

Final Glide Table (SZD-51-1 Junior at 333 kg all-up-weight)												
by Paul E. Remde		Instructions Use the value of the last or current thermal to determine when to begin your final glide. For example: Assume you are climbing at 800 ft/min. Look-up the altitude required using a MacCready setting of 800. If you cannot make it home using this MacCready setting, you should continue on to the next thermal rather than flying home at a slower MacCready setting. This will maximize your speed around the course.										
ENTER	Reserve Altitude for Pattern 1000 feet Note: If your altimeter is set to MSL altitude, be sure to add the destination elevation to the altitude required.											
MacCready m/s		Headwind				Wind				Tailwind	Units	
		40	30	20	10	0	-10	-20	-30	-40	knots	
0	Altitude Required To Go	5 mi	3,800	2,900	2,400	2,000	1,800	1,600	1,500	1,400	1,400	feet
		10 mi	6,600	4,800	3,700	3,000	2,700	2,200	2,000	1,900	1,800	feet
		20 mi	12,200	8,600	6,400	5,000	4,300	3,400	3,000	2,800	2,600	feet
		30 mi	17,700	12,300	9,100	7,000	6,000	4,600	4,100	3,700	3,400	feet
		40 mi	23,300	16,100	11,900	9,000	7,700	5,800	5,100	4,600	4,100	feet
		50 mi	28,900	19,900	14,600	11,000	9,300	7,000	6,100	5,400	4,900	feet
	Speed To Fly		78	66	58	53	50	48	46	45	44	mph
	Set Speed Ring To		2.2	1.1	0.5	0.2	0	-0.1	-0.2	-0.3	-0.3	m/s
	Velocity Over the Ground		32	31	35	41	50	59	69	80	90	mph
	Average Cruise Speed		0	0	0	0	0	0	0	0	0	mph
	Glide Ratio		9	14	19	26	32	44	52	59	67	
	Sink Rate		-1.5	-1	-0.8	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	m/s
MacCready m/s		Headwind				Wind				Tailwind	Units	
		40	30	20	10	0	-10	-20	-30	-40	knots	
0.5	Altitude Required To Go	5 mi	3,900	3,100	2,400	2,100	1,800	1,600	1,600	1,500	1,400	feet
		10 mi	6,800	5,200	3,900	3,100	2,600	2,300	2,100	2,000	1,700	feet
		20 mi	12,600	9,400	6,800	5,200	4,300	3,500	3,200	3,000	2,500	feet
		30 mi	18,400	13,500	9,600	7,300	5,900	4,800	4,300	3,900	3,200	feet
		40 mi	24,200	17,700	12,500	9,500	7,600	6,000	5,400	4,900	4,000	feet
		50 mi	30,000	21,900	15,400	11,600	9,200	7,300	6,500	5,900	4,700	feet
	Speed To Fly		89	77	68	62	57	54	52	50	49	mph
	Set Speed Ring To		3.3	2.1	1.3	0.8	0.5	0.3	0.1	0	0	m/s
	Velocity Over the Ground		43	42	45	50	57	66	75	85	95	mph
	Average Cruise Speed		8	11	14	18	22	27	31	35	43	mph
	Glide Ratio		9	13	18	25	32	42	48	54	71	
	Sink Rate		-2.1	-1.5	-1.1	-0.9	-0.8	-0.7	-0.7	-0.7	-0.6	m/s

MacCready m/s		Headwind				Wind				Tailwind		Units
		40	30	20	10	0	-10	-20	-30	-40		knots
1	Altitude Required To Go											
	5 mi	4,100	3,200	2,500	2,100	1,900	1,700	1,600	1,500	1,400	feet	
	10 mi	7,200	5,400	4,100	3,200	2,800	2,500	2,200	1,900	1,800	feet	
	20 mi	13,400	9,800	7,200	5,500	4,700	4,000	3,400	2,800	2,700	feet	
	30 mi	19,600	14,200	10,300	7,700	6,500	5,400	4,500	3,800	3,500	feet	
	40 mi	25,800	18,500	13,400	10,000	8,400	6,900	5,700	4,700	4,300	feet	
	50 mi	32,000	22,900	16,500	12,200	10,200	8,400	6,900	5,600	5,200	feet	
	Speed To Fly	98	86	76	69	64	60	57	55	53	mph	
	Set Speed Ring To	4.3	3	2	1.4	1	0.7	0.5	0.3	0.2	m/s	
	Velocity Over the Ground	51	51	53	58	64	72	80	89	99	mph	
1.5	Average Cruise Speed	14	18	22	28	32	38	45	53	58	mph	
	Glide Ratio	9	12	17	24	29	36	45	57	63		
	Sink Rate	-2.7	-1.9	-1.4	-1.1	-1	-0.9	-0.8	-0.7	-0.7	m/s	
MacCready m/s		Headwind				Wind				Tailwind		Units
		40	30	20	10	0	-10	-20	-30	-40		knots
2	Altitude Required To Go											
	5 mi	4,400	3,500	2,900	2,400	2,100	1,900	1,700	1,600	1,500	feet	
	10 mi	7,900	6,100	4,900	3,800	3,200	2,700	2,400	2,200	2,000	feet	
	20 mi	14,700	11,100	8,800	6,700	5,400	4,400	3,900	3,400	3,000	feet	
	30 mi	21,600	16,200	12,600	9,500	7,500	6,200	5,300	4,600	4,000	feet	
	40 mi	28,400	21,300	16,500	12,400	9,700	7,900	6,800	5,800	5,000	feet	
	50 mi	35,300	26,300	20,400	15,200	11,900	9,600	8,200	7,000	6,000	feet	
	Speed To Fly	112	100	90	82	76	71	67	64	61	mph	
	Set Speed Ring To	6.1	4.5	3.4	2.6	2	1.6	1.2	0.9	0.8	m/s	
	Velocity Over the Ground	66	65	67	71	76	82	90	98	107	mph	
2	Average Cruise Speed	23	27	32	38	45	51	58	65	74	mph	
	Glide Ratio	8	10	14	19	24	31	37	44	53		
	Sink Rate	-3.8	-2.8	-2.2	-1.7	-1.4	-1.2	-1.1	-1	-0.9	m/s	

MacCready m/s		Headwind				Wind				Tailwind		Units
		40	30	20	10	0	-10	-20	-30	-40		knots
2.5	Altitude Required To Go 5 mi	4,600	3,700	3,100	2,500	2,200	1,900	1,800	1,600	1,500		feet
	10 mi	8,100	6,500	5,200	4,100	3,500	2,900	2,500	2,300	2,100		feet
	20 mi	15,200	11,900	9,400	7,200	6,000	4,800	4,000	3,500	3,100		feet
	30 mi	22,300	17,400	13,600	10,300	8,400	6,700	5,500	4,800	4,200		feet
	40 mi	29,400	22,900	17,800	13,400	10,900	8,600	7,000	6,100	5,300		feet
	50 mi	36,500	28,300	22,100	16,500	13,400	10,500	8,500	7,400	6,300		feet
	Speed To Fly	118	106	96	88	81	76	71	68	65		mph
	Set Speed Ring To	6.9	5.3	4.1	3.2	2.5	2	1.6	1.3	1		m/s
	Velocity Over the Ground	71	71	73	76	81	87	94	102	111		mph
	Average Cruise Speed	26	31	36	42	48	56	64	71	79		mph
3	Glide Ratio	7	10	13	17	21	28	35	42	50		
	Sink Rate	-4.3	-3.3	-2.6	-2	-1.7	-1.4	-1.2	-1.1	-1		m/s
MacCready m/s		Headwind				Wind				Tailwind		Units
		40	30	20	10	0	-10	-20	-30	-40		knots
3	Altitude Required To Go 5 mi	4,800	3,900	3,300	2,700	2,300	2,000	1,800	1,700	1,600		feet
	10 mi	8,500	6,800	5,500	4,500	3,600	3,100	2,700	2,300	2,100		feet
	20 mi	16,000	12,700	10,000	8,000	6,200	5,100	4,400	3,700	3,300		feet
	30 mi	23,500	18,500	14,600	11,400	8,800	7,200	6,000	5,000	4,400		feet
	40 mi	31,000	24,400	19,100	14,900	11,400	9,200	7,700	6,300	5,500		feet
	50 mi	38,600	30,200	23,600	18,400	14,000	11,300	9,400	7,700	6,700		feet
	Speed To Fly	123	111	101	93	86	80	76	72	68		mph
	Set Speed Ring To	7.7	6.1	4.8	3.8	3	2.4	2	1.6	1.4		m/s
	Velocity Over the Ground	77	77	78	81	86	92	99	106	114		mph
	Average Cruise Speed	29	34	39	45	53	60	67	76	84		mph
3.5	Glide Ratio	7	9	12	15	20	26	31	40	47		
	Sink Rate	-4.9	-3.8	-3	-2.4	-1.9	-1.6	-1.4	-1.2	-1.1		m/s
MacCready m/s		Headwind				Wind				Tailwind		Units
		40	30	20	10	0	-10	-20	-30	-40		knots
3.5	Altitude Required To Go 5 mi	4,900	4,100	3,400	2,800	2,400	2,200	1,900	1,800	1,600		feet
	10 mi	8,800	7,200	5,800	4,700	3,900	3,300	2,800	2,500	2,200		feet
	20 mi	16,500	13,400	10,600	8,400	6,700	5,700	4,700	4,000	3,400		feet
	30 mi	24,300	19,600	15,400	12,100	9,600	8,000	6,500	5,500	4,600		feet
	40 mi	32,000	25,800	20,300	15,800	12,500	10,300	8,400	7,000	5,800		feet
	50 mi	39,800	32,000	25,100	19,500	15,300	12,700	10,200	8,500	7,000		feet
	Speed To Fly	128	117	106	98	91	85	80	75	72		mph
	Set Speed Ring To	8.5	6.8	5.4	4.3	3.5	2.9	2.4	2	1.7		m/s
	Velocity Over the Ground	82	82	83	86	91	96	103	110	118		mph
	Average Cruise Speed	32	37	42	49	56	62	70	79	88		mph
3.5	Glide Ratio	7	9	11	14	18	23	29	35	44		
	Sink Rate	-5.4	-4.3	-3.4	-2.7	-2.2	-1.9	-1.6	-1.4	-1.2		m/s

MacCready m/s		Headwind				Wind				Tailwind		Units
		40	30	20	10	0	-10	-20	-30	-40		knots
4	Altitude Required To Go 5 mi	5,100	4,200	3,500	2,900	2,600	2,200	2,000	1,800	1,700		feet
	10 mi	9,100	7,400	6,100	4,900	4,100	3,500	3,000	2,700	2,400		feet
	20 mi	17,300	13,800	11,200	8,800	7,200	5,900	5,000	4,300	3,700		feet
	30 mi	25,400	20,200	16,300	12,700	10,300	8,400	7,000	6,000	5,100		feet
	40 mi	33,600	26,600	21,400	16,600	13,400	10,900	9,000	7,600	6,400		feet
	50 mi	41,700	33,000	26,400	20,500	16,500	13,400	11,000	9,300	7,800		feet
	Speed To Fly	133	121	111	102	95	89	84	79	75		mph
	Set Speed Ring To	9.3	7.5	6	4.9	4	3.3	2.7	2.3	2		m/s
	Velocity Over the Ground	87	87	88	91	95	100	107	114	121		mph
	Average Cruise Speed	35	40	45	52	59	66	74	81	90		mph
MacCready m/s	Glide Ratio	6	8	10	14	17	21	26	32	39		
	Sink Rate	-6	-4.7	-3.8	-3	-2.5	-2.1	-1.8	-1.6	-1.4		m/s
4.5	Altitude Required To Go 5 mi	5,200	4,400	3,700	3,100	2,700	2,400	2,100	1,900	1,700		feet
	10 mi	9,400	7,700	6,300	5,200	4,300	3,700	3,100	2,700	2,400		feet
	20 mi	17,800	14,400	11,700	9,400	7,700	6,400	5,300	4,400	3,800		feet
	30 mi	26,100	21,100	17,000	13,600	11,000	9,100	7,400	6,100	5,300		feet
	40 mi	34,500	27,900	22,400	17,800	14,300	11,900	9,600	7,900	6,700		feet
	50 mi	42,900	34,600	27,700	22,000	17,600	14,600	11,700	9,600	8,100		feet
	Speed To Fly	138	126	116	107	99	93	87	83	79		mph
	Set Speed Ring To	10	8.2	6.7	5.5	4.5	3.7	3.1	2.7	2.3		m/s
	Velocity Over the Ground	92	91	93	95	99	104	110	117	125		mph
	Average Cruise Speed	37	42	48	54	61	68	76	85	94		mph
MacCready m/s	Glide Ratio	6	8	10	13	16	19	25	31	37		
	Sink Rate	-6.5	-5.2	-4.2	-3.4	-2.8	-2.4	-2	-1.7	-1.5		m/s
5	Altitude Required To Go 5 mi	5,400	4,500	3,800	3,300	2,800	2,400	2,100	1,900	1,800		feet
	10 mi	9,700	8,000	6,600	5,500	4,500	3,800	3,300	2,900	2,600		feet
	20 mi	18,500	15,000	12,200	10,000	8,100	6,700	5,600	4,700	4,100		feet
	30 mi	27,200	22,100	17,800	14,500	11,600	9,500	7,800	6,600	5,700		feet
	40 mi	35,900	29,100	23,400	19,000	15,200	12,300	10,100	8,400	7,300		feet
	50 mi	44,700	36,100	29,000	23,500	18,700	15,200	12,400	10,300	8,800		feet
	Speed To Fly	142	130	120	111	103	97	91	86	82		mph
	Set Speed Ring To	10.8	8.9	7.3	6	5	4.2	3.5	3	2.6		m/s
	Velocity Over the Ground	96	96	97	100	103	108	114	121	128		mph
	Average Cruise Speed	40	45	51	57	64	71	79	87	96		mph
MacCready m/s	Glide Ratio	6	8	9	12	15	19	23	28	34		
	Sink Rate	-7.1	-5.7	-4.6	-3.8	-3.1	-2.6	-2.2	-1.9	-1.7		m/s