



Troubleshooting

- [Base Station Installation Problems, on page 1](#)
- [Repeater Installation Problems, on page 2](#)
- [Handset Installation Problems, on page 2](#)
- [Operational Problems with the Base Station, on page 4](#)
- [Operational Problems with the Handset, on page 4](#)
- [Dualcell Troubleshooting, on page 7](#)
- [Multicell Troubleshooting, on page 7](#)
- [Troubleshooting Procedures, on page 8](#)

Base Station Installation Problems

Base Station LED is Solid Red

Problem

The LED on the base station doesn't change to green.

Cause

The base station can't get an IP address.

Solution

- Test the Ethernet cable with another device to check for signal.
- Ensure that the Ethernet cable is connected on the switch.
- Check that the DHCP server is available on the network.
- Replace the Ethernet cable with one that you know is working.

Repeater Installation Problems

Can't Set Up a Repeater - LED is Red

Problem

The repeater LED is red and registration of fails.

Cause

The repeater is not in registration mode.

Solution

Reset the repeater with one of these options:

- Unplug the repeater. Wait 30 seconds, then plug the repeater in again.
- Press and hold the reset button on the bottom edge of the repeater for 5 seconds.

Handset Installation Problems

Handset Won't Register (Automatic Configuration)

Problem

The initial setup of a handset is complete, but the handset won't register with a base station or repeater.

Cause

The base station isn't working, the base station isn't in range, or the base station is not trying to connect with the handset.

Solution

Check the following items:

- If the handset displays the message `Can't locate a base station`, check that the base station is working. If it is working, move the handset close to the base station. You may need to extend the network with an additional multicell base station. If you have a single cell base station, you may need to change to a multicell system.

If the handset displays the message `Can't locate a base station`, check that the base station is working. If it is working, move the handset close to the base station. You may need to extend the network with an additional multicell base station or repeater. If you have a single cell base station, you may need to change to a multicell system or add a repeater.

- If the handset displays the message `Sign in error`. Contact your administrator., there is a problem with the user's configuration or authentication. Contact your service provider.
- If the handset displays the message `Device error`. Contact your administrator, contact your service provider. This message indicates that you have reached the maximum number of handsets you can configure.
- If the handset displays the message `Registration timeout`. Contact your administrator, check that the base station is working and within range of the handset. If the timeout continues, contact your service provider.
- If the handset displays the message `Access Code error`. Enter the code or contact your administrator:
 - If there are multiple base stations within range, check that the user is trying to access the correct base station.
 - Verify that you have given the correct access code for the selected base station.

Handset Won't Register (Manual Configuration)

Problem

The initial setup of a handset is complete, but the handset won't register with a base station or repeater.

Cause

The configuration is incomplete or incorrect, the base station isn't working, the base station isn't in range, or the base station is not trying to connect with the handset.

Solution

Check the following items:

- If the IPEI number of the handset is configured in the **Extensions** web page, ensure that the IPEI is correct. If it isn't correct, change it.
- Check that the base station LED is green and that the handset is in range of a base station or a repeater.
If the base station isn't in range, you may need to add a repeater to the system.
- Access the **Extensions** web page, check the **VoIP Idx** check box associated with the handset, and click **Start SIP Registration(s)**.

Handset Can't Register

Problem

The handset displays `Deregistered`. When you try to register the handset in the **Extensions** web page, the handset doesn't register.

Solution

1. In the **Extensions** web page, click the **Refresh** button.
2. You may be prompted to reconnect the handset to the base station.
3. If the handset doesn't register, contact your service provider.

Operational Problems with the Base Station

Base Station LED Flashes Red and Handset Displays “No SIP Reg” Message

Problem

The LED on the base station flashes red. One or more handsets display the message No SIP Reg. In the base station administration **Extensions** web page, the handset status doesn't say SIP Registered.

Cause

The base station can't communicate with the call control system.

Solution

1. Sign into the base station administration web page.
2. Click **Extensions**.
3. In the **VoIP Idx** column, check the check box for each handset that is not registered.
4. Click **Start SIP Registration(s)**.

Operational Problems with the Handset

This section contains troubleshooting information for common handset problems.

Handset Won't Turn On



Problem

The handset has a battery installed but won't turn on.

Cause

The battery doesn't have sufficient charge, the plastic tab over the battery contacts aren't removed, or the battery has failed.

Solution

1. Place the handset in the charger and monitor it. If the screen turns on after a few minutes, the battery was depleted and needs to be fully charged. You can confirm the battery level from the **Menu**  > **Settings**  > **Status** screen while the handset is in the charger.
This happens if the handset hasn't been used for a long period of time.
2. If the handset won't turn on after 10 minutes on the charger, remove the battery and replace it with a battery that you know is charged. If the handset now works, the battery may have failed.

Handset Won't Stay On

Problem

The handset won't stay powered on when not in the charging cradle. When in the charging cradle, the handset turns on.

Solution

Check:


- Does the handset have a battery installed? You can use the handset in the cradle with no battery, but it needs the battery as soon as you remove it from the cradle.
- If the handset is new, has the plastic tab over the battery contacts been removed?
- Have you tried to use the handset with a charged battery from another handset?

Handset Doesn't Ring


Problem

The phone can receive calls but no ringtone is heard.

Cause

The phone may be in silent mode and the silent mode icon  is displayed in the screen header.

Solution

- Increase the volume from the **Settings**  menu.
- Press and hold the pound (#) key for two seconds while the phone is idle to disable silent mode.

Handset Doesn't Respond to Key Presses

Problem

Nothing happens when you press a key on the handset.

Cause

The keypad is probably locked.

Solution

Press and hold the star (*) key for 2 seconds to unlock the keypad.

Handset Beeps Continuously While in the Charger

Problem

The handset beeps continuously when placed in the charger.

Solution

Check these scenarios:

- The handset wasn't placed in the charger so that the contacts on the handset and charger touched.
- The handset is new and this is the first time it has been placed on the charger. Check that the plastic on the battery has been removed.

If none of the scenarios apply, the battery may be defective. Put a battery that you know works into the handset and place the handset in the charger. If the handset doesn't beep, then the original battery is defective.

Handset Screen Displays "Searching"

Problem

The handset displays the message *Searching*.

Cause

The handset is too far from the closest base station or the base station isn't active.

Solution

- If the handset has been stationary, the base station may be rebooting or inactive.
 1. Wait a couple of minutes to see if the handset can communicate with the base station.
 2. If the problem persists, check that the base station has power and the LED is green. If the handset power was off while searching for the base station, it takes more time to register after the handset power is on.

- If the handset has been carried around, it may be out of range of the base station.
 - Short term solution: Move the handset closer to the base station.
 - Long term solution for system with one single cell base station:
 - Add another 110 Single-Cell Base Station to set up a dualcell system.
 - Add repeaters to improve coverage.
 - Long term solution for system with one multi-cell base station: Add additional 210 Multi-Cell Base Stations or repeaters to improve coverage.
 - Long term solution for dualcell system: Change the base stations to 210 Multi-Cell Base Station or add repeaters to improve coverage.
 - Long term solution for multicell system: Add one or more 210 Multi-Cell Base Stations or repeaters to improve coverage.

No Audio on Your Handsets with a Single Base Station System

Problem

You have one base station and two or more handsets. But when you try to call from one handset to the other, you don't hear anything on either phone.

Solution

1. Sign into the base station web page.
2. Click **Network Settings**.
3. Verify that the field **Use Different SIP Ports** is set to **Enabled**.

Dualcell Troubleshooting

If you have problems with a dualcell system, you may need to turn on extra logs to debug the problem. For more information, see [Turn On Dualcell Debug Logs, on page 11](#).

Multicell Troubleshooting

If you have problems with a multicell system, you may need to turn on extra logs to debug the problem. For more information, see [Turn on Multicell Debug Logs, on page 11](#).

Base Station Shows Searching in DECT Property

Problem

You have set up a multicell system, but the **Multi cell** web page shows **Searching!** in the **DECT property** column.

Cause

The base stations can't communicate.

Solution

Check these things:

- The base station that can't connect is too far from the other base stations. Move the base station closer, or add another base station between the one that can't communicate and the base stations already set up.

Look at the field **DECT sync source** in the **Multi cell** page. Each base station in the system shows the signal strength it receives in decibels per milliwatt (dBm).

- -75 dBm or lower is recommended.
 - -76 to -85 dBm is acceptable.
 - -86 to -90 dBm is acceptable but you should consider adding another base station.
 - -91 dBm and above, you must add another base station.
- There is something interfering with the radio signal. For example, there may be a door or equipment that disrupts the radio communications. You may need to move the base station.
 - On the **Home/Status** web page for each base station, compare the **RF Band** fields to ensure that they have the same band configured. You must have all base stations on the same RF band for the base stations to communicate. You also must have all base stations on the RF band for your country. The RF band is configured on the base station in the factory.

Troubleshooting Procedures

These procedures can be used to identify and correct problems.

Collect Troubleshooting Logs for a General Problem

When you have problems with your system, the SIP logs and syslogs may help to identify the problem. Your service provider may need this information to fix the problem.

The sections [SIP Log Web Page Fields](#) and [Syslog Web Page Fields](#) give you some information about the contents of the logs.

Use this procedure if the problem is not repeatable. If you can recreate the problem, use [Collect Troubleshooting Logs for a Repeatable Problem](#), on page 9.

Before you begin

Connect to the base station web page as described in [Sign in to the administration web page](#)

Procedure

-
- Step 1** Click **Syslog**.
 - Step 2** Click at the beginning of the log.
 - Step 3** Scroll to the end of the log, hold Shift and then click at the end of the log.
 - Step 4** Press **Ctrl+C**.
 - Step 5** Go to the text editor and click in the top of the file body
 - Step 6** Press **Ctrl+V**.
 - Step 7** Save the file to a known location on your PC.
Name the file with the log type, date, and time. For example, syslog_20181212.txt.
 - Step 8** Click **SIP Log**.
 - Step 9** Click at the beginning of the log.
 - Step 10** Scroll to the end of the log, hold Shift and then click at the end of the log.
 - Step 11** Press **Ctrl+C**.
 - Step 12** Go to the text editor and click in the top of the file body.
 - Step 13** Press **Ctrl+V**.
 - Step 14** Save the file to a known location on your PC.
Name the file with the log type, date, and time. For example, siplog_20181212.txt.
-

Collect Troubleshooting Logs for a Repeatable Problem

When you have problems with your system, the SIP logs and syslogs may help to identify the problem. Your service provider may need this information to fix the problem.

The sections [SIP Log Web Page Fields](#) and [Syslog Web Page Fields](#) give you some information about the contents of the logs.

Use this procedure if the problem is repeatable. If you can't recreate the problem, use [Collect Troubleshooting Logs for a General Problem, on page 8](#).

Before you begin

Connect to the base station web page as described in [Sign in to the administration web page](#).

Open Notepad or a similar test editor and open a new file.

Procedure

-
- Step 1** Use [Change the Debug Log Level, on page 10](#) to change the debug level to Debug.

- Step 2** Click **Syslog**.
- Step 3** Click **Clear**.
- Step 4** Click **Syslog**.
- Step 5** Click **Clear**.
- Step 6** Recreate the problem.
- Step 7** Click **Syslog**.
- Step 8** Click at the beginning of the log.
- Step 9** Scroll to the end of the log, hold **Shift** and then click at the end of the log.
- Step 10** Press **Ctrl+C**.
- Step 11** Go to the text editor and click in the top of the file body.
- Step 12** Press **Ctrl+V**.
- Step 13** Save the file to a known location on your PC.
Name the file with the log type, date, and time. For example, syslog_20181212.txt.
- Step 14** Click **SIP Log**.
- Step 15** Click at the beginning of the log.
- Step 16** Scroll to the end of the log, hold Shift and then click at the end of the log.
- Step 17** Press **Ctrl+C**.
- Step 18** Go to the text editor and click in the top of the file body.
- Step 19** Press **Ctrl+V**.
- Step 20** Save the file to a known location on your PC.
Name the file with the log type, date, and time. For example, siplog_20181212.txt.
- Step 21** Use [Change the Debug Log Level, on page 10](#) to change the debug level to Normal Operation.

Change the Debug Log Level

When you have problems with your system, detailed SIP logs and syslogs may help to identify the problem. Use this procedure only when requested by your service provider. The amount of information gathered with increased debug levels may degrade system performance.



Note After you get the required logs, make sure you return the debug level to **Normal Operation**.

For more information about the fields, see [Management Web Page Fields](#).

Before you begin

Connect to the base station web page as described in [Sign in to the administration web page](#).

Procedure

- Step 1** Click **Management**.
- Step 2** In the Syslog/SIP Log section, change the **Upload of SIP Log** to Enabled.
- Step 3** In the Syslog/SIP Log section, change the **Syslog Level** to the required level.
- Step 4** Click **Save**.
- Step 5** After you capture logs, click **Management**.
- Step 6** (Optional) In the Syslog/SIP Log section, change the **Upload of SIP Log** to Enabled.
- Step 7** In the Syslog/SIP Log section, change the **Syslog Level** to Normal Operation.
- Step 8** Click **Save**.

Turn On Dualcell Debug Logs

To debug dualcell system problems, enable debugging. This causes the log files to contain extra log messages about dualcell.



Note After you get the required logs, make sure you set the debug level to **Disabled**.

Procedure

- Step 1** Access a base station web page. See [Sign in to the administration web page](#).
- Step 2** Click **Dual Cell**.
- Step 3** Set **Dual cell debug** to **Both**.
- Step 4** Click **Save**.

Turn on Multicell Debug Logs

In order to debug multicell problems, you need to turn multicell debugging. This causes the log files to contain extra log messages about multicell.



Note After you get the required logs, make sure you return the debug level to **Disabled**.

Procedure

- Step 1** Access a base station web page. See [Sign in to the administration web page](#).
- Step 2** Click **Multi Cell**.

Step 3 Set **Multi cell debug** to **Both**.

Step 4 Click **Save**.

Generate PCAP Logs

You can create a Packet Capture (PCAP) from the base station web page to assist in troubleshooting problems. You can select a number of trace options.



Note Some of the trace options can quickly fill the limited buffer. Use these with caution.

Some trace options should only be used by experienced personnel.

PCAP logs are stored in the base station RAM. If the base station loses power or resets before you download the logs to your computer, the logs are lost. After you download the logs, you can open them in a packet capture tool (for example, WireShark) for further analysis.

Until the memory fills up, call performance is not impacted by the capture. But memory can fill up quickly, so limit the capture.

Packet traces are done with Ethernet II. Other traces, like Novell raw IEEE 802.3, IEEE 802.2 LLC, and IEEE 802.2 SNAP, are not available.

The packets are filtered based on MAC addresses, for example, 00:08:7B:17:80:39.

Before you begin

Connect to the base station web page as described in [Sign in to the administration web page](#).

You need to be using one of the following browsers:

- Microsoft Edge, version 42 or later
- Firefox, version 61 or later
- Chrome, version 68 or later

Procedure

Step 1 Click **Diagnostics**.

Step 2 Click **Logging**.

Step 3 Check one or more check box:

- **Trace packets to/from this base (except Audio):** All Ethernet packets to and from the base station are traced. This includes broadcast packets but does not include audio.
- **Trace audio packets to/from this base:** All RTP streams to and from the base station are traced. The trace uses the **RTP port** and **RTP port range** from the **Network Settings** web page.

Note Audio packets can quickly fill the log buffer. Use this setting with caution.

- **Trace received broadcast packets:** All broadcast packets received by the base station are traced.
Note Broadcast packets can quickly fill the log buffer. Use this setting with caution.
- **Trace received IPv4 multicast packets:** All IPv4 multicast packets received by the base station are traced.
Note Multicast packets can quickly fill the log buffer. Use this setting with caution.
- **Trace received packet with destination MAC between (compare between each byte):** You set up the MAC address range to be monitored with the 6 pairs of fields. Each byte of the received destination MAC is checked to determine if it is in the trace range.
Note For expert use only.
- **Trace received Ethertype:** You can select up to three received Ethertypes to trace.
Note For expert use only.
- **Trace received IPv4 protocol:** You can select up to 3 received IPv4 protocols to trace.
Note For expert use only.
- **Trace received TCP/UDP port:** You can set up to 3 TCP/UDP ports to trace. The packet is logged if the select port is the destination port or the source port for a packet.
Note For expert use only.

- Step 4** Click **Save** to start the packet capture.
 - Step 5** If you are trying to troubleshoot a specific problem, reproduce the problem.
 - Step 6** Click **Cancel** to stop the packet capture.
 - Step 7** (Optional) Click **Reset traces** to start the packet capture again. The existing capture is deleted.
 - Step 8** Click **All Basestations** or **Current Basestation** to download the packet capture to your computer.
-

