

Oscillation in the Signals

Frequently Asked Question #6

Question:

I have a 6 channel TSI hot wire system with IFA signal processor that is about 2 years old. The system worked fine during installation, but then we set the system up in another lab and the system began to act strangely.

1. The signal for one of the channels will start oscillating during data acquisition
2. Moving the probe to another channel on the IFA did not help
3. Sometimes it starts oscillating during setup, when I check the zero & offset
4. We have tried different gains and offsets for the channels - but the problem remains.

How can I get the system working?

Answer:

This appears to be a Settings or probe cable issue. It is crucial that the probe cable being used is the one supplied by TSI, as these are not standard BNC cables. For TSI probe cables, the cable length (as set in ThermalPro) must be set correctly for the cable being used (5 or 30m). In addition, the cable resistance (Cbl Res) must be measured for the specific cable (typical values are 0.31 ohms and 1.60 ohms for the 5 and 30 meter cables respectively).

You mentioned setting up in another lab. If the cables were interchanged to other channels, or if additional cable extensions were added at this time we could see oscillations result from the mismatch in electrical properties. Cables become an integral part of the IFA300 system, they cannot be swapped around freely or replaced by standard BNC cables. Always use the standard TSI supplied probe cables.



TSI Incorporated - 500 Cardigan Road, Shoreview, MN 55126-3996 USA
USA Tel: +1 800 874 2811 E-mail: fluid@tsi.com Website: www.tsi.com
UK Tel: +44 149 4 459200 E-mail: tsuuk@tsi.com Website: www.tsiinc.co.uk
France Tel: +33 491 95 21 90 E-mail: tsifrance@tsi.com Website: www.tsiinc.fr
Germany Tel: +49 241 523030 E-mail: tsigmbh@tsi.com Website: www.tsiinc.de
Sweden Tel: +46 8 595 13230 E-mail: tsiab@tsi.com Website: www.tsi.se
India Tel: +91 80 41132470 E-mail: tsi-india@tsi.com
China Tel: +86 10 8260 1595 E-mail: tsibeijing@tsi.com

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