chambers ELECTRONICS

Wireless System

Overview

A robust and high performing wireless system for outdoor applications that allows count data to be transmitted to a receiver attached to a LAN network or host PC. Wireless transmission of data eliminates the need to manually download information from individual unit loggers and is compatible with the majority of Chambers outdoor counters.

The system consists of:

- one or more wireless-enabled counters which are attached to a radio transmitter.
- one receiver which is attached to the LAN or local PC via a continuously powered USB Hub.
- one or more repeaters can be supplied which increases the distance between the counters and the receiver.

The maximum distance between the transmitter and receiver is approximately 200 metres (line of sight) Repeaters can be supplied when the distance between the counter and the receiver is too great.

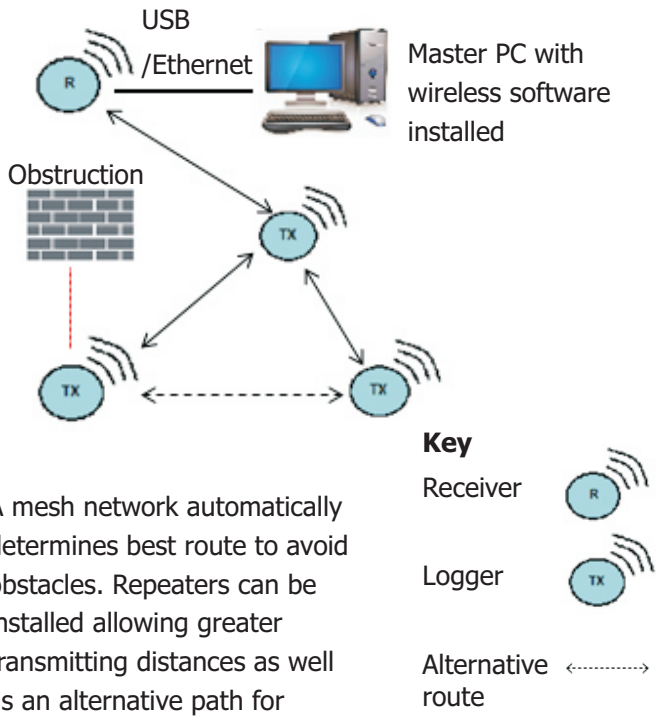
More than one repeater can be used to relay information from multiple counters. All units, excluding the receiver which is typically powered via USB, are battery operated and require infrequent replacement.

Each logger has the logging interval set by the user (between 2 minutes and 10 days) and at the end of each interval, the information collected during that time period is transmitted. The software allows the data to be downloaded at any time the operator requires. The counts are displayed graphically, and as a table, showing the time/date stamp on the counts for each interval. Data can also be easily exported if desired.

If a LAN connection is used, received data is available to other computers on the network that have the software installed. Ideally, the master PC with radio gateway to the receiver would be left running 24/7, however the device can be shut down for up to two weeks without loss of data.

Main Features & Advantages

- **Ease of Installation and Set up :** Simply install the software, follow the brief set up procedure, connect to the receiver then switch on logging devices.
- **Ideal for Larger Sites:** Eliminates laboring task of manually downloading data from each counter within a large site.
- **Robust Network**: Loggers will transmit information up to 200m line of sight and find an optimal route to send data, routing around obstructions via repeaters or other loggers.
- **Reliable Data:** If communication is lost, loggers will store data locally until communications are restored.
- **Alarms:** Users can set criteria within the software to raise an alarm if certain conditions are met. Low battery icons will also indicate when a specific unit requires batteries replaced.



A mesh network automatically determines best route to avoid obstacles. Repeaters can be installed allowing greater transmitting distances as well as an alternative path for information to be relayed. In result, a robust network can be formed.

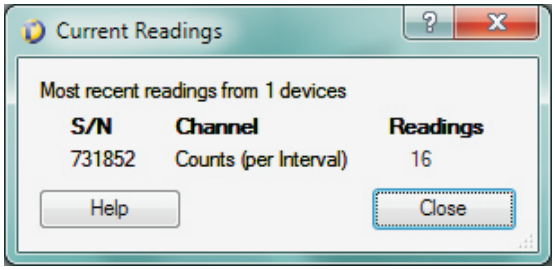
Counter software

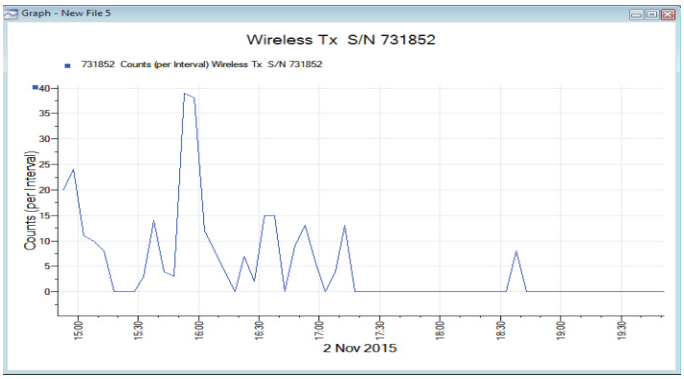
The supplied software can display the real-time data in a current reading window which shows the number of counts in the current time interval (see right).

There is also the option to "Get Data from Logger", which generates a graphical view showing all data held in the logger up to the last time interval (see graph at right). This graph can be converted to a table of counts against time/date which can be exported to Excel or other management systems.

The standard output can be customised to show the counts from multiple counters, display bar graphs, etc. The system will also record the temperature and humidity at the receiver.

We will discuss your specific requirements and advise on the optimum solution.

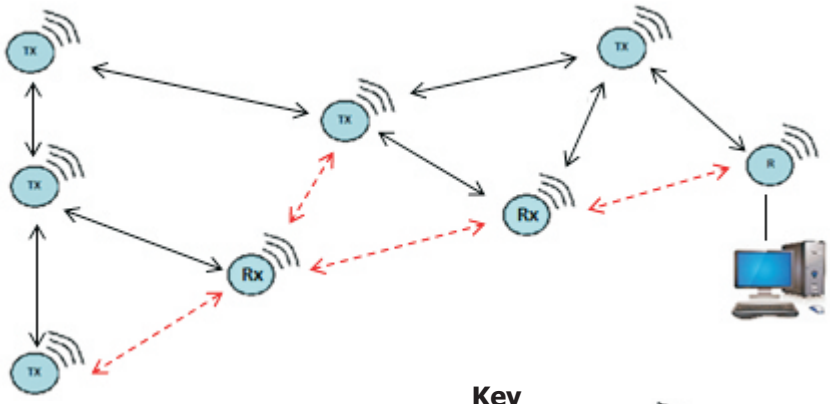




Mesh Network Example 1 - Good Network

5 x Counters, 2 x Repeaters, 1 x Receiver

Consisting 5 loggers and 2 repeaters, the system illustrated to the right is a robust network. An alternative path exists between loggers to compensate for possible loss of communication between devices.



Mesh Network Example 2 - Poor Network

6 x Counters, 1 x Repeater, 1 x Receiver

Consisting of 6 loggers and 1 repeater, the system illustrated below would be considered a non reliable network. The unit highlighted in red is the only link to the receiver and in result, all units upstream of this repeater are at risk of communication loss.

Key

Receiver

Logger

Repeater

Alternative route