GMW

TNG3DTM004a - Automatic Recovery of Calibration Tables

The automatic recovery of the DTM user's and Calibration table is possible through use of cunning programming techniques when using a computer to control the DTM.

The basic principle is quite simple:
1. Make a data file that contains the values of all the user's reading modification table, and the instrument calibration table, when in a known 'good' state.

If the DTM is hit with a transient of sufficient energy to corrupt any of the stored users modification table or the calibration table, it will start reading back incorrect field values.

2. The software flags the wrong readings, and then (if possible) confirms the failure by checking one of the other system monitoring instruments (if installed).
3. If the software determines that the DTM is in error, it will first attempt to reset the DTM and upload the **users** table.
4. Should the reset fail to correct the problem, the software should then download the calibration table from the DTM and compare it with the one saved earlier. If they do not match, the software should upload the correct table to the DTM.
5. If this corrects the problem then all is well, if the problem still exists, the DTM has likely suffered physical damage and should be returned for repair.

The above is a very simple outline of the procedure is it most basic form. It is likely that in many cases, more detail will provide a better result. Things to consider when writing software are:
❑   Will the DTM ever be replaced? If so, serial number checking should be used to prevent the wrong tables being written to the DTM.
❑   Is the software being sold as part of a system? Again, if so, serial number checking should be used.
❑   Keeping a log file of the errors and the results of the procedure.
❑   Even if all of the probe ranges are not being used, verify them at the time of the event.
❑   The possibility to use this event to diagnose the failure of other instruments and equipment on the system. Example: Field reading and current readback are zero, but the power supply is indicating an output.

If you have any questions, please feel free to contact GMW Technical Support at:
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