

## Quick reference for setting up a single repeater

**This does not replace the two Davis manuals:  
Solar Powered Wireless Repeater  
Long Range Repeater Addendum**

There are a number of important steps to take when setting up a repeater. The following steps are essential for all installations. Additional steps may be required for multiple repeaters and are contained in the manuals above.

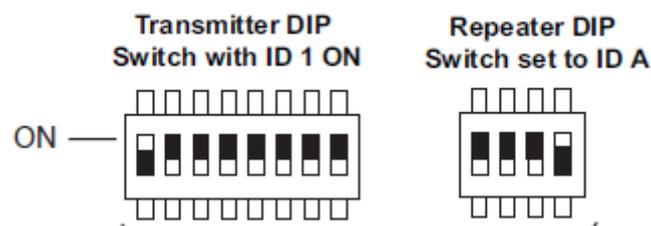
The first 3 steps can be carried out in the workshop before field installation

**1. Configure your stations as per the relevant station instructions**

- a. With the console nearby, make sure you can receive all data directly to the console without the repeater. (Use 3 x C cell batteries to power the console without AC power)
- b. Take note of the station ID(s) that you use (default is 1)

**2. Configure the repeater**

- a. Insert battery to power up. This may initially take 2-3 minutes after which the LEDs will light up. The STAT LED will flash from red to yellow to green and the TX LED will flash green
- b. Attach aerials if you are using the long range repeater. The RX connection is for the aerial that will receive data from the weather (or other remote) station(s). If you have more than one remote station you should use an omnidirectional aerial so it can receive from multiple directions. The TX connection is for the aerial that will re-transmit data back to the console.
- c. Set the DIP switches in the repeater. The Transmitter DIP switches indicate which remote stations the repeater should receive data from. Switch the relevant switch(es) ON (up) as per your station ID(s). The Repeater DIP switch should be set to ID A which is all first 3 switches OFF (down). Set the Test DIP switch ON. This is the fourth switch on the Repeater set.



- d. Observe the LEDs as follow. This may take 2-3 minutes.
  - i. STAT – red when signal is detected
  - ii. STAT – green when a good packet is received
  - iii. TX – green when a good packet is transmitted back to base

### 3. Configure the console to receive data via the repeater

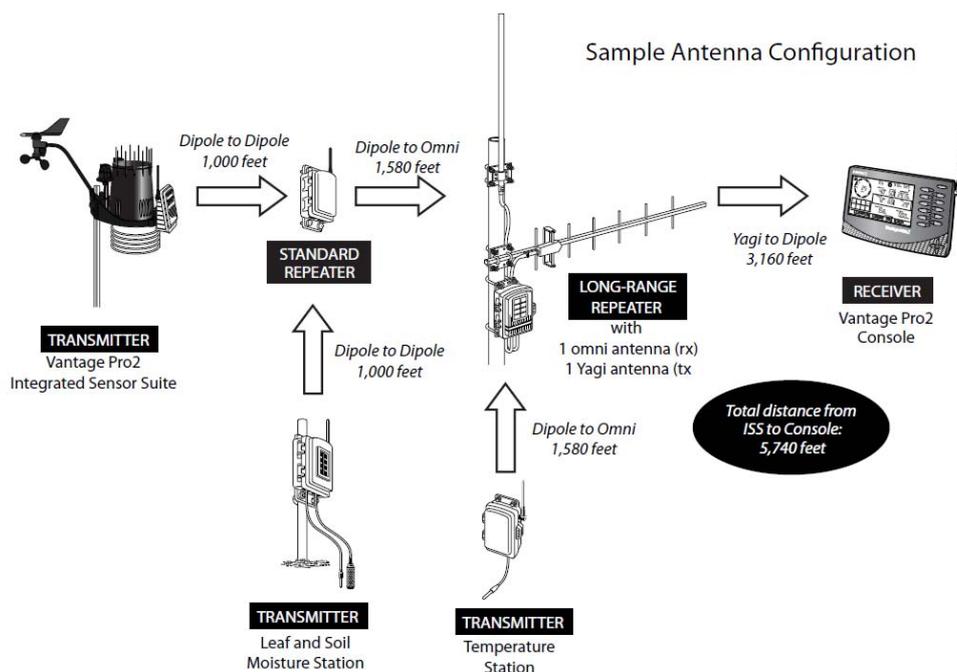
- Enter the Setup mode (DONE – minus). Press DONE when the station identifies the correct station
- Use the < & > buttons to select the correct ID is ON. From this screen, press 2<sup>ND</sup> then WIND to enter the Repeater Setup screen. Keep pressing WIND until REPEATER A comes up in the bottom right hand corner. Press DONE to go back to the main Setup screen.
- Press and hold DONE to go back to the main screen. Now the console is being forced to receive data via the repeater and not direct from the station. It may take a few minutes to retrieve the first set of data as it sets up new radio paths.



- Set the Test DIP switch in the Repeater to OFF to preserve power until you physically install it.

### 4. Install the remote stations and repeater

- Set the Test DIP switch ON.
- Test that the data can be received from the station(s). The STAT LED should flash green. Adjust aerials or location until a good signal is received.
- Test that the data can be transmitted back to the console (in it's final location). Use the console diagnostic screens (below) to fine tune. Adjust aerials or location until a good signal is received.
- Complete physical installation as per instruction manual
- Set the Test DIP switch OFF.



## Console Diagnostics Screen

To enter these screen press TEMP & HUM buttons at the same time. There are two screens, one for Statistics and one for Reception

To toggle between the two screen press 2<sup>ND</sup> and CHILL

Full details are contained in the Vantage Pro2 Console manual

Key items to observe on the Reception Diagnostics screen are:

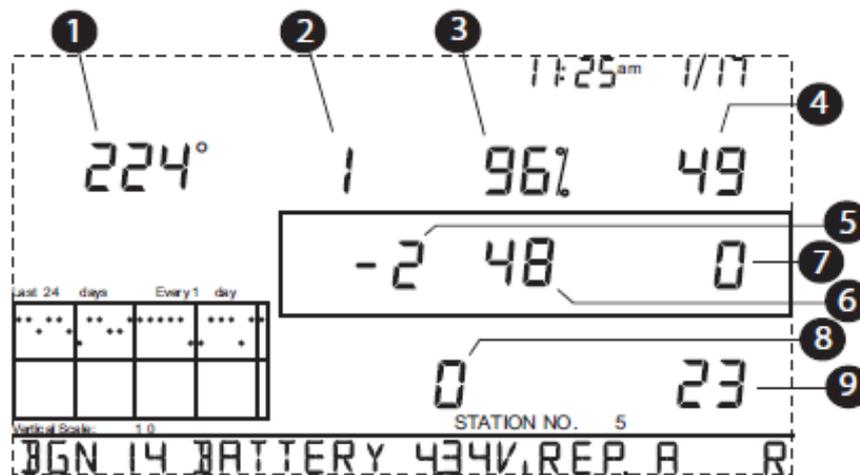
3. Percentage of good packets
4. Signal strength (should be above 30)
9. Current streak of good data packets

On Ticker Tap (bottom):

BGN xx : Background noise level (should be smaller than signal strength)

REP x: Repeater path (if this is not present then your console is not set up correctly)

Status: X = Receiving signal; R = Reestablishing connection; L = Loss of signal



Screen 2: Reception Diagnostics Screen