

## **Application Note – Monitor and record signal strength and plot position for best voice and data communications with a train.**

### **Customer Requirements**

The client was required to carry out a radio survey on a sugar train. To determine optimal placement of signal repeater towers providing reliable radio data communications.



### **Equipment**

*dataTaker DT800*  
DeLogger™

### **Sensors**

Garmin eTREX Summit Global Positioning System (GPS)  
Signal Strength Meter

### **Datataker Solution**

The client installed UHF and mid-band transmitters in appropriate positions on the train and rigged the train with aerials and radios.

The *dataTaker DT800* monitored and recorded the signal strength from the radios recording RF dead spots at the same time it was recording the position from the GPS. The data string from the GPS unit communicated the position via the *dataTaker DT800* serial sensor port.

The data was then unloaded from the *DT800* and overlaid on a map of the area revealing the location of poor communications. From this data optimal placement of signal repeater towers could be determined to provide reliable radio data communications.

Adverse weather conditions were experienced during the project highlighting the need for reliable communications with the train. Sections of the railway track were washed away and a crane was required to lift the train over a ravine where a bridge had once been. The project was successfully completed.

**If you need more detail on this application please contact [joyce.reid@datataker.com.au](mailto:joyce.reid@datataker.com.au)**

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