

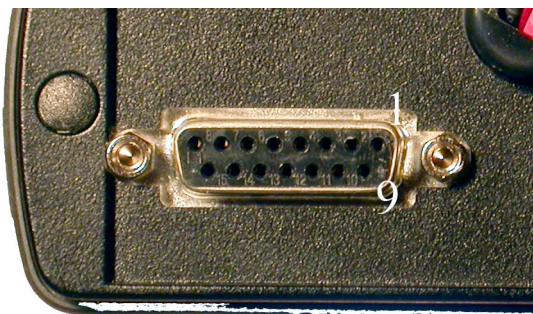
## Gemini Pulsar2 pinout information

Motor connector for bipolar (2 coil, 4 lead) steppers

Pin on DSUB15	Connection	
1	Mot DEC Coil1 A	
2	Mot DEC Coil1 B	
3	Not used	
4	Mot RA Coil1 A	<p>255 level microstepping is used for tracking. Recommended minimum total reduction for 400step motor is 250.</p> <p>PEC has 300 registers for the worm rotation cycle.</p> <p>The incremental encoders can be used to correct GoTo and to get an absolute reference for initializing, not for real time tracking corrections.</p> <p>A monostable Hall sensor can be used as PEC worm sensor.</p> <p>Stepper motor quality may influence tracking stability and max goto speed.</p>
5	Mot RA Coil1 B	
6	Not used	
7	Mot RA Coil2 A	
8	Mot RA Coil2 B	
9	Mot DEC Coil2 A	
10	Mot DEC Coil2 B	
11	Not used	
12	PEC +5V	
13	PEC GND	
14	PEC signal (pull down to GND)	
15	Not used	

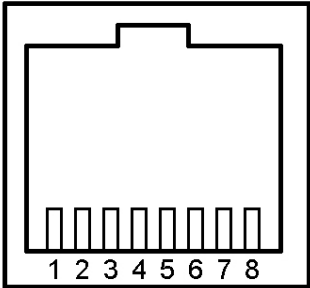


Pin identification



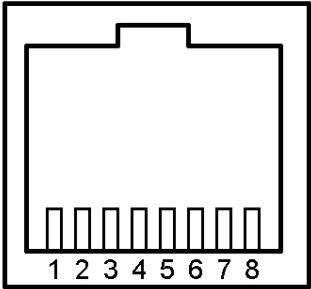
Encoder connector for incremental encoders (TTL quadrature signal, 5V 200mA max) with reference channel

RJ45 pin	Connection	Note: the reference channel must be connected to both inputs marked “reference” of the RJ45 connector. Connector pinout for RA and DEC is identical. Pins are marked on the diagram below.
1	GND	
2	reference	
3	VSS +5V	
4	reference	
5	GND	
6	Signal B	
7	VSS +5V	
8	Signal A	



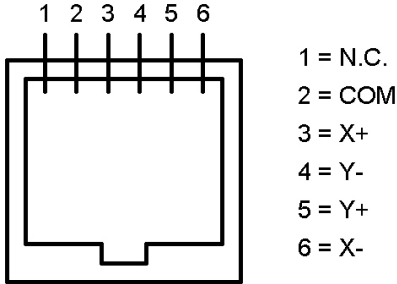
Auxiliary RJ45 connector pinout (NOT the Ethernet/LAN connector near the USB)

RJ45 pin	Connection
1	15 Volts
2	External Parking (short to GND)
3	bus +
4	3,3 Volts
5	GND (GPS or serial D9 pin5)
6	bus -
7	RS 232 out (GPS D9 pin3, serial pin2)
8	RS 232 in (GPS D9 pin2, serial



Pins marked on the diagram above.

Autoguider port pinout



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