ALERT2 System & Field Maintenance

A Guide to ALERT2 Field Maintenance using your ALERT2 Field Decoder

Austin Seback
Arriving at your alert2 station

Stream

Rain, Meteorology
Software Applications for alert Field Maintenance

- Communication Software
- Field Maintenance of your ALERT2 Transmitter
- Blue Water Design ALERT2 Field Decoder
- Decoding your ALERT2 Data in the Field

Software Applications for alert Field Maintenance
5096 Programming

- Ease of communication
- Archive station programming
- Efficiently Read:
  - Station Parameters
  - Sensor Readings
- Restore pre-visit station conditions
Blue Water Design LLC
- Decodes ALERT2 transmissions
- Powered by laptop via USB cable
- Internal radio with 8 channels
- Speaker with adjustable volume
- Front panel LEDs

Field Decoding your ALERT2 Data
1. **Hardware:** Radio receiver and ALERT2 demodulator with USB power/communication cable and radio antenna

2. **Software:** Display program  
   Windows PC (XP, Win 7, Win 8)

3. **Software:** Decoder program
ALERT2 FIELD DECODER

- Easy to Operate
- Connect the USB cable to computer
- Connect VHF antenna to BNC connector on rear panel (any 50 ohm VHF antenna)
- Select correct frequency (default frequencies or custom order)
- On laptop….start display program
# Default Frequencies

1. 169.425
2. 169.475
3. 169.500
4. 169.525
5. 170.250
6. 170.300
7. 171.850
8. 171.875

Custom Frequencies can be programmed
USING THE ALERT2 FIELD DECODER

Launch ALERT2 Display program

Note: all these files must be kept in the same local directory
USING THE ALERT2 FIELD DECODER

Messages – scrolling window showing all received messages

Current MANT Message – 1 line only showing most recent MANT packet

Header Information – displays the MANT packet information in human readable form

Sensor Reports – displays sensor data extracted from the application packet

All windows are scrollable and contain 1,000 entries
USING THE ALERT2 FIELD DECODER

File names:

Decoder Name – Decoder program

Exchange File – Decoder program writes to this file……the Display program reads this file (if you change this file name you must also change the Decoder output to match)

Raw Data Log – Log file of raw data

Header Log – Log file of header information

Report Log – Log file of sensor reports

All application and log files must be kept in the same directory.
Save Settings Button:
The “Save Settings” button writes Display settings to the registry so that these settings will be used again at the next start-up.
Pause Button:

- The “Pause” button will idle the display in case you want to examine a message more closely.
- The Display is paused but not the Decoder. Output will continue to accumulate in the exchange file.
- To “Un-Pause” click the “Start” button.
- Accumulated messages from the Decoder exchange file are processed.

USING THE ALERT2 FIELD DECODER
USING THE ALERT2 FIELD DECODER

End Button:

The “End” button stops both the Display program and the Decoder program.
Clear Screen Button:
The “Clear Screen” button clears all data from the Display window and does not affect logging.
The "Restore Default" button clears the registry entries and returns the Display program to its default settings.
USING THE ALERT2 FIELD DECODER

Log Radio Buttons:

Data can be logged in two ways:

**Displayed** – logs every message and every sensor report to its appropriate file automatically as it is received.

**Selected** – only logs reports that are manually selected by double-clicking on the display entry.

Each saved entry is marked by an asterisk.
USING THE ALERT2 FIELD DECODER

Time Display Radio Buttons:

Date/time can be displayed in two ways:

System Time Zone – displays data in the local time zone of the computer including adjustment for Daylight Savings

GMT Offset – applies an offset entered in hours to the GMT time

The Decoder messages are written to the exchange file in GMT
Source Address Filter:

- Allows for the entry of a single source address
- Only data from that source address will be displayed
- For concentrator messages enter the SA of the repeater where the message was converted to ALERT2
1. Select the correct COM Port
2. Click the “Start” button
USING THE **ALERT2** FIELD DECODER

The Decoder Run window opens after clicking the “START” button.
USING THE ALERT2 FIELD DECODER

- **Front Panel LEDs**
  - **ON** – flashes **green** when the system is powered and operating correctly
  - **Frame** – flashes **yellow** when the unit correctly detects an ALERT2 frame pattern
  - **Bit** – flashes **blue** when the unit detects an ALERT2 message pattern
USING THE ALERT2 FIELD DECODER

- N, P and S Messages
- Most recent MANT Packet
- ALERT2 Header Information
- Decoded ALERT2 Data
<table>
<thead>
<tr>
<th>Reading Time</th>
<th>Source</th>
<th>Type</th>
<th>Sensor</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/01/2014 09:59:47</td>
<td>10015</td>
<td>1</td>
<td>GP</td>
<td>0</td>
</tr>
<tr>
<td>12/01/2014 09:59:47</td>
<td>10015</td>
<td>3</td>
<td>Battery</td>
<td>12.3</td>
</tr>
<tr>
<td>12/01/2014 09:59:47</td>
<td>10015</td>
<td>3</td>
<td>P</td>
<td>-0.17</td>
</tr>
<tr>
<td>12/01/2014 09:59:47</td>
<td>10015</td>
<td>2</td>
<td>Rain</td>
<td>0</td>
</tr>
</tbody>
</table>

“0” means GPS is connected
Battery voltage is 12.3 volts
Water depth (ft.)
Type 1: GSR
Type 2: TBR
Type 3: MSR
Tipping bucket count is “0”
Questions?