GECKODRIVE
MOTION CONTROLS

Reducing RF Interference

Reducing Noise for Highly Sensitive Applications

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This application note is meant for those with applications requiring a reduction in RF noise from Gecko drives. There are three ways of doing this and they are arranged from the simplest to the most complex. The first one should suffice for most applications; if the level of noise is still unacceptable then move on to the other two.

Method One:

Use a shielded 5-conductor cable for your motor to drive connection; 4 of the wires go to the motor leads while the 5th goes to the motor case. Return the motor case wire to the drive's power supply ground connection. Ground the shield to your electronics control box at the control box end only, leaving it disconnected at the drive end.

Method Two:

Install 20 to 50 uH chokes in series with each motor wire as close to the drive as is practical. The choke outputs go to the cable described above.

Method Three:

Install an L-C low pass filter (pi section) from your power supply to the drives. Make L 100uH; make C 1uF non-inductive (multi layer ceramic capacitor). Use this in addition to both of the above.

If you have any questions regarding RF interference with your Geckodrive, please feel free to email us at support@geckodrive.com or give us a call at (714) 832-8874 between 8AM and 5PM Pacific Time.

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