

## **SIL SG102-04-C** **SG102 AHRS Service Information Letter**

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Date: September 24, 2009  
Regarding: SG102 AHRS Software Version 1.26 Release  
Revision: C – Updated to reference calibration software version 2.20  
B – Initial release

### **Reason**

Availability of SG102 AHRS software 1.26 and revised Installation/Calibration Utility.

### **Applicability**

Applies to Sandel part number SG102-(xxx) with MOD 1

### **Description**

There have been two verified field reports of installation problems when the SG102/MT102 system was installed in a highly magnetized airframe. One was a Piper Cheyenne II; the other was a Robinson R-44 helicopter. These could be described as situations in which the local magnetic field distortion at the MT102 mount location exceeded the compensation capability of the SG102 software to compensate for it. The system either would not calibrate properly on the ground, or would 'just' calibrate, but momentarily flag during flight to re-slave, often after a turn. These problems are exacerbated at higher latitudes due to the high magnetic inclination angle.

1.26 software increases the capability of the SG102 calibration procedure by providing a two-step (coarse-fine) sequence which will improve the performance of the SG102/MT102 to achieve excellent heading accuracy even when installed in these conditions.

The two-step calibration is performed in conjunction with the Sandel SG102 Windows Installation/Calibration Software version 2.20 or later.

**Note regarding MT102 Extension Cable:** The new MT102 calibration procedure requires a measurement of MT102 data prior to its installation in the airframe. This is easiest done by plugging in to the aircraft wiring with an MT102 extension cable, which can be field fabricated. Please see the web site information concerning the details of this cable.

**Note regarding spares:** Version 1.26 is backward compatible with prior calibrations, meaning 1.26 software can be freely loaded into any SG102. However prior software is not forward-compatible with calibrations done with 1.26. As a safety precaution the software is designed so an SG102 running older software which cannot properly read the new calibration will produce an MAG NVS FAULT (flashing MAG LED) and will not go valid. This can be corrected by loading Software 1.26.

For this reason it is recommended that any SG102 in spares inventory be loaded in advance with version 1.26, which is fully backward compatible.

The SIL SG102-04 related files including the software update, software load utility and instructions can be accessed on the Sandel website at:

[www.sandel.com/SG102\\_sup\\_sb.php](http://www.sandel.com/SG102_sup_sb.php) [case-sensitive]

- or -

contact Sandel Product Support at (760)727-4900 selection "2"

## **Compliance**

Recommended

## **Warranty**

None

## **Documentation**

82011-PG Pilot's Guide