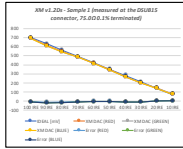


**TOP RE<sup>+</sup> Test Video DAC measurements, by using the M1Ster SINES core and the Artemis 240 Suite.**  
**Hardware under test:** TOP v1.20c and the official M1Ster Analog ID Board v1.0  
**Testing setup:** PicoScope 6022C (Scope, DeepMeasure mode activated)  
**Authors:** Sander Roden, Gonzalo B. SanRodriguez  
**Revision date:** 2023-04-28

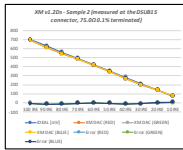
**MM v1.20c - Sample 1 (measured at the DSUB15 connector, 75.00 0.1% terminated)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	694.9	689.7	688.4	-5.7	-10.3	-11.6
80 RE	560	555.9	550.7	549.4	-4.1	-9.3	-10.6
60 RE	420	416.9	411.7	410.4	-2.6	-8.8	-10.1
40 RE	280	280.9	275.7	274.4	-1.7	-7.4	-7.6
20 RE	140	141.7	141.2	139.7	0.7	-1.2	-1.5
10 RE	70	72.8	70.5	70.1	2.6	-2.3	-2.5



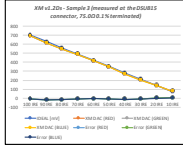
**MM v1.20c - Sample 2 (measured at the DSUB15 connector, 75.00 0.1% terminated)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	680	673.9	668.7	667.4	-4.1	-9.3	-10.6
80 RE	540	531.9	526.7	525.4	-2.1	-7.3	-8.6
60 RE	400	391.9	386.7	385.4	-1.1	-5.3	-6.6
40 RE	260	261.9	256.7	255.4	0.1	-3.3	-4.6
20 RE	130	130.7	129.2	127.7	0.7	-1.2	-1.5
10 RE	65	66.7	64.2	63.7	2.6	-2.3	-2.5



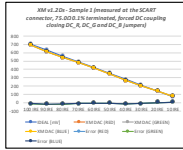
**MM v1.20c - Sample 3 (measured at the DSUB15 connector, 75.00 0.1% terminated)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	694.9	689.5	688.2	-5.1	-10.5	-11.8
80 RE	560	549.9	544.5	543.2	-6.1	-10.7	-12.0
60 RE	420	414.9	409.5	408.2	-5.1	-10.9	-12.2
40 RE	280	280.9	275.5	274.2	-4.1	-11.1	-12.4
20 RE	140	140.7	139.2	137.7	1.0	-11.3	-12.6
10 RE	70	70.7	69.2	67.7	1.0	-11.5	-12.8



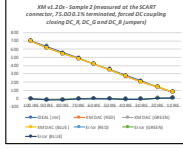
**MM v1.20c - Sample 1 (measured at the SCART connector, 75.00 0.1% terminated, forced DC coupling closing DC\_A, DC\_G and DC\_B jumpers)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	689.7	684.5	683.2	-10.3	-15.5	-16.8
80 RE	560	549.7	544.5	543.2	-10.3	-15.5	-16.8
60 RE	420	414.7	409.5	408.2	-10.3	-15.5	-16.8
40 RE	280	280.7	275.5	274.2	-10.3	-15.5	-16.8
20 RE	140	140.7	139.2	137.7	-10.3	-15.5	-16.8
10 RE	70	70.7	69.2	67.7	-10.3	-15.5	-16.8



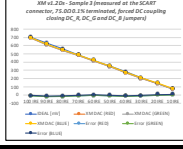
**MM v1.20c - Sample 2 (measured at the SCART connector, 75.00 0.1% terminated, forced DC coupling closing DC\_A, DC\_G and DC\_B jumpers)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	689.7	684.3	683.0	-10.3	-15.7	-17.0
80 RE	560	549.7	544.3	543.0	-10.3	-15.7	-17.0
60 RE	420	414.7	409.3	408.0	-10.3	-15.7	-17.0
40 RE	280	280.7	275.3	274.0	-10.3	-15.7	-17.0
20 RE	140	140.7	139.3	137.9	-10.3	-15.7	-17.0
10 RE	70	70.7	69.3	67.9	-10.3	-15.7	-17.0



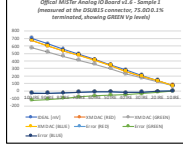
**MM v1.20c - Sample 3 (measured at the SCART connector, 75.00 0.1% terminated, forced DC coupling closing DC\_A, DC\_G and DC\_B jumpers)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	689.7	684.3	683.0	-10.3	-15.7	-17.0
80 RE	560	549.7	544.3	543.0	-10.3	-15.7	-17.0
60 RE	420	414.7	409.3	408.0	-10.3	-15.7	-17.0
40 RE	280	280.7	275.3	274.0	-10.3	-15.7	-17.0
20 RE	140	140.7	139.3	137.9	-10.3	-15.7	-17.0
10 RE	70	70.7	69.3	67.9	-10.3	-15.7	-17.0



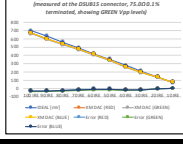
**Official M1Ster Analog ID Board v1.0 - Sample 1 (measured at the DSUB15 connector, 75.00 0.1% terminated, showing GREEN Vpp levels)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	679.9	674.7	673.4	-10.1	-15.3	-16.6
80 RE	560	539.9	534.7	533.4	-10.1	-15.3	-16.6
60 RE	420	419.9	414.7	413.4	-10.1	-15.3	-16.6
40 RE	280	279.9	274.7	273.4	-10.1	-15.3	-16.6
20 RE	140	139.9	138.4	136.9	-1.5	-1.0	-1.5
10 RE	70	71.4	70.9	69.4	0.5	-1.0	-1.5



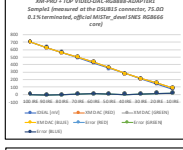
**Official M1Ster Analog ID Board v1.0 - Sample 2 (measured at the DSUB15 connector, 75.00 0.1% terminated, showing GREEN Vpp levels)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	679.9	674.7	673.4	-10.1	-15.3	-16.6
80 RE	560	539.9	534.7	533.4	-10.1	-15.3	-16.6
60 RE	420	419.9	414.7	413.4	-10.1	-15.3	-16.6
40 RE	280	279.9	274.7	273.4	-10.1	-15.3	-16.6
20 RE	140	139.9	138.4	136.9	-1.5	-1.0	-1.5
10 RE	70	71.4	70.9	69.4	0.5	-1.0	-1.5



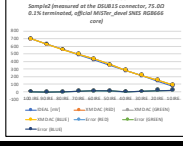
**MM-PRO + TOP VIDEO-DAC-ROBBER - ADAPTER1 Sample1 (measured at the DSUB15 connector, 75.00 0.1% terminated, official M1Ster\_devel SINES ROBBED core)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	684.7	679.5	678.2	-15.3	-20.5	-21.8
80 RE	560	544.7	539.5	538.2	-15.3	-20.5	-21.8
60 RE	420	424.7	419.5	418.2	-15.3	-20.5	-21.8
40 RE	280	284.7	279.5	278.2	-15.3	-20.5	-21.8
20 RE	140	144.7	143.2	141.7	-1.5	-1.0	-1.5
10 RE	70	74.7	73.2	71.7	-1.5	-1.0	-1.5



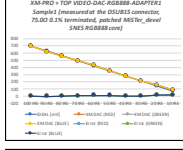
**MM-PRO + TOP VIDEO-DAC-ROBBER - ADAPTER1 Sample2 (measured at the DSUB15 connector, 75.00 0.1% terminated, official M1Ster\_devel SINES ROBBED core)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	684.7	679.5	678.2	-15.3	-20.5	-21.8
80 RE	560	544.7	539.5	538.2	-15.3	-20.5	-21.8
60 RE	420	424.7	419.5	418.2	-15.3	-20.5	-21.8
40 RE	280	284.7	279.5	278.2	-15.3	-20.5	-21.8
20 RE	140	144.7	143.2	141.7	-1.5	-1.0	-1.5
10 RE	70	74.7	73.2	71.7	-1.5	-1.0	-1.5



**MM-PRO + TOP VIDEO-DAC-ROBBER - ADAPTER1 Sample3 (measured at the DSUB15 connector, 75.00 0.1% terminated, published M1Ster\_devel SINES ROBBED core)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	684.7	679.5	678.2	-15.3	-20.5	-21.8
80 RE	560	544.7	539.5	538.2	-15.3	-20.5	-21.8
60 RE	420	424.7	419.5	418.2	-15.3	-20.5	-21.8
40 RE	280	284.7	279.5	278.2	-15.3	-20.5	-21.8
20 RE	140	144.7	143.2	141.7	-1.5	-1.0	-1.5
10 RE	70	74.7	73.2	71.7	-1.5	-1.0	-1.5



**MM-PRO + TOP VIDEO-DAC-ROBBER - ADAPTER1 Sample4 (measured at the DSUB15 connector, 75.00 0.1% terminated, published M1Ster\_devel SINES ROBBED core)**

RE Level	DSUB (mV)	KM DAC (RED)	KM DAC (GREEN)	KM DAC (BLUE)	Error (RED)	Error (GREEN)	Error (BLUE)
100 RE	700	684.7	679.5	678.2	-15.3	-20.5	-21.8
80 RE	560	544.7	539.5	538.2	-15.3	-20.5	-21.8
60 RE	420	424.7	419.5	418.2	-15.3	-20.5	-21.8
40 RE	280	284.7	279.5	278.2	-15.3	-20.5	-21.8
20 RE	140	144.7	143.2	141.7	-1.5	-1.0	-1.5
10 RE	70	74.7	73.2	71.7	-1.5	-1.0	-1.5

