

# TECHNICAL NOTE

June 29, 1999

**SUBJECT:** .NULL. ENTRY IN DATA LIST FROM DATATRACE for Windows (DTW) PROGRAM

**PROBLEM:** On a very infrequent basis, customers report data lists displaying .NULL. values. It may be single or multiple occurrences, in multiple occurrences it could be sequential or random. In multiple parameter Tracers it can appear with one or both values.

The data displayed before the .NULL. value seems always to be OK. Data after the .NULL. entries may or may not be correct. The Tracer frequently does not display the same problem in subsequent uses, and if the Tracer is re-read, the data from the second reading is usually OK - but not always.

**CAUSE:** The usual cause is corruption by static discharge during data transfer. This can be actual corruption of data when the Tracer is sending data to the computer or, if communications were directed toward the Tracer, the memory may have been "zapped".

Tracers were designed to be resistant to static discharge, however, when the Tracer is in the PC Interface AND data communication is occurring, it can be vulnerable to a electrical discharge. While corruption can occur during both Programming and Reading, it is most likely to occur during the Read process because this process takes longer.

**CURE:** Normally, rereading the Tracer corrects the problem of a .NULL. data value. However, it is possible that a static discharge was sufficient to damage the Tracer's memory or other circuitry components. If this is the case, the Tracer must be returned to the factory for diagnosis and repair.

While it may not be possible to completely eliminate these situations, they can be minimized. Do not touch the Tracer when it is in the PC Interface AND it is communicating with the computer. Always wait for the program to indicate that the process (Program or Read) is complete before the Tracer is touched.

Other remedies that can help include:

- Ensuring that the computer is attached to a quality surge protector.
- Ensuring that the serial cable is not in close proximity to power sources or cables (even inside adjacent walls) that could cause electrical induction fields.