84-Series Handsets with enhanced Rauland nurse-call integration

In September 2013, Spectralink released special versions of the 8440 & 8452 handsets (product IDs: 2200-37146-001 & 2200-37200-001 respectively), which when used with software release 4.3.1 (or later), offer an enhanced integration with Rauland Responder 5 nurse-call systems. This tech bulletin explains how to use these additional integration capabilities.

For convenience, this document refers to these special models as “Rauland” handsets, but the handsets are branded, sold and supported by Spectralink.

**System Affected**

Spectralink 8440 w/ product ID: 2200-37146-001
Spectralink 8452 w/ product ID: 2200-37200-001

**Enhanced Integration Overview**

When used with Software release 4.3.1 or later, the “Rauland” handsets support four additional built-in alert tones. These tones can be triggered by the Rauland Responder 5 system to provide more intuitive alert notifications to the handset users.

The handsets also differ from standard Spectralink 84-series models by having a green bezel and have a special memory bit programmed during manufacturing to identify these handsets as “Rauland” handsets.

84-Series software release 4.3.1 and later supports the enhanced Rauland nurse-call capabilities. These releases will check the handset’s “Rauland” bit. If set, the software will make available the enhanced capabilities otherwise those capabilities will not be available. All other 84-Series handsets will not have these enhanced integration capabilities.

**Supported Software Releases**

Rauland handsets should use software release 4.3.1 or later. These handsets do not support Microsoft Lync, so administrators should upgrade using the Spectralink 84-series non-Lync
software releases when available (e.g. 4.3.x, 4.5.x, …). Rauland handsets will support earlier software releases, e.g. 4.2.0, but is not recommended as the handsets will lose the additional Rauland integration capabilities present in the 4.3.1 or later software.

Non-Rauland 84-Series handsets can run 4.3.1 or later but will not have the enhanced Rauland integration capabilities.

<table>
<thead>
<tr>
<th>Handset Type</th>
<th>Software Releases</th>
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<tbody>
<tr>
<td></td>
<td>4.2.x or earlier</td>
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<td></td>
<td>Non-Lync Releases</td>
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<td></td>
<td>4.3.1 or later</td>
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<td>Lync Releases:</td>
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<td></td>
<td>4.4.x or later</td>
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<tr>
<td>“Rauland”</td>
<td>Standard 84-Series behavior</td>
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<tr>
<td></td>
<td>Enhanced Rauland Integration</td>
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<tr>
<td></td>
<td>Not Supported</td>
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<tr>
<td>Standard 84-Series or OEM</td>
<td>Standard 8400</td>
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<td>Standard 8400</td>
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**Using the Integrated Alert Tones**

The Rauland handsets with release 4.3.1 or later have four additional integrated alert tones:

- SlowDingDong.wav
- CodeBlue.wav
- FastDingDing.wav
- SlowDing.wav

These alert tones are not presented in the handset’s UI as they are not intended as general use ring tones (i.e. set in Profile settings). Instead the tones are designed to be used by the Rauland Responder system. The system administrator can use these additional tones by adding or changing the appropriate pattern matching rules in the Dial Plan of the Brekeke call server to include a SIP Alert-Info header in the SIP Invite message. The Alert-Info header notifies the handset to play the specified tone. An example of dial plan rule example is below, where “CodeBlue.Wav” can be substituted with one of the other WAV files above:

```
$request = ^INVITE
To = sip:(8.+)@
From = Code
Alert-Info = <ftp://localhost/CodeBlue.wav>
```

For more general information on Dial Plan Rules and Pattern Matching please refer to the appropriate Rauland and Brekeke documentation. If the specified WAV file is not installed or present on the handset, then the specified WAV file will not play.
Adding New Tones

If an administrator wishes to use other ring tones or alert tones, additional tones can be downloaded to any 84-Series model handset using a provisioning server.

By configuring the 84-Series phone appropriately, new tones are downloaded each time the phone starts and is available for use by the Rauland system or as additional ring tones. The tones are loaded into the handset’s volatile memory, so they are lost when a handset is powered off, and thus need to be left on the provisioning server.

To configure a handset to add new tones, use the saf.x parameter in the configuration file. Typically x is 12 to 24. For example:

```xml
<sampled_audio
  saf.12="tftp://somehost.example.com/sounds/example.wav"
  saf.13="chirp.wav"
/>
```

In the above example, saf.12 directs the handset to use TFTP to retrieve example.wav from the specified TFTP server (using a RFC1738 compliant URL). saf.13 directs the handset to retrieve chirp.wav from the current provisioning server.

Once downloaded to the handset, the Rauland system can use these tones as alert tones by adding an Alert-Info header directive (e.g. “Alert-Info = <ftp://localhost/blah.wav>”) to a dial plan rule in the Brekeke call-server as explained in the previous section, where blah.wav would be replaced by the new filename of the tone.

The new WAV files should be less than 300 KB, in the WAVE file format and either mono 8 kHz G.711 u-Law, or G.711 A-Law.

The “Default Ring Tones and Alert Tones” section of the 84-Series administration guide document covers the above in more details and explains how to make these additional downloaded tones available as ringtones.
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The Product Warranty and Software License and Warranty and other support documents are available at http://support.spectralink.com.

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