Diamond Knowledge Base

Why Would a Loop Board Shut Down?

Loop Board Monitoring Traffic counter/classifiers like our Unicorn, Pegasus, Phoenix, Phoenix RAX have a built in function to insure that the MDK loop boards functioning properly. Basically, when you use loops for data collection, the counter checks every five minutes to see if any loop activations have occurred. If they have not, then the counter goes into a special function which sends a command to the loop board to see if it is responding. If it isn't, then the loop board is restarted and all loops are retuned for proper operation. When then would a loop board shut down unexpectedly?

Generally this is caused by one of two things:

Lightning Strike: Sometimes if a lightning strike is close enough to the loops in the road a large static charge can be transmitted through the loops into the loop board circuitry. The loop board has some electronic protection against this and it will probably not cause any damage (unless the lightning is very close), it may cause the loop board to lock up or shut down. The loop board monitoring function will detect the loop board failure and will restart the loops between 5 and 10 minutes later. With the original Phoenix unit it is highly recommended that you install external RF and lightning protection either at terminal strips or built into the external loop harness. The Phoenix II provides a heavy duty grounding strap that must be connected to provide adequate surge protection.

Other Electrical Noise: Similar to a lightning strike, other sources of strong electronic signals can cause the loop board to have problems. For example, a strong C.B. broadcast from an illegal transmitter. The loop boards in your counter are the best available, but it is possible for a strong electrical interference to cause premature shutdown. Once again, the loop board monitoring function will detect and correct the occurrence.

What if my loop is no longer responding?

If a counter unit is no longer recognizing the loops or loop boards it is possible that a electronic failure has occurred and the board is no longer working properly. It is recommended that a COLD RESTART be performed to see if the board can recover from the error. A power cycle may also reset the board so that it will once again return to operation. In cases where this is a common occurrence it is symptom of a hardware failure or loose internal connection. In cases of multiple failures we recommend the unit be checked and possibly sent in for repair to diagnose the issue.

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