eqdrive

Unitrack





The Telescope Control System (TCS) which automates the work of the equatorial mounts or the **Focuser**. The TCS use **Stepless(Vector) Algorithm** and works with practically any mount operated by a stepper motor. It supports a wide range of Gear Ratio and Speed of axes, Soft acceleration and deceleration, the Temperature and Zero Position sensors, allowing users to operate their telescope mount through Astronomical programs and SynScan hand controller.

Specifications		Firmware v6.0.1200, Board rev1.1	
Input Voltage		1028 V	
Maximum Input Current		2 A	
Motor drivers Voltage		equal the input voltage	
Motor Current		0,11,25 A	
Soft acceleration and de	eceleration	010 sec (constant acceleration)	
Gear ratio (non limited)	Mount Mode	1:11:2000 (recommended)	
	Focuser Mode	0.00120 mm/rev	
Maximum Slew Speed	Mount Mode	2500 x sidereal (10°/sec)	
	Focuser Mode	10 mm/sec	
Non-linearity correction		four coefficients	
Support (parallel operati	ion)	Eqmod	
		Guiding (only PC)	
		SynScan Controller	
Temperature Sensor		DS18B20 type	
Zero Position Sensor		SPST, Open Collector	
Operating temperature		-30+50°C	
Dimensions		87 x 54 x 23 mm (aluminum)	
Weight		0,1 kg / 0,22 lbs	

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DC IN socket

2.1mm*5.5mm type Central contact plus Side contact minus *Protected against polarity reversal*

Hand Controller (HC) Socket

+8v (200mA max.)
Rx
Tx
Gnd
Compatible with SynScan Controller

USB Socket

Type B, Connection to PC EQDriveConfig, FocusDriveConfig, Eqmod ASCOM, Indi

LED Power Indicator (Top Side)

10...24V Smooth light 9...10V Blinking light < 9V No light



Motor Socket

- 1. RA_A2 coil
- 2. RA_A1 coil
- 3. Gnd (shield)
- 4. DEC/FOC_B2 coil
- 5. DEC/FOC_B1 coil
- 6. RA_B1 coil
- 7. RA B2 coil
- 8. DEC/FOC A2 coil
- 9. DEC/FOC_A1 coil





Bipolar Stepper Motor Unipolar Stepper Motor

Sensor Socket (only Focuser Mode)

Jack 3,5mm type Temperature Sensor and Zero Position



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🔏 EQDrive Confi	g. Port: COM3 96	00	_	□ ×	🐒 EQDrive Config. Port: COM3 9600 —	
Settings Test Firmware About					Settings Test Firmware About	
Axes & Motors					Testing Motors Axes	
Reversed	Axis RA V	Axis DEC			Enable Motors	
Accel.time	1.0 🌩	1.0 🗣	sec	EQDRIVE	Dec+	EQDRIVE
Gear	260.000 🚔	130.000 💂				
Max.speed	800 🜩	800 🜩	sidereal	Options	Ra- Stop Ra+	Options
Guide speed	0.5 🜩	0.5 🚔	sidereal	Load	Dec-	Load
Motor steps	200 🜩	200 🚔	step	Save		Save
Motor current	0.500 🜩	0.500 🚔	Amp	Read	Rate	Read
Correction 1	0.000 🜩	0.000 🚔		Write	May Pata 200 A rideraal	Write
Correction 2	0.000 牵	0.000 🚔				
Correction 3	0.000 晕	0.000 📥		EN 🔽		EN 🔽
Offset	0.025 🚔	0.025 晕			sidereal	2
Graph	$\square \square$	\frown			Voltage	
correction	$ / \rangle$				Input 12.7 v Read	
Concin	/ Ra \	/ Dec			Driver 12.4 v	
EQDrive-Unitrack (ver 6.0.1277/ Board rev 1.1) 27.07.2018 16:05:40			:05:40	EQDrive-Unitrack (ver 6.0.1277/ Board rev 1.1) 27.07.2018 16:05:40		

Available Settings (Mount Mode)

Note:

- 1. Select the Options to set the Serial Port
- 2. The Read the device settings
- 3. Adjust the parameters that satisfy to your motor and the mount. The Write them in the device
- 4. The Offset must be tuned first, to minimize the non-linearity of rotation of the motor shaft.
- 5. Always do the Read and Write to change settings
- 6. Use the Load and Save to store and change settings from the file

Testing the Device (Mount Mode)

Note:

- 1. Enable Motors
- 2. Set the Rate. Press the buttons to move at the set rate
- 3. For a constant speed, set the Track RA and Dec
- 4. The Read the supply voltage

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Firmware Update from File (Mount Mode)

Note:

- 1. The Update to select the File. The update will start automatically.
- 2. Settings do not change when updating



Team

www.eqdrive.com.ua astrodevices.net



Available Settings (Focuser Mode)