



1 March 2023

Regarding: TerraTrak Single-Axis Tracker Motor(s) and sound measurements

Description:

Terrasmart Codes & Standards Team performed testing to measure the sound of Terrasmart TerraTrak single axis tracker motors during operation.

Testing was performed on an operational production gearbox/slew drive with two production versions of motor used to operate the TerraTrak 1P and TerraTrak 2P tracker systems. Based on time constraints and physical location of full scale tracker test site, this data set was collected from production components, not on full scale installed tracker. Further data collection can be done if needed on full scale installed equipment.

Testing was performed at the Terrasmart, Inc. factory in Cincinnati, Ohio. The testing was performed outside in the rear parking lot of the facility in order to minimize possible noise interference from the street, factory, and or adjacent properties.

Tools: Fluke Temperature Humidity Meter, Amprobe Sound meter

Ambient sound recorded prior to motor test: 51.4 Db

Date:	Time:	Location:	Temperature (°C):	Humidity (%):	Other Notes:
3/1/2024	11:12AM	6715 Steger Drive, Cincinnati, OH	5.1°C	41.8 %	Overcast, very light breeze

Tool:	Manufacturer:	Model:
Temperature and Humidity Sensor	FLUKE	971
Decibel Meter	Ampro	SM10



Distance Perpendicular/ behind motor (ft)	Distance parallel/ beside motor (ft)	Motor 1 - Decibel measurements (dba)	Motor 2 - Decibel measurement (dba)	Other Notes
NA	0.1	63.1	61.7	Literally next to the motor (facing the side of the motor enclosure)
NA	3	50.9	49.8	3 feet from motor long side
NA	10	50.1	50.6	10 feet away from motor long side
NA	20	51.4	49.8	20 feet away from motor long side
3	NA	55.2	52.3	3 ft away behind motor
10	NA	49.7	51.7	10 feet away behind motor
20	NA	49.8	49.0	20 feet away behind motor

Test images: measurement taken beside motor, measurement beside motor 20 feet distance, measurement behind motor 20 feet distance.

Data signoff: James Cormican, Terrasmart Codes & Standards Manger – jcormican@terrasmart.com – 513-560-6991







End of Report

terrasmart.com

