

Encoder Tips & Tricks

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Multi-Event or Shaft Encoder



Multi-Event Encoder	Shaft Encoder
Pick up (Once per turn or tooth count)	Mag Pick up (once per turn)
Optical	Optical (once per turn)
	Shaft

Shaft Encoder

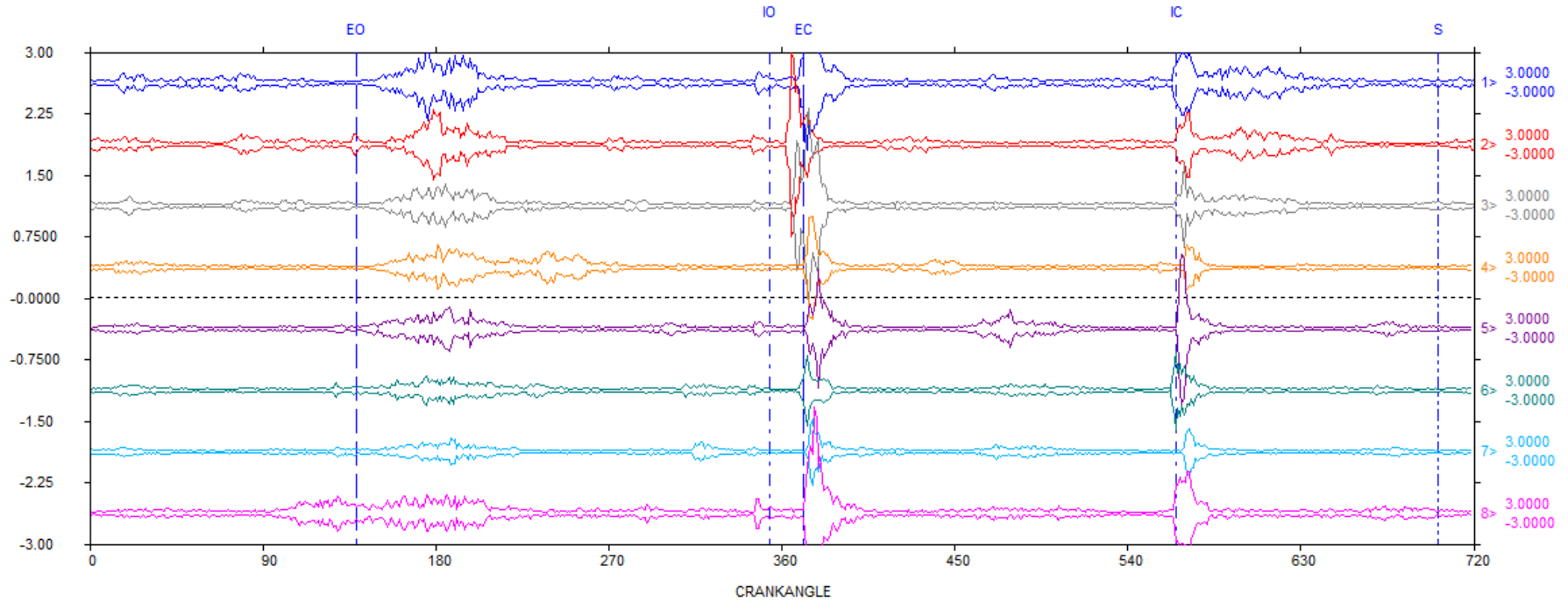


Things Included in the Encoder Kit

- Two rods with different ends
- Bungee cord



Phased Data (Ideally)



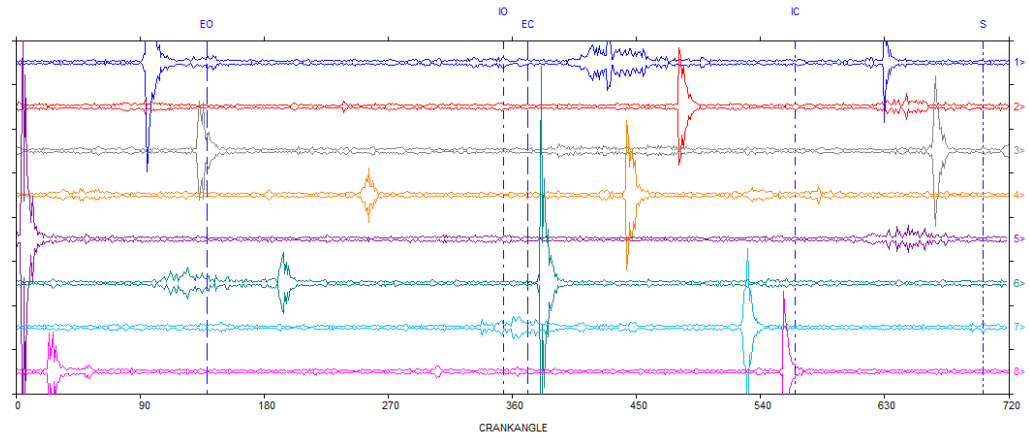
1> Power 1 Hi Freq Vib, R=1, LS=1, C=9
3> Power 3 Hi Freq Vib, R=1, LS=1, C=9
5> Power 5 Hi Freq Vib, R=1, LS=1, C=9
7> Power 7 Hi Freq Vib, R=1, LS=1, C=9

2> Power 2 Hi Freq Vib, R=1, LS=1, C=9
4> Power 4 Hi Freq Vib, R=1, LS=1, C=9
6> Power 6 Hi Freq Vib, R=1, LS=1, C=9
8> Power 8 Hi Freq Vib, R=1, LS=1, C=9

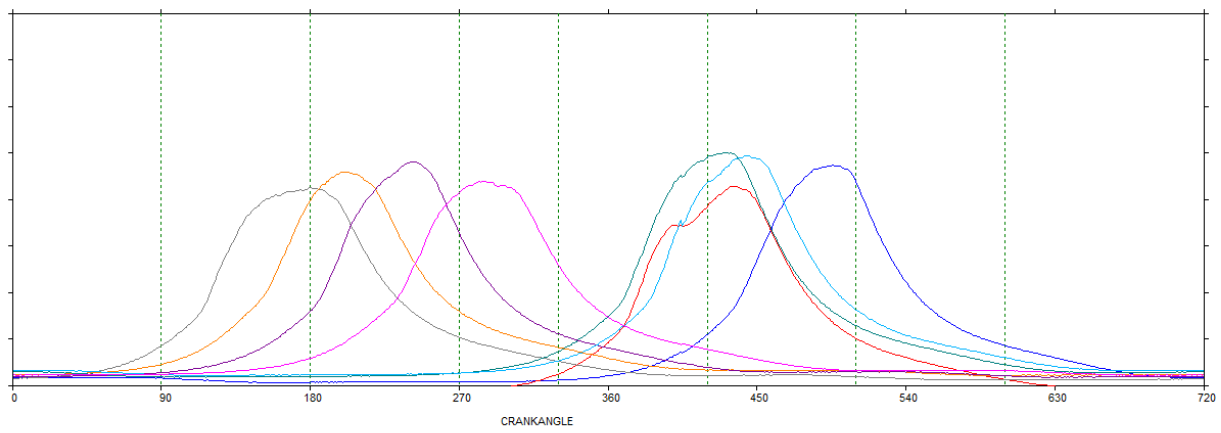
Problem

- Encoder shaft slipping
- Loss of RMP

Problem (Slipping)



- 1> Power 1 Ultra, R=1, LS=1, C=9
- 2> Power 2 Ultra, R=1, LS=1, C=9
- 3> Power 3 Ultra, R=1, LS=1, C=9
- 4> Power 4 Ultra, R=1, LS=1, C=9
- 5> Power 5 Ultra, R=1, LS=1, C=9
- 6> Power 6 Ultra, R=1, LS=1, C=9
- 7> Power 7 Ultra, R=1, LS=1, C=9
- 8> Power 8 Ultra, R=1, LS=1, C=9



- 1> Power 1 Pressure, R=1, LS=1, C=30
- 2> Power 2 Pressure, R=1, LS=1, C=30
- 3> Power 3 Pressure, R=1, LS=1, C=30
- 4> Power 4 Pressure, R=1, LS=1, C=30
- 5> Power 5 Pressure, R=1, LS=1, C=30
- 6> Power 6 Pressure, R=1, LS=1, C=30
- 7> Power 7 Pressure, R=1, LS=1, C=30
- 8> Power 8 Pressure, R=1, LS=1, C=30

Solutions

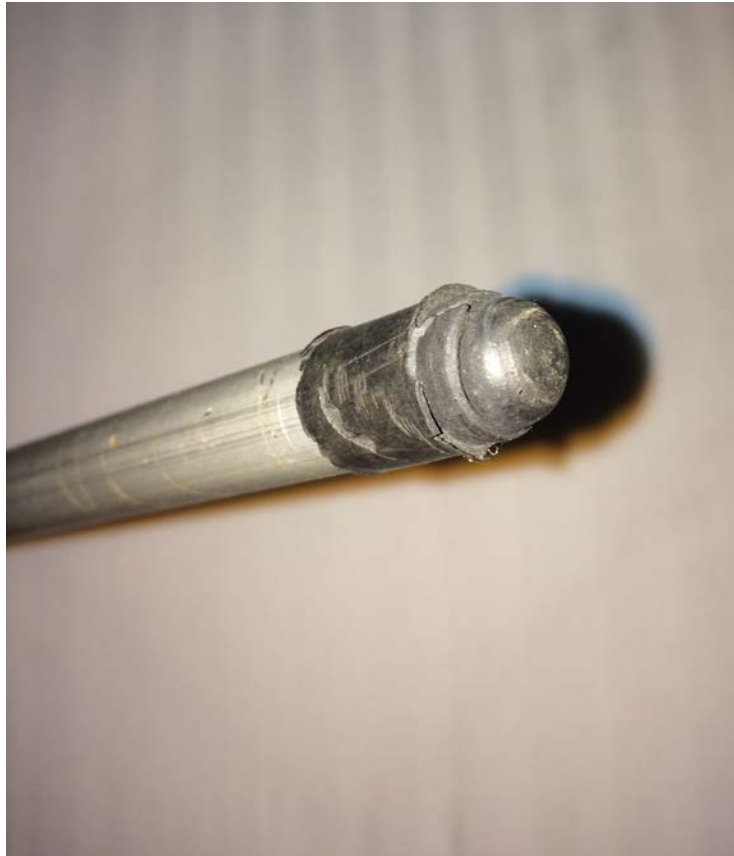
- Inspect:
 - Shaft tip
 - Set up

- Watch data

- Consider:
 - Socket wrench
 - Mag pick up
 - Optical

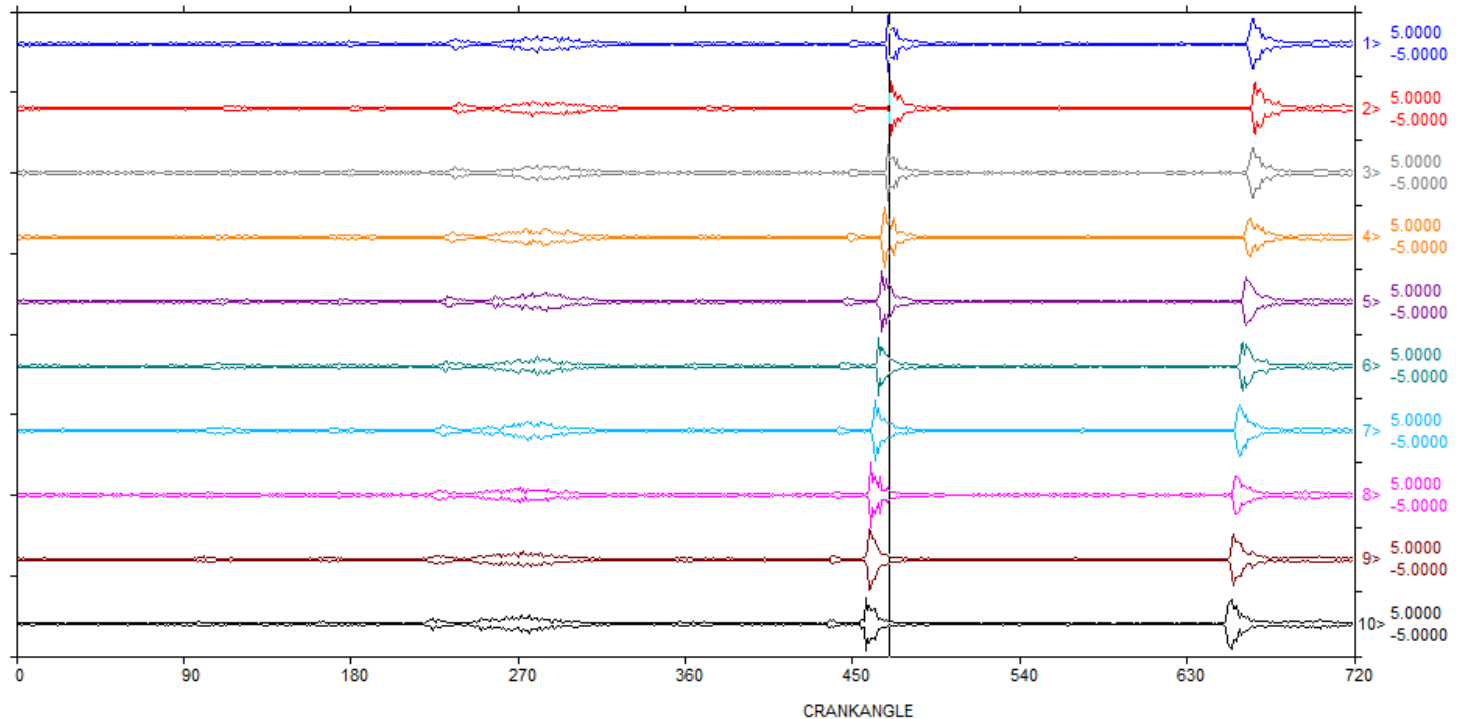
Inspect

- Set up
- Wear in tip
- Tension on shaft



Observe Data

- Watch for a few seconds the screen
- Plot single traces



1> Power 1 Hi Freq Vib, R=1, LS=1, C=9
3> Power 1 Hi Freq Vib, R=1, LS=1, C=1
5> Power 1 Hi Freq Vib, R=1, LS=1, C=1
7> Power 1 Hi Freq Vib, R=1, LS=1, C=1
9> Power 1 Hi Freq Vib, R=1, LS=1, C=1

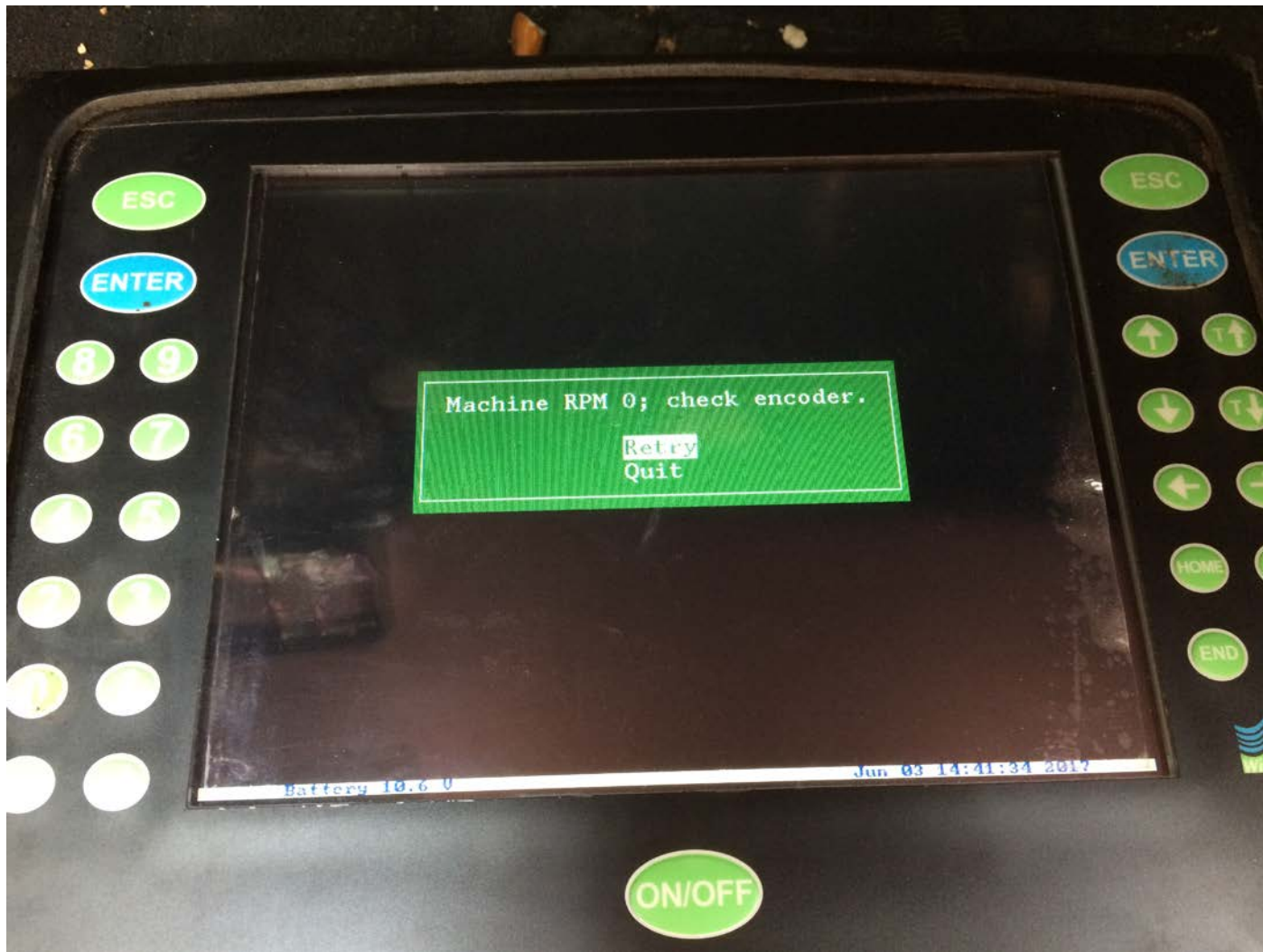
2> Power 1 Hi Freq Vib, R=1, LS=1, C=1
4> Power 1 Hi Freq Vib, R=1, LS=1, C=1
6> Power 1 Hi Freq Vib, R=1, LS=1, C=1
8> Power 1 Hi Freq Vib, R=1, LS=1, C=1
10> Power 1 Hi Freq Vib, R=1, LS=1, C=1

Consider...

- The large tip over the small one
- A second bungee cord
- Socket wrench
- Mag pick up
- Optical



Problem (RPM Signal)



Solutions

- Unplug and plug again the encoder cable to the wireless transmitter and encoder.
- Escape on data collection screen.
- Turn off and on analyzer.
- Connect the encoder cable from encoder to analyzer.

Questions?





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