

# SailServo

## Acd1, Acd2, Dcd1, Dcd2

Transmitter/Receiver:- Spectrum Dx5e/AR500 Rudder Ch4 Hi Mode Output 1.16 / 1.88ms =0.72ms 3.5/9v 5A

6v Bench supply

Short Measured drum rotation and travel at no load  
 Distance drum does not rotate back to zero when pulled in  
 Long Drum rotation increases as more load is applied  
 Time to pull in 100mm cord. Sec/100mm

Speed Drop Bands		
Drop 10% =	0 - 10%	Speed Drop
Drop 20% =	10 - 20%	
Drop 30% =	20 - 30%	
Drop 40% =	30 - 40%	

27 Jan 13 Circumference 78.6 mm Drum diameter 25mm

Acd1		0.8 - 2.2 = 1.4		deg = 2755 = 627		mm		1968 =deg/ms		0.228 mm/deg		448 =mm/ms					
ss210		1.0 - 2.0 = 1.0ms = 1970deg = 5.5T = 450mm						Speed Drop			Running			Hold			
Kg	Load	Short	Turns	Long	Total	Time	sec/	Sec/	rpm	%	V	CA	W	V	CA	W	
.cm		mm deg	deg	deg	Deg mm		100mm	3 rev									
0.0	0.0				1435	327	6.8	2.1	3.58	50	0%	5.95	0.10	0.6	6.00	0.01	0.1
0.6	0.5	-9	-40		1395	317	6.5	2.0	3.89	46	8%	5.85	0.25	1.5	6.00	0.01	0.1
1.3	1.0	-13	-60		1375	313	7.3	2.3	4.20	43	15%	5.83	0.35	2.0	6.00	0.01	0.1
1.9	1.5	-22	-100		1335	304	7.2	2.4	4.63	39	23%	5.73	0.45	2.6	6.00	0.01	0.1
2.5	2.0	-28	-130		1305	297	8.1	2.7	5.17	35	31%	5.67	0.55	3.1	6.00	0.01	0.1
3.1	2.5	-35	-160	+30	1305	297	9.3	3.1	5.75	31	38%	6.60	0.65	4.3	5.90	0.20	1.2

Acd2		0.8 - 2.2 = 1.4		deg = 2350 = 530		mm		1679 =deg/ms		0.226 mm/deg		379 =mm/ms					
ss304		1.0 - 2.0 = 1.0ms = 1680deg = 4.7T = 380mm						Speed Drop			Running			Hold			
Kg	Load	Short	Turns	Long	Total	Time	sec/	Sec/	rpm	%	V	CA	W	V	CA	W	
.cm		mm deg	deg	deg	Deg mm		100mm	2 rev									
0.0	0.0				1210	273	3.6	1.3	1.70	71	0%	5.90	0.18	1.1	6.00	0.01	0.1
0.6	0.5	-11	-50		1160	262	4.0	1.5	1.90	63	11%	5.80	0.33	1.9	6.00	0.01	0.1
1.3	1.0	-20	-90		1120	253	4.7	1.9	2.38	50	29%	5.70	0.50	2.9	5.91	0.14	0.8

Dcd1		0.9 - 2.1 = 1.2		deg = 1790 = 405		mm		1492 =deg/ms		0.226 mm/deg		338 =mm/ms					
ss401		1.0 - 2.0 = 1.0ms = 1470deg = 4.1T = 340mm						Speed Band			Running			Hold			
Kg	Load	Short	Turns	Long	Total	Time	sec/	Sec/	rpm	%	V	CA	W	V	CA	W	
.cm		mm deg	deg	deg	Deg mm		100mm	3 rev									
0.0	0.0				1135	257	1.2	0.5	1.24	165	0%	5.90	0.20	1.2	6.00	0.01	0.1
0.6	0.5	-2	-10		1125	255	1.4	0.6	1.35	145	12%	5.70	0.60	3.4	5.85	0.20	1.2
1.3	1.0	-7	-30	+5	1110	251	1.8	0.7	1.66	117	29%	5.50	0.90	5.0	5.75	0.45	2.6

Dcd2		0.9 - 2.1 = 1.20		deg = 1800 = 400		mm		1500 =deg/ms		0.225 mm/deg		340 =mm/ms					
ss505		1.0 - 2.0 = 1.0ms = 1500deg = 4.2T = 330mm						Speed Band			Running			Hold			
Kg	Load	Short	Turns	Long	Total	Time	sec/	Sec/	rpm	%	V	CA	W	V	CA	W	
.cm		mm deg	deg	deg	Deg mm		100mm	3 rev									
0.0	0.0				1100	248	2.0	0.9	2.0	94	0%	5.67	0.30	1.7	6.00	0.01	0.1
0.6	0.5	-2	-10		1090	245	2.2	0.9	2.2	86	9%	5.40	0.50	2.7	5.93	0.10	0.6
1.3	1.0	-3	-15		1085	244	2.2	1.0	2.2	83	12%	5.14	0.70	3.6	5.85	0.30	1.8
1.9	1.5	-5	-25		1075	242	2.4	1.0	2.4	78	17%	5.11	0.90	4.6	5.79	0.40	2.3
2.5	2.0	-7	-30	+10	1070	243	2.6	1.1	2.6	71	24%	5.09	1.10	5.6	5.53	0.60	3.3
3.1	2.5	-8	-35	+20	1065	244	2.9	1.2	2.9	63	33%	4.96	1.25	6.2	5.40	0.70	3.8
3.8	3.0	-10	-45	+30	1055	244	3.2	1.4	3.2	56	40%	4.73	1.50	7.1	5.37	0.90	4.8