

## HCFA Maccon I Connections

VME4SA-F1 Connector		HCFA RACK			Comments
Function Connector Pin	Instrument Unit	Terminal Strip	Phoenix 108	Phoenix 64	
E8	ADC In/Out Motor +	Ts1 1		1A	rd
E5	ADC In/Out Motor -	Ts1 2		2A	wh
D7	ADC In/Out Motor Shield	Ts1 3			
E3	Tacho ADC In/Out +	Ts1 4		4A	gn
E2	Tacho ADC In/Out -	Ts1 5		5A	wh
E4	Tacho ADC In/Out Shield	Ts1 6			
A4	Encoder ADC In/Out $U_{a0(zp)}$	Ts1 7	1		gr
A2	Encoder ADC In/Out $U_{a0^*(zp)}$	Ts1 8	19		or
A8	Encoder ADC In/Out $U_{a1(sin)}$	Ts1 9	37		wt
A6	Encoder ADC In/Out $U_{a1^*(sin)}$	Ts1 10	55		vi
B7	Encoder ADC In/Out $U_{a2(cos)}$	Ts1 11	73		rd
B5	Encoder ADC In/Out $U_{a2^*(cos)}$	Ts1 12	91		bu
C6	Encoder ADC In/Out Shield	Ts1 13			
C3	1k resistor to C2				
D3	1k resistor to C2				
B3	1k resistor to C2	Ts1 14	38		Init.
C5	Upper limit switch	Ts1 15	2		
D5	Lower limit switch	Ts1 16	20		

VME4SA-F2 Connector		HCFA RACK			Comments
Function Connector Pin	Instrument Unit	Terminal Strip	Phoenix 108	Phoenix 64	
E8	ADC Rotation Motor +	Ts1 17		1B	rd
E5	ADC Rotation Motor -	Ts1 18		2B	wh
D7	ADC Rotation Motor Shield	Ts1 19			
E3	Tacho ADC Rotation +	Ts1 20		4B	gn
E2	Tacho ADC Rotation -	Ts1 21		5B	wh
E4	Tacho ADC Rotation Shield	Ts1 22			
A4	Encoder ADC Rotation $U_{a0(zp)}$	Ts1 23	3		gr
A2	Encoder ADC Rotation $U_{a0^*(zp)}$	Ts1 24	21		or
A8	Encoder ADC Rotation $U_{a1(sin)}$	Ts1 25	39		wt
A6	Encoder ADC Rotation $U_{a1^*(sin)}$	Ts1 26	57		vi
B7	Encoder ADC Rotation $U_{a2(cos)}$	Ts1 27	75		rd
B5	Encoder ADC Rotation $U_{a2^*(cos)}$	Ts1 28	93		bu
C6	Encoder ADC Rotation Shield	Ts1 29			
C3	1k resistor to C2				Limit not used
D3	Connect to C5				Limit not used
C5	Connect to D3				Init. not used
D5	Connect to D6				
C7	Controller GND	Ts1 30	105		

## HCFA Maccon I Connections

VME4SAF3 Connector		HCFA RACK			Comments
Function Connector Pin	Instrument Unit	Terminal Strip	Phoenix 108	Phoenix 64	
E8	ADC Diff.Rot. Motor +	Ts1 31		1C	rd
E5	ADC ADC Diff.Rot. Motor -	Ts1 32		2C	wh
D7	ADC ADC Diff.Rot. Shield	Ts1 33			
E3	Tacho ADC Diff.Rot. +	Ts1 34		4C	gn
E2	Tacho ADC Diff.Rot. -	Ts1 35		5C	wh
E4	Tacho ADC Diff.Rot. Shield	Ts1 36			
A4	Encoder ADC Diff.Rot. $U_{a0(zp)}$	Ts1 37	5		gr
A2	Encoder ADC Diff.Rot. $U_{a0^*(zp)}$	Ts1 38	23		or
A8	Encoder ADC Diff.Rot. $U_{a1(sin)}$	Ts1 39	41		wt
A6	Encoder ADC Diff.Rot. $U_{a1^*(sin)}$	Ts1 40	59		vi
B7	Encoder ADC Diff.Rot. $U_{a2(cos)}$	Ts1 41	77		rd
B5	Encoder ADC Diff.Rot. $U_{a2^*(cos)}$	Ts1 42	95		bu
C6	Encoder ADC Diff.Rot. Shield	Ts1 43			
C3	1k resistor to C2				Limit not used
D3	Connect to C5				Limit not used
C5	Connect to D3				Init. not used
D5	Connect to D6				

VME4SAF4 Connector		HCFA RACK			Comments
Function Connector Pin	Instrument Unit	Terminal Strip	Phoenix 108	Phoenix 64	
E8	Calib. Mirror Motor +	Ts1 44		1D	rd
E5	Calib. Mirror Motor -	Ts1 45		2D	wh
D7	Calib. Mirror Motor Shield	Ts1 46			
E3	Tacho Calib. Mirror +	Ts1 47		4D	gn
E2	Tacho Calib. Mirror -	Ts1 48		5D	wh
E4	Tacho Calib. Mirror Shield	Ts1 49			
A4	Encoder Calib. Mirror $U_{a0(zp)}$	Ts1 50	6		gr
A2	Encoder Calib. Mirror $U_{a0^*(zp)}$	Ts1 51	24		or
A8	Encoder Calib. Mirror $U_{a1(sin)}$	Ts1 52	42		wt
A6	Encoder Calib. Mirror $U_{a1^*(sin)}$	Ts1 53	60		vi
B7	Encoder Calib. Mirror $U_{a2(cos)}$	Ts1 54	78		rd
B5	Encoder Calib. Mirror $U_{a2^*(cos)}$	Ts1 55	96		bu
C6	Encoder Calib. Mirror Shield	Ts1 56			
C3	1k resistor to C2				
D3	1k resistor to C2				
B3	1k resistor to C2	Ts1 57	43		Init.
C5	Upper limit switch	Ts1 58	7		
D5	Lower limit switch	Ts1 59	25		