



# A Note From Engineering

## Integrating Room Alert Signal Towers With Other Applications And Devices

On behalf of the entire engineering team at AVTECH, I would like to express how excited we are about the recent release of the Room Alert Signal Tower. With this new product, we have been able to incorporate our 20+ years of network-wide monitoring experience with 8+ years of developing environment monitoring hardware and combine it with customer feedback to create a truly unique product with virtually unlimited uses. Below are some common applications for the Room Alert Signal Tower currently being implemented by AVTECH customers.

### Computer Room / Data Center

- Install on top of each rack to provide a visual indication that the environment (i.e. Temperature, humidity, power, etc.) inside the rack is at acceptable levels.
- Install on top of each rack to provide a visual indication that the equipment in the rack is performing satisfactorily by having your monitoring application send SNMP Trap or URL commands to the Room Alert Signal Tower.
- Install on top of each rack to provide a visual indication if a ping performed by the Room Alert Signal Tower fails for a system or server in the rack.
- Install in the administrator's office and configure network printers to send SNMP Traps to the Room Alert Signal Tower when paper is out or toner is empty.
- Install in a hallway outside the data center to provide a visual indication that everything is normal without having to enter the room.
- Install in the IT manager's office (or cubicle) to provide a remote visual indication that something is wrong in the data center or on the network.

### Restaurant / Food Service

- Install above the cooler to provide a visual indication that the temperature inside the cooler is above acceptable levels.
- Install at the owner's home or office and combine with a Room Alert unit installed at the restaurant or monitoring location to provide a remote indication for conditions such as a malfunctioning cooler, smoke in the kitchen, door left open, motion detected after hours, etc.
- Install at the maitre d' or host desk to provide a visual notification if the dining room is too hot or cold ensuring the comfort of guests.

### Warehouse / Distribution

- Install outside of monitored environments to provide a visual indication ensuring that the environment complies with regulations imposed by the FDA or other regulatory agencies.
- Install in the warehouse manager's office to provide a visual indication of an unauthorized door opening, potential security breach, delivery driver at door, panic button pushed, etc.
- Install at a remote location such as corporate headquarters to provide a visual indication of alarm conditions in the warehouse.

### Factory / Manufacturing / Industrial

- Install in the production manager's office to provide a remote visual indication of error conditions on equipment, located on the factory floor.
- Install on the factory floor to provide a visual indication of environment conditions that are outside of normal conditions including temperature too high or low, heat index too high, smoke detected, motion in an unsafe zone, room entry, panic button pushed, etc.

There are many more applications in these and other markets including Hotel & Hospitality, Retail, Hospital, Medical Laboratory and many more. In order to serve these varied markets and integrate with many different software and hardware products, Room Alert Signal Towers use a flexible design that incorporates standards such as SNMP with custom API and URL commands. These options allow virtually any software application or hardware device to send commands to turn the visual and audio (optional) indications on and off in response to detected conditions.

Below are some strategies from our engineering team for integrating Room Alert Signal Towers with your existing applications and hardware devices to best leverage the visual and audio alert notifications.

# Integrating With SNMP

## SNMP Traps

Most network devices and many network aware applications have the ability to send SNMP Trap messages in response to alarm conditions. In most cases, these trap messages are received by network monitoring applications such as *PageR Enterprise*, *Tivoli* or *OpenView* and alert notifications are sent to mobile phones, pagers, PDAs and email. Room Alert Signal Towers add to this and provide a visual indication and optional audio alarm that can be triggered when a SNMP Trap is received. In addition, if email is configured on the Room Alert Signal Tower, it can send an email to the configured contacts with the IP address of the device that sent the trap message, the time and date it was received, and a link to the web browser interface of the Room Alert Signal Tower.

Configuration of this function is as easy as configuring your network device or software application to send SNMP Trap messages to the IP address of the Room Alert Signal Tower unit. That's it! If additional restrictions are required, IP addresses can optionally be configured on the Room Alert Signal Tower so only SNMP Traps received from specific IP addresses are processed. This method is the easiest way to integrate the Room Alert Signal Tower with existing network applications and devices. Users can often have Room Alert Signal Towers operational in minutes.

## SNMP Queries (SET / GET)

Network monitoring applications often use SNMP Queries to retrieve data from systems and devices on the network to check that parameters are within configured thresholds. Room Alert Signal Towers are fully SNMPv1 compatible and all current sensor data and standard RFC-1157 information can be queried from SNMP capable applications on the network.

In addition to querying Room Alert Signal Towers for current sensor data, the SNMP SET command can also be used to control the lights and optional audible alarms on Room Alert Signal Towers. This makes it easy for network monitoring applications to use the Room Alert Signal Tower as a visual and audio (optional) indication that an alarm condition exists with something the application is monitoring.

## Integrating Via Custom URL

If the application or network device you are working with does not support SNMP, the lights and optional audio indicators can also be controlled via URL. The first URL below will turn the 'Red' light on a Room Alert Signal Tower 'On' and the second URL will turn the 'Red' light 'Off'.

```
http://<IP of RAST>/cmd.cgi?action=ST&t=RE&a=1  
http://<IP of RAST>/cmd.cgi?action=ST&t=RE&a=0
```

Be sure to replace '<IP of RAST>' with the actual IP address of your Room Alert Signal Tower. The valid parameters to pass with the URL are listed below with the available options:

- 'action' – Always 'ST' for any model of the Room Alert Signal Tower
- 't' – Two letter code indicating signal tower element to control. For lights, Red=RE, Orange=OR, Green=GR, Blue=BL and White=WH. For optional audio alarms, Short Tone=A1, Long Tone=A2.
- 'a' – Valid options are '1' for ON and '0' for OFF.

The URL option is a convenient way to integrate Room Alert Signal Tower control into other web-based applications. In addition, custom applications and programs might find it easier to simply open a URL connection to the device instead of implementing a full SNMP stack if that is not already available. Connecting via URL is easy to implement in high-level languages such as Java and C++ and also scripting languages such as VBScript, JavaScript, Perl and many others. Our engineering team has samples currently available for VBScript, JavaScript and Java and can help point your development team in the right direction with most other programming languages.

Some examples of these applications might be integrating with your CRM database to provide a visual indication to the warehouse when a new order is ready in the system for processing. It could be integrated with a Help Desk application so a remote visual indication can be activated in a supervisors office when a support case needs to be escalated. PageR Enterprise could be monitoring your network and use a Task object to activate the Room Alert Signal Tower lights automatically when an alarm is detected. Many applications are possible and the URL interface should provide a simple interface to the Room Alert Signal Tower functionality.

## Monitoring Built Into Room Alert Signal Tower

Room Alert Signal Towers monitor digital temperature and switch sensors such as power, flood, smoke, motion, air flow, room entry, panic button and more. It can ping up to eight (8) devices, a built-in web browser interface and can send email, SMS & SNMP alerts in addition to providing a visual and audio (optional) indication of an alarm condition. When this is combined with the integration opportunities listed above, Room Alert Signal Towers prove to be a product whose features are truly unmatched. Contact AVTECH today to discuss how a Room Alert Signal Tower can work for you and your organization.