

Alidade wire harnessing: controller box									
Reference ELMCOOverview.vsd									
5-Apr-06									
AWC1 Power from relay board to power mgmt board									
	A	Description	B	Comment	Color	Size	Twist	Length	
Wires	1	100 VAC "L"			White	18		15"	
	2	Return "N"			Black	18		15"	
	3	Ground			Green	18		15"	
Ends	A	IEC-320 0.25 quick disconnect F insulated							
	B	spade fork term #6, unins bent heat shrink							
AWC2 25-wire cable from alidade relay board									
	A	Description	B,C,D	Comment	Color	Size	Twist	Length	
Wires/pins	1	brakes +24V	C1	power mgmt board	brown	all wires #22 AWG	Z	7.5"	
	2	Ground	C2		black		Z	7.5"	
	3	24V aux	D1		purple		Y	7.5"	
	4	Ground	D2		black		Y	7.5"	
	5	+5V	B19	microcontroller board	red		X	7.5"	
	6	Ground	B15		black		X	7.5"	
	7	float in	B6		green			7.5"	
	8	T 2 input	B9		blue			7.5"	
	9	T 4 input	B10		yellow			7.5"	
	10	Az brake sense	B13		white			7.5"	
	11	Latch	B7		orange			7.5"	
	12	Pot 1 (GND)	B18		black		W	7.5"	
	13	Pot wiper	B16		green			7.5"	
	14	brakes +24V	C1	power mgmt board	brown		Z	7.5"	
	15	Ground	C2		black		Z	7.5"	
	16	24V aux	D1		purple		Y	7.5"	
	17	Ground	D2		black		Y	7.5"	
	18	+5V	B20	microcontroller board	red		X	7.5"	
	19	Ground	B3		black		X	7.5"	
	20	T 1 input	B11		green			7.5"	
	21	T 3 input	B12		blue			7.5"	
	22	electronics reset (on/off)	B5		yellow			7.5"	
	23	EI brake sense	B8		white			7.5"	
	24	Unlatch (drives on/off)	B14		grey			7.5"	
	25	Pot 2 (+5V)	B17		red		W	7.5"	
Ends	A	56-126-004	filtered D25 Socket on top of control b				connects to AWE7B		
	B	22-55-2201/16-02-0102	2x10 100mil ucntlr board						
	C	770849-2/770522-1	power mgmt board		relay/brakes				
	D	770849-2/770522-1	power mgmt board		HV aux				
B:									
1: N/C 3: GND 5: RST 7: LTCH 9: T2 11: T1 13: ABS 15: GND 17: P5V 19: +5V									
2: N/C 4: N/C 6: FLT 8: EBS 10: T4 12: T3 14: ULTC 16: WPR 18: GND 20: +5V									
AWC3 encoder for azimuth (P/N: R176H-03600Q-5L10-AT40SP-24MN)									
	A	Description	B, C	Comment	Color	Size	Twist	Length	
Wires/pins	1	A	3		yellow	all wires #24 AWG	Z	5.75	
	2	B	5		green		Y	5.75	
	3	IND (Z)	7		blue		X	5.75	
	4	N/C	C		bare			2	
	5	+5V	9		red		W	5.75	
	6	/A	4		brown		Z	5.75	
	7	/B	6		orange		Y	5.75	
	8	/IND (Z)	8		white		X	5.75	
	9	COMMON	10		black		W	5.75	
Ends	A	56-106-010	filtered Dsub 9 socket on control box			connects to AWE12A			
	B	22-55-2101/16-02-0102	2x5 0.100" on ucntlr card						
	C	spade							
		1: NC 3: A 5: B 7: Z(IND) 9: +5V							
		2: NC 4: /A 6: /B 8: /Z(IND) 10: GND							
						in-line w/ battery			

AWC4 encoder for elevation (P/N: 9220S03600D5L10D99SP04EA)									
	A	Description	B, C	Comment	Color	Size	Twist	Length	
Wires/pins	1	A	3		yellow	all wires #24 AWG	Z	5.75	
	2	B	5		green		Y	5.75	
	3	IND (Z)	7		blue		X	5.75	
	4	N/C	C		bare			2	
	5	+5V	9		red		W	5.75	
	6	/A	4		brown		Z	5.75	
	7	/B	6		orange		Y	5.75	
	8	/IND (Z)	8		white		X	5.75	
	9	COMMON	10		black		W	5.75	
Ends	A	56-106-010		D9S		connects to AWE13A			
	B	22-55-2101/16-02-0102		2x5 0.100" on ucntlr card					
	C	spade							
		1: NC	3: A	5: B	7: Z(IND)	9: +5V			
		2: NC	4: /A	6: /B	8: /Z(IND)	10: GND			
AWC5 battery									
	A	Description	B	Comment	Color	Size	Twist	Length	
Wires/pins	1	+12V	1	use 1-#18	red	18		4	
	2	+12V	1	or 3-#22	red	same wire			
	3	N/C							
	4	GND	2	use 1-#18	black	18		4	
	5	GND	2	or 3-#22	black	same wire			
	6	+12V	1		red	same wire			
	7	N/C							
	8	N/C							
	9	GND	2		black	same wire			
Ends	A	56-101-010		D9P		connects to AWE14A			
	B	770849-2/770522-1							
AWC6 standard CAT5 cable RJ-45									
									12
AWC7 9V to media converter from power mgmt board									
	A	Description	B	Comment	Color	Size	Twist	Length	
Wires	1	+9V	1		black/white	20		13	
	2	Common	2		black	20		13	
Ends	A	round							
	B	770849-2/770522-1		This connector numbering is opposite to 0.100" connectors					
AWC8 24 V from power supply to power mgmt board									
	A	Description	B	Comment	Color	Size	Twist	Length	
Wires	1	+24V	1		red	18		8.25	
	2	Common	2		black	18		8.25	
Ends	A	spade fork #6x18							
	B	770849-2/770522-1							
AWC9 5V to SBC									
	A	Description	B	Comment	Color	Size	Twist	Length	
Wires	1	+5V	1		red	18		7.5	
	2	Common	2		black	18		7.5	
Ends	A	15-24-4048							
	B	770849-2/770522-1							
AWC10 12 VDC from Power Management to uCntlr board									
	A	Description	B	Comment	Color	Size	Twist	Length	
Wires	1	+12V	1		red	18		4.5	
	2	Common	2		black	18		4.5	
Ends	A	770849-2/770522-1							
	B	770849-2/770522-1		0.156" pitch					

AWC11 SBC reset (goes between the uCntrlr board and SBC)								
	A	Description	B	Comment	Color	Size	Twist	Length
Wires	1	power	1		red	24	Z	9
	2	ground	2		black	24	Z	9
	3	reset	3		green	24	Z	9
	4	N/C	4	pin 1 on inboard side				
	5	N/C	5					
Ends	A	50-57-9005/16-02-0102	1x5 100mil connector on ucntrlr card					
	B	50-57-9005/16-02-0102	1x5 100mil connector on SBC					
AWC12 electronics on/off (between uCntrlr board and power management board)								
	A	Description	B	Comment	Color	Size	Twist	Length
Wires	1	electronics on/off	1		green	24	Z	6.5
	2	ground	2		black	24	Z	6.5
	3	battery voltage /3	3		yellow	24	Z	6.5
Ends	A	50-57-9003/16-02-0102						
	B	50-57-9003/16-02-0102						
AWC13 short cat 5 crossover cable between SBC (second LAN) and uCntrlr board								
crossover CAT5 cable								6"