

Lab A5 Report – FreeRTOS

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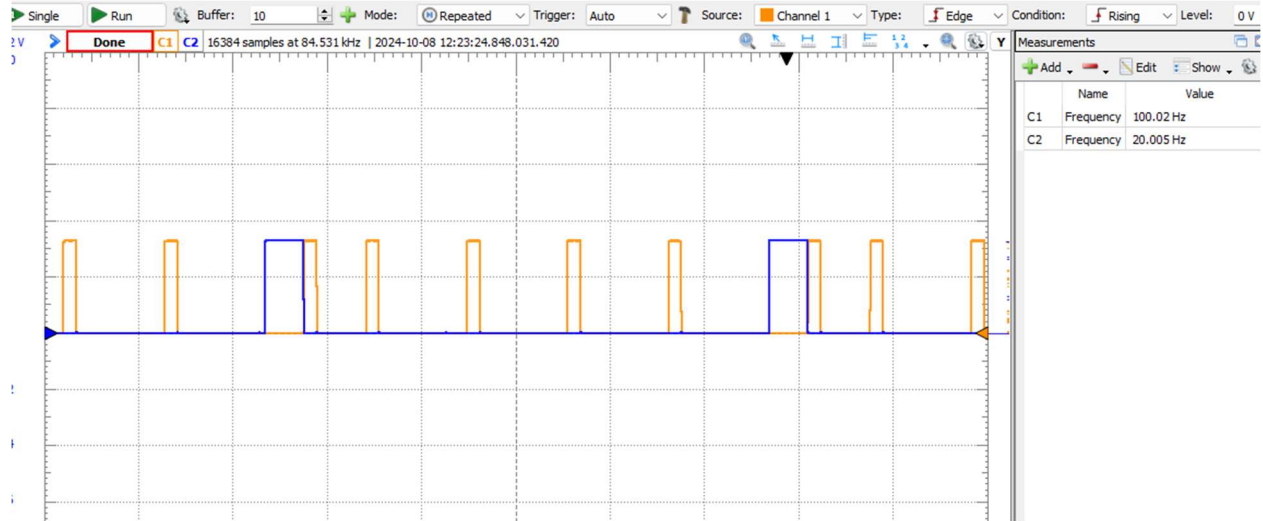


Figure 1: Part 1 Digilent Screenshot

	B	C	D	E	F	G	H	I	J	K
	69									
	54.6				y	x				
	MPS	Heading (deg)	Time (s)	Distance	Starting Lat	Starting Long	DeltaY	Final Lat	DeltaX	Final Long
	0.833333	0	30	25	51.15922	1.202582	0	51.15922	25	1.660457458
	0.833333	45	30	25	51.15922	1.202582	17.67766953	51.41541811	17.67766953	1.526348841
	0.833333	315	120	100	51.15922	1.202582	-70.71067812	50.13442756	70.71067812	2.497649365
	0.833333	315	300	250	51.15922	1.202582	-176.7766953	48.59723891	176.7766953	4.440250412
	1.388889	0	30	41.66667	51.15922	1.202582	0	51.15922	41.6666667	1.965707763
	1.388889	45	30	41.66667	51.15922	1.202582	29.46278255	51.58621685	29.46278255	1.742193402
	1.388889	335	200	277.7778	51.15922	1.202582	-117.3939616	49.45785824	251.7521631	5.813427477
	1.388889	70	90	125	51.15922	1.202582	117.4615776	52.8615617	42.75251792	1.985595149

Figure 2: Part 2 Lat_Long Calculations

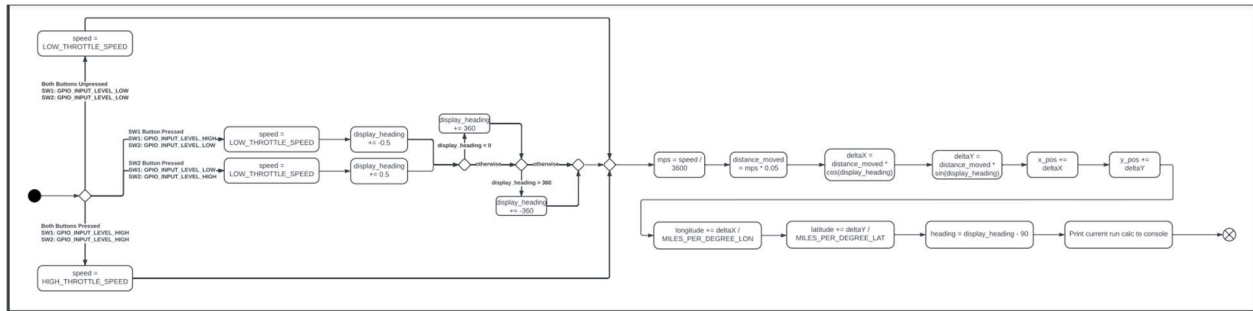


Figure 3: Part 3 Design

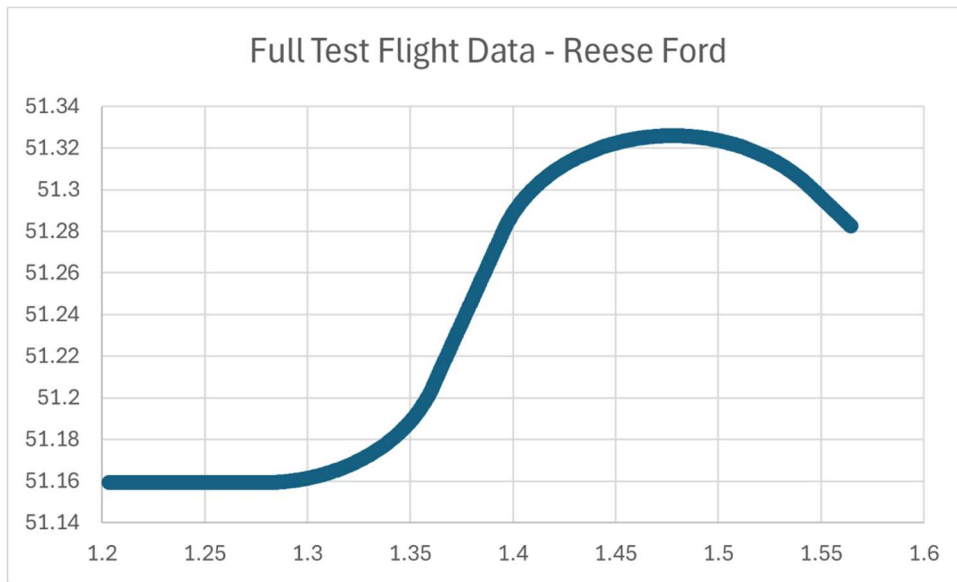


Figure 4: Part 4 FULL_TEST Graph

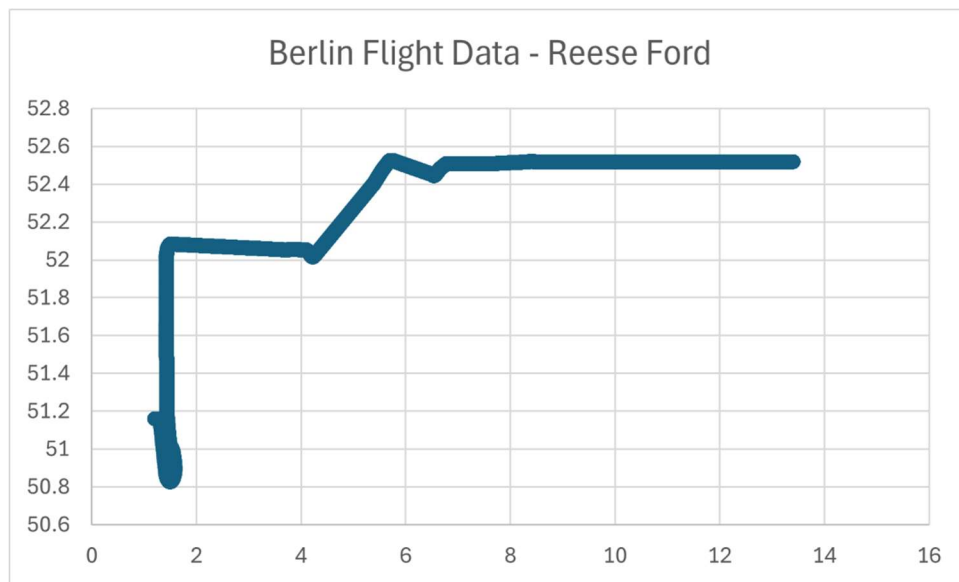


Figure 5: Part 6 Free Flight Graph

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3000.000000, 52.519898, 13.401850, 360.000000
3000.000000, 52.519898, 13.402613, 360.000000
3000.000000, 52.519898, 13.403376, 360.000000
Final Position: 52.519898*N 13.403376*E
Distance to Berlin: 0.088958|
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Figure 6: Final Stop