

ASOS MAINTENANCE NOTE 11 (for Electronics Technicians)

Engineering Division

W/OSO321:BGM/MGC

Correction for the Laser Beam Ceilometer Calibration Procedure

GENERAL

This maintenance note corrects the Laser Beam Ceilometer (LBC) calibration procedure in the ASOS Site Technical Manual. Variation in the manufacturing processes of the CTX reflector hood results in improper operation with some LBCs. As a result, the calibration procedure must be modified. This calibration procedure change will work with all calibration kits and LBCs now in the field.

PROCEDURE

Make the following pen and ink changes to Table 9.5.3, CALIBRATION PROCEDURE, starting on page 9-84 of the ASOS Site Technical Manual:

1. Step 2. Delete Step 2.
2. Step 3. Replace Step 3 with the following:

Allow the ceilometer to be powered up for at least 10 minutes in the automatic mode with the CTX-16 reflector hood in place on the LBC so that the laser power can stabilize. Complete steps 3A through 3D in sequence and within 60 seconds to minimize laser power change during the test.

- 3A. Type **AUTO OFF <CR>**.
The LBC responds: **MAINTENANCE MODE** (after some possible intermediate statements).
- 3B. Type **STA <CR>**.
LBC responds with status message.
Record values for LLAS and LASER FREQUENCY.
- 3C. Type **GAIN 0**.
LBC responds: **GAIN SELECT 0**.

3D. Type **MEAS 12**.

LBC responds: **BACK SCATTERED POWER.**
INPUT DATA AVE xx.xxxx

3. Step 4. Delete Step 4.

4. Step 9. Delete Step 9.

5. Step 10. Change to read "**MES <CR>**" instead of "**SEND 2**".

6. Add Step 19: Type **AUTO ON <CR>**.

LBC responds: **AUTOMATIC MODE.**

Note: **Failure to do this step will result in the LBC erroneously reporting the calibration values obtained above as cloud data. The ASOS will not detect this false condition.**

EFFECT ON OTHER INSTRUCTIONS

ASOS Site Technical Manual:

Page 9-85, Table 9.5.3

Page 9-86, Step 10

Page 9-87, Step 18

Original Signed

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W/OSO31(BGM)/MGChristopher:disk EHB 11D:rhz:6/17-20:corrected 6/23/94:"MA11.H11",
spellchecked