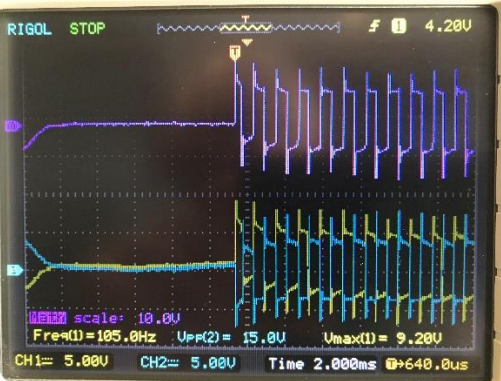
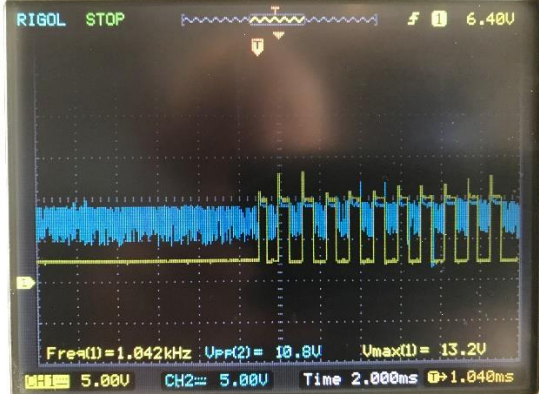
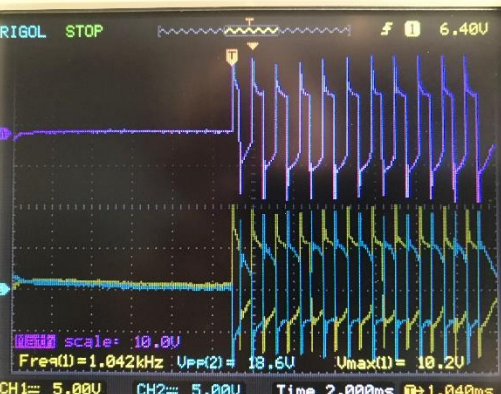


Data collection method was to set Primary input by looking at Vpp(2) with both probe on primary into which is an estimate of voltage level into primary. After that was set, I switched probes to Secondary to capture its output at that level. Repeated process to each voltage level I captured. So, Primary input on left and Secondary Output on right.

Exception is first line in table. Picture on left is just analog sign zoomed out and compress to 10v scale. I did this to see if there was a better way to see voltage level that the way I was doing it. It seem to work better and is what you would see on Stan’s analog test point if scope setting were set the same. The picture on right is the same setting as second line of table but with scale set to show more of the signals.

Near top of Offset levels, I captured a few extra shots to show affect of clipping. Go further and signal disappear.

|   |  |  |
|---|--|--|
| <p>Analog signal zoomed out at 10v scale</p> <p>Start Analog and Digital Pri in Min level Zoomed out slightly</p> |  |  |
| <p>Start Analog and Digital Pri in Min</p> <p>VIC P3 Sec out Vpp Min</p>  |  |  |

|   |   |  |
|---|---|--|
| <p>VIC P4 Anal<br/>and Dig Pri In<br/>Vpp 4v</p> <p>VIC P5 Sec out<br/>Vpp 4</p>                  |  <p>RIGOL STOP</p> <p>Freq(1)=1.042kHz Upp(2)= 4.40U Umax(1)= 4.24U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p>   |  <p>RIGOL STOP</p> <p>Freq(1)=961.5Hz Upp(2)= 5.68U Umax(1)= 3.12U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p>    |
| <p>VIC P6 Anal<br/>and Dig Pri In<br/>Vpp 5v</p> <p>VIC P6 Anal<br/>and Dig Pri In<br/>Vpp 5v</p> |  <p>RIGOL STOP</p> <p>Freq(1)=961.5Hz Upp(2)= 5.04U Umax(1)= 4.64U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p>    |  <p>RIGOL STOP</p> <p>Freq(1)=1.000kHz Upp(2)= 6.08U Umax(1)= 3.60U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p>   |
| <p>VIC P8 Anal<br/>and Dig Pri In<br/>Vpp 6v</p> <p>VIC P9 Sec out<br/>Vpp 6v</p>                 |  <p>RIGOL STOP</p> <p>Freq(1)=1.042kHz Upp(2)= 6.24U Umax(1)= 5.68U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p>  |  <p>RIGOL STOP</p> <p>Freq(1)=1.042kHz Upp(2)= 7.12U Umax(1)= 3.84U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p>  |
| <p>VIC P10 Anal<br/>and Dig Pri In<br/>Vpp 7v</p> <p>VIC P11 Sec<br/>out Vpp 7v</p>               |  <p>RIGOL STOP</p> <p>Freq(1)=1.042kHz Upp(2)= 7.44U Umax(1)= 6.16U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p> |  <p>RIGOL STOP</p> <p>Freq(1)=1.042kHz Upp(2)= 8.32U Umax(1)= 4.00U</p> <p>CH1= 2.00U CH2= 2.00U Time 2.00ms</p> |

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|---|---|--|
| <p>VIC P12 Anal<br/>and Dig Pri in<br/>Vpp 8v</p> <p>Vic P13 Sec<br/>out Vpp v8</p>     |    |    |
| <p>VIC P14 Anal<br/>and Dig Pri in<br/>Vpp 10v</p> <p>VIC P15 SEc<br/>out Vpp 10v</p>   |    |    |
| <p>VIC P16 Anal<br/>and Dig in<br/>Near Clip</p> <p>VIC P17 Sec<br/>out Near Clip</p>   |   |   |
| <p>VIC P18 Anal<br/>and Dig in<br/>Below Clip</p> <p>VIC P19 Sec<br/>out Below Clip</p> |  |  |