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What is an Acknowledge Delay?

One of the most commonly asked questions to AES technical support is "What is an R903?" This alarm output signal is sent to the alarm monitoring system by the AES receiving equipment, when a subscriber sends an "Acknowledge Delay" trouble code. This particular signal format would be seen when using our Radionics 6500 compatible output format.

As you know, AES *IntelliNet* is a two-way communication system. When a subscriber sends a data packet to another device on the network, it expects to receive a Packet Acknowledged from that device confirming proper reception of the packet. If the subscriber does not receive the Packet Acknowledged it will repeat the transmission according to its internal programming until it does. If the subscriber does not receive the packet acknowledged before a programmable time, it flags itself as having an Acknowledge Delay or communication time-out and adds an acknowledge delay trouble code to its list of signals to send. The factory default time is either 90 or 120 seconds and is programmable between 60 and 300 seconds. Now the subscriber has at least two things it is trying to communicate. The original signal possibly a check-in and the new acknowledge delay signal.

The subscriber continues sending until it receives a packet acknowledged. The trouble condition will be restored when a packet acknowledged is finally received. Now, besides the original signals, a restore of the trouble will also be sent. What you will see at the alarm monitoring system is the original signal, an acknowledged delay and the current status, which is the restore of a trouble or fault code. A000, R903 & Y800 are the codes typically seen with our current Radionics output format. In our Ademco output format you will see E602/C000, R356/C903 & R307/ C800. These translate into a check-in, an acknowledge delay and a status OK.

In the past AES has also used a T903 in the Radionics output format for the acknowledged delay. We have found that an R903 or a restore code is less obtrusive and many of our customers prefer this.

What this sequence of codes really means is that there is a communication problem. Under normal conditions it should not take more than 90 seconds to receive an packet acknowledged. It usually takes less than 10. Look for trouble with the antenna or its location, coax, connectors, transceiver, radio or electrical interference or with the electronics itself. Maybe the subscriber is just to far away from other devices in the network. The problem could also be with the other subscribers or receiver it is attempting to communicate with.