Tool info

Serial API:	1:1.0
Board:	Custom STM32F401RE thrustBoard v2
Firmware:	thrust++ : ChibiOS RT 7.1.0 : HAL 8.1.0
Commit:	[] : Sep 15 2022 - 20:11:16

Measurement info

Motor:	Dualsky 2814 V2
KV:	0
Magnet poles:	14
Propeler:	Graupner 12x6 fold
Blade count:	2
Note:	Battery 3S. ESC was not calibrated for the first measurement.

Measurement Results 1:

Output [%]	Thrust [G] mean	std dev	Torque [G cm] mean	std dev	RPM [1/min] mean	std dev	Voltage [V] mean	std dev	Current [A] mean	std dev	Pin [W]	ThrustEff [G/W]
20	78.63	9.050	182.44	3.091	1765	63.8	12.324	0.0051	0.568	0.0428	7.006	11.224
30	156.52	9.055	376.13	3.090	2537	64.0	12.300	0.0052	1.361	0.0447	16.744	9.348
40	358.48	9.063	700.46	3.138	3537	66.2	12.245	0.0069	3.157	0.0533	38.656	9.274
50	644.19	9.062	1157.99	3.204	4566	67.1	12.146	0.0088	6.266	0.0495	76.102	8.465
60	926.40	9.143	1695.78	3.163	5515	75.7	11.996	0.0105	10.714	0.0768	128.525	7.208
70	1271.15	11.087	2242.81	4.827	6311	83.2	11.804	0.0099	15.949	0.0744	188.269	6.752
80	1560.90	9.371	2766.81	9.520	6988	77.5	11.577	0.0140	22.323	0.0669	258.436	6.040
90	1857.32	13.771	3249.85	26.297	7495	73.7	11.303	0.0138	29.352	0.1520	331.755	5.598
100	1954.50	9.415	3460.49	9.759	7763	75.1	11.118	0.0112	33.383	0.1526	371.149	5.266

Measurement Results 2:

Output [%]	Thrust [G] mean	std dev	Torque [G cm] mean	std dev	RPM [1/min] mean	std dev	Voltage [V] mean	std dev	Current [A] mean	std dev	Pin [W]	ThrustEff [G/W]
20	62.31	2.437	200.64	3.399	1799	58.5	12.088	0.0058	0.672	0.0298	8.123	7.671
30	155.32	2.415	382.30	3.313	2522	58.3	12.066	0.0043	1.408	0.0362	16.985	9.144
40	348.12	2.466	686.98	3.386	3469	59.2	12.013	0.0054	3.101	0.0450	37.253	9.345
50	593.26	3.188	1094.61	3.358	4404	59.5	11.929	0.0068	5.883	0.0570	70.175	8.454
60	848.13	3.041	1580.52	3.421	5258	67.4	11.799	0.0093	9.778	0.0658	115.376	7.351
70	1153.62	5.190	2055.95	4.709	6003	71.1	11.648	0.0082	14.280	0.0594	166.339	6.935
80	1442.80	4.958	2540.91	6.297	6640	75.2	11.460	0.0114	19.906	0.0561	228.126	6.325
90	1693.13	10.990	2990.33	10.882	7186	70.2	11.247	0.0154	26.032	0.0754	292.786	5.783
100	1940.58	5.366	3410.40	15.317	7639	72.6	11.005	0.0131	32.880	0.1813	361.829	5.363

Measurement Results 3:

Output [%]	Thrust [G] mean	std dev	Torque [G cm] mean	std dev	RPM [1/min] mean	std dev	Voltage [V] mean	std dev	Current [A] mean	std dev	Pin [W]	ThrustEff [G/W]
20	61.66	6.842	196.12	3.910	1738	15.3	11.924	0.0044	0.623	0.0306	7.425	8.304
30	152.89	6.769	372.59	3.840	2459	11.1	11.904	0.0050	1.399	0.0400	16.651	9.182
40	343.45	6.776	671.06	3.848	3389	19.4	11.854	0.0048	3.031	0.0412	35.931	9.559
50	585.70	7.625	1071.67	3.834	4320	17.7	11.777	0.0060	5.785	0.0652	68.123	8.598
60	833.27	7.643	1533.01	4.782	5176	23.9	11.649	0.0122	9.535	0.0755	111.070	7.502
70	1107.99	7.148	2008.62	4.183	5887	37.5	11.486	0.0098	14.046	0.0711	161.322	6.868
80	1394.59	8.153	2461.93	5.646	6543	49.1	11.304	0.0132	19.352	0.0725	218.743	6.375
90	1652.65	9.555	2917.27	8.046	7081	46.2	11.093	0.0136	25.446	0.0661	282.279	5.855
100	1904.55	7.407	3338.82	12.606	7527	44.6	10.869	0.0135	32.359	0.1670	351.711	5.415

Measurement Results 4:

| Output | Thrust [G] | | Torque [G cm] | | RPM [1/min] | | Voltage [V] | | Current [A] | | Pin [W] | ThrustEff |
[%]	mean	std dev	mean	std dev	mean	std dev	mean	std dev	mean	std dev		[G/W]
20	63.37	5.798	185.57	4.999	1706	17.5	11.677	0.0043	0.607	0.0407	7.088	8.940
30	143.52	5.720	356.08	4.860	2408	11.8	11.659	0.0054	1.335	0.0320	15.568	9.219
40	330.37	5.707	647.92	4.903	3332	13.9	11.616	0.0058	2.942	0.0534	34.180	9.666
50	559.48	6.039	1035.51	4.903	4245	18.8	11.547	0.0063	5.591	0.0515	64.559	8.666
60	809.08	5.806	1494.28	5.155	5098	31.1	11.434	0.0077	9.283	0.0650	106.149	7.622
70	1083.07	6.465	1956.02	6.139	5822	51.7	11.304	0.0082	13.721	0.0953	155.106	6.983
80	1364.57	9.399	2427.25	7.545	6458	36.4	11.136	0.0087	19.064	0.0666	212.295	6.428
90	1616.66	6.655	2858.37	7.062	7009	38.4	10.951	0.0103	24.959	0.0655	273.329	5.915
100	1869.98	6.310	3286.13	12.909	7472	29.7	10.740	0.0107	31.794	0.1884	341.459	5.476

Plots for Measurement Results: