



Technical Support Bulletin

Testing Encoder

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Abstract: This TSB describes a procedure to test the optical encoders on motors used by Allen Datagraph on the Engraver and Sand Blaster. You can use this test if you suspect the encoder on your motor is malfunctioning.

Procedure:

Power on with motor power wires disconnected.

Remove the xoa optical wire from the servo control board (PL-00-05-427).

While the x motor is moving slowly the red led should flash indicating the motor is moving. If the led stays on or off the transmitter board or encoder is suspect. Use the [other encoder test procedure](#) to determine if the encoder is working.

Repeat test with xob optical wire.

Remove the yoa optical wire.

While the y motor is moving slowly the red led should flash indicating the motor is moving.

Repeat test with yob optical wire.

After testing optics repeat electrical encoder test

Requirements:

[5V source](#) (you can use clip leads and test points on CPU board)

[Volt Meter](#)

Procedure:

[Set meter to ac volts](#)

Connect black wire of meter to GND/DGND/AGND test point on receiver board

Connect [red lead of meter to](#) XOA test point

[AC voltage should be near zero](#)

[Spin motor](#)

[AC voltage should increase](#)

[Move red lead of meter to](#) XOB test point

[AC voltage should be near zero](#)

[Spin motor](#)

[AC voltage should increase](#)

Repeat with Y motor, YOA/YOB test points