

PCU COMMAND SUMMARY

xx09-xx10 Version 2.00 - 2.xx

0	00	NUL	ignored in sio			64	40	@	GPS position, min		msg@_
1	01	SOH				65	41	A	absolute az	Addd@_	*
2	02	STX				66	42	B	absolute hdg hard	Bddd@_	*
3	03	ETX				67	43	C			
4	04	EOT				68	44	D	absolute hdg soft	Dddd@_	*
5	05	ENQ				69	45	E	absolute el	Eddd@_	*
6	06	ACK				70	46	F			
7	07	BEL				71	47	G			
8	08	BS				72	48	H	read R H	H	msg@_
9	09	HT				73	49	I	absolute CL	Iddd@_	*
10	0A	LF				74	4A	J	absolute rel	Jddd@_	*
11	0B	VT				75	4B	K			
12	0C	FF				76	4C	L	echo msg=Lddd	Lddd@_	msg*_
13	0D	CR	cmd terminator	_		77	4D	M			
14	0E	SO				78	4E	N	set parameters	Nddd@_	msg*_
15	0F	SI				79	4F	O	port e output	Ohhhh@_	*
16	10	DLE				80	50	P	read E A C	P	msg@_
17	11	DC1				81	51	Q			
18	12	DC2				82	52	R			
19	13	DC3				83	53	S	read S (sio)	S	msg@_
20	14	DC4				84	54	T			
21	15	NAK				85	55	U			
22	16	SYN				86	56	V	PCU version	V	msg_
23	17	ETB				87	57	W	read VCs	W	msg@_
24	18	CAN				88	58	X			
25	19	EM				89	59	Y			
26	1A	SUB				90	5A	Z	diag test start(res)	Znnnn@_	*
27	1B	ESC				91	5B	[			
28	1C	FS				92	5C	\			
29	1D	GS				93	5D	]	Motor Drv Com		
30	1E	RS				94	5E	^	utility cmds	^ddd@_	*
31	1F	US	reserved for conscan pulse			95	5F	_			
32	20	sp				96	60	`			
33	21	!				97	61	a	incremental az	ai@_	*
34	22	"				98	62	b	incremental hdg	bi@_	*
35	23	#				99	63	c			
36	24	\$				100	64	d	debug	d	msg@_
37	25	%				101	65	e	incremental el	ei@_	*
38	26	&	clear errors	&	*	102	66	f			
39	27	'				103	67	g	write pol	gddd@_	*
40	28	(				104	68	h	write pwm	hddd@_	*
41	29	)				105	69	i	differential CL	idd@_	*
42	2A	*	reserved for positive command response			106	6A	j	differential LV	jddd@_	*
43	2B	+	reset rc in sio	+		107	6B	k	differential AZ	kddd@_	*
44	2C	,				108	6C	l	lumped CL,LV,AZ		
45	2D	-				109	6D	m			
46	2E	.				110	6E	n	same as N		
47	2F	/				111	6F	o			
48	30	0				112	70	p	read EAC in hex	p	msg@_
49	31	1				113	71	q			
50	32	2	dec lvtrm ±	2	*	114	72	r			
51	33	3				115	73	s			
52	34	4	dec cltrm ±	4	*	116	74	t	read raw tilt	t	msg@_
53	35	5	clr trms ±	5	*	117	75	u	read Pol & aux	u	msg@_
54	36	6	inc cltrm ±	6	*	118	76	v	read references	v	msg@_
55	37	7	TAAC off	7		119	77	w	read QRSS	w	msg@_
56	38	8	inc lvtrm ±	8	*	120	78	x	read IVCs	x	msg@_
57	39	9	TAAC on	9		121	79	y	read TCs	y	msg@_
58	3A	:				122	7A	z			
59	3B	;				123	7B	{			
60	3C	<	Modem Com BDE			124	7C				
61	3D	=	GPS position, .0000 min		msg@_	125	7D	}			
62	3E	>	Modem Com ADE			126	7E	~			
63	3F	?	reserved for negative command response			127	7F	DEL			

‡ enabled only in test mode

© checksum

UTILITIES (.94)				
0	std mode	^0000		
C	Toggle DishScan	^0067		
F	Slow Scan	^0070		
G	Sat Reference	^0071		
V	Cksum off	^0086		
T	Test/Tilt mode	^0084		
W	NV write	^0087		
Z	Reset	^0090		
2	Trim Up	^0002		
4	Trim Left	^0004		
5	Trim Clear	^0005		
6	Trim Right	^0006		
7	TAAC off	^0007		
8	Trim Down	^0008		
9	TAAC on	^0009		
1nnn	CL DC torque	^1nnn		
2nnn	LV DC torque	^2nnn		
3nnn	AZ DC torque	^3nnn		
Checksum for ^0086 = Alt+0172 (0xAC)				
n / N PARAMETERS (.78) or (.110)				
n / N	Parameter	Format		
0	Stype	n0nnn	N0nnn	
1	CL Kp	n1nnn	N1nnn	
2	LV Kp	n2nnn	N2nnn	
3	AZ Kp	n3nnn	N3nnn	
4	CL trim	n4nnn	N4nnn	
5	LV trim	n5nnn	N5nnn	
6	HF trim	n6nnn	N6nnn	
7	DishScan	n7nnn	N7nnn	
8	Scan Rate	n8nnn	N8nnn	
9	Error Byte	n9nnn	N9nnn	
A/:	System ID	nAnnn n:nnn	NAnnn N:nnn	
B/;	Tim40S	nBnnn n:nnn	NBnnn N:nnn	
System	N0	N1	N2 N3 N7 Index	
6009C	3	60	34 34 22 3	
	4	40	20 20 26 4	
	5	50	40 20 21 5	
	6	60	34 34 22 6	
	7	30	16 16 26 7	
4009	4	40	20 20 26 4	
5009	5	50	40 20 21 5	
6009K	6	60	34 34 22 6	
4009Mini	7	30	16 16 26 7	
4010	76	40	30 14 25 12	
	77	50	50 26 25 13	
	78	50	50 26 25 14	
				15
N7				
Phase		Drive CL	AZ EL	
-45	0	Max	0 0 0	
+0	64	1/2	16 4 1	
+45	128	1/4	32 8 2	
+90	192	1/8	48 12 3	

'O' command bit assignments

Bit	Nibble 3	Nibble 2	Nibble 1	Nibble 0
3	XXX	XXX	5V Sw	LNB Voltage
2	XXX	XXX	Bridge 2B	Motor 1B
1	XXX	XXX	Bridge 2A	Motor 1A
0	XXX	Aux2	LNB Tone	Aux1 (coax sw)

Software Part Numbers

131579

Application

09Mk2

Status word bit assignments

Bit	Word 1	Word2	Word 3
7	Spare	El Target	Initialization Failure
6	1	1	1
5	SlowScan	Az Target	Motor Driver Error
4	Sat Ref	Sat Ref Active	Stabilization Limit
3	DishScan	Hdg Valid	Az Reference Error
2	Unwrap	Error Flag	Az Torque Limit Error
1	Data in 3	Init	Lv Torque Limit Error
0	TAAC on	Hi Elevation	CI Torque Limit Error