

MicroMet 1.06 Troubleshooting – Quick Summary

For More Detail, please refer to the [MicroMet Manual](#)

No Data Reports Received at AMBCS

If no data reports are being received from a *MicroMet* site, a site visit may be required to determine the source of the problem. Since the *MicroMet* will only transport data that it receives from the CR10X, troubleshooting procedures can be broken down to two questions:

- Is the *MicroMet* receiving data messages from the CR10X?
- Is the *MicroMet* communicating properly with AMBCS?

First, connect your PC to the *MicroMet* and observe its communication statistics. If the number of RXSPs and SYNCs are low to nonexistent, the problem is likely in the antenna, interference, coax, receiver, or site selections. Try a test transmission to verify the antenna/coax. If the test elicits no **warnings**, the problem is most likely in the receiver and the *MicroMet* should be replaced.

If the SYNCs are good but no transmissions have been attempted (XMIT=0), then most likely the *MicroMet* is not receiving data messages from the CR10X. Set **verbosity** to 5 and look for **new data msg advisories** after an expected data message time-frame or a forced CR10X data message. If no new message advisories are observed, proceed to **Are CR10X Data Messages Being Sent to MicroMet?** (page 2)

If the transmit to acknowledgment ratio is high (greater than 10/1), do a test transmission to verify the antenna/coax. Remember that zero (0) reports at AMBCS should translate to zero (0) acks at the *MicroMet*. Problems in the antenna/coax/battery should elicit HIVSWR or Low Power **warnings!**

Example MicroMet Status Report:

```
stat
09/01/08 1044:03
      RXSP  SYNC  RXERR  XMIT  ACK  HIVSWR  LOPWR
TODAY 00000 00000 00000 00000 00000 00000 00000
HOUR  00000 00000 00000 00000 00000 00000 00000
```

RXSP = Number of Signal Presence Events (Receiver Threshold Detected)
SYNC = Number of times Sync character was detected after RXSP
XMIT = Number of Transmit attempts
ACK = Number of Acknowledgements received in response to XMIT
HIVSWR = Number of HiVSWR errors from transmitter
LOPWR = Number of Low Transmit Power events from transmitter

Are CR10X Data Messages Being Sent to MicroMet?

CR10X data messages traverse the cable between the CR10X CSIO and the *MicroMet* J4 receptacle. Verify this cable is plugged in correctly at both ends, and that the pins have not been pushed out of the connector at the MicroMet end of the cable.

If the MicroMet's Verbose parameter ≥ 5 (verbose 5), the MicroMet will output an advisory when a new data message is received from the CR10X:

```
ADVISORY
09/01/08 1112:34 New data msg:1,2,3,5,6,7,8,9,10
7 Sensors
```

You can force a data message from the CR10X by connecting C8 to 5V for 10 seconds or more. If no advisory is subsequently shown by the MicroMet indicates a problem with the CR10X or the cable that connects the CR10X to the MicroMet.

If you suspect that the CR10X is not producing any data messages, you should connect your PC or handheld PC to the CR10X and run PC208W, LoggerNet or PConnect (handheld).

- ❑ If the CR10X time is drastically incorrect or even not incrementing, the CR10X should be replaced.
- ❑ Monitor the CR10X data with NUMERIC DISPLAY to verify that sensor data is being collected.

Resolving Bad Sensor Readings (CR10X)

- ❑ Connect your PC to CR10X CSIO, and run PC208W.
- ❑ Use the **NUMERIC DISPLAY** tab to observe the live data being collected by the CR10X. If these data do not seem reasonable, then you will have to refer to documentation pertaining to the suspect sensor(s). Some sensors connect directly to the CR10X wiring panel while others require some interface electronic modules. The basic process to keep in mind is that the CR10X must excite or "turn on" each sensor, then read some sort of returned value (usually a voltage) from the sensor. The CR10X then converts this returned value to real numeric values.