

# Best Practices for Cleaning and Troubleshooting Cisco IP Phone Hookswitch

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## Introduction

### Prerequisites

Requirements

Components Used

Conventions

### Cleaning and Troubleshooting Cisco IP Phone Hookswitch

Signaling

Cradle Clip

LAN Cord

Self Cleaning Hookswitch Contacts

Cleaning Contacts

### NetPro Discussion Forums – Featured Conversations

### Related Information

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## Introduction

A thorough analysis of a large number of Cisco IP Phones that have been reported as hardware failures has been completed and our research reveals that the great majority of these phones do not have any determinable failure. The standard by which the phone industry measures phone failures is based on Bell Corp/Telcordia standards and the standard acceptable failure rate is set at 4 percent. The Cisco IP Phone's overall failure rate is well under the acceptable industry average. Many of the problems that have been reported as hardware failures are really either operational or cleanup issues. This document describes some common troubleshoot steps to be taken before you attempt to replace the Cisco IP Phone.

## Prerequisites

### Requirements

There are no specific prerequisites for this document.

### Components Used

The information in this document is based on the hardware versions below.

- Cisco 7910, 7940, and 7960 IP Phone

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

## Cleaning and Troubleshooting Cisco IP Phone Hookswitch

This section highlights some guidelines for phone usage and what to look for if you suspect a hookswitch failure.

A slightly dampened soft cloth should be used to clean or wipe down the phone. Do not use any liquids or powders directly on the phone to clean or for other purposes. As with all but weatherproof electronics, liquids and powders can contaminate the components and cause failures.

## Signaling

Check to see whether signaling works properly between the phone and the Cisco CallManager. Use the speaker button to answer the phone or take the phone off-hook. If the call is answered or dial tone is received, signaling is active.

## Cradle Clip

The phones are designed with a reversible clip in the handset cradle area. The clip is used with the tab out when the phone is wall-mounted. Check to see whether the cradle handset clip is in the wall-mounted position (with plastic tab that protrude upward). If the phone is on a desktop, slide the clip upward to remove it, rotate one 180 degrees, and slide back in so that the tab is hidden.

This tab can interfere with the handset as it is replaced on the base (in the cradle), which causes the hookswitch to remain in the up position. When the handset is lifted later in an attempt to initiate a new call or answer one, the hookswitch is not activated. If you answer a call, the phone continues to ring; if you place a call, no dial tone occurs.

## LAN Cord

Check to see whether the dark gray line cord / LAN cable that was packaged with the phone is being used. If a different patch of cable is in use, position it to pass out the side of the phone, between the base and the footstand.

Other cables such as Cat-5, Cat-5E, or Cat-6 that have larger diameters do not pass under the rear of the footstand without raising the phone forward. The footstand is designed to allow the most number of positions to eliminate glare from the display. When the phone is adjusted to the most vertical position, larger diameter cords actually force the phone forward to the point where the handset may not sit firmly on the hookswitch. This creates false off-hook conditions.

Keep the phone one notch from the most vertical position to ensure that the handset firmly rests on the hookswitch.

## Self Cleaning Hookswitch Contacts

The hookswitch contacts design uses a wipe action to self-clean the contacts. Periods of nonuse of the phone allow air impurities such as dust and other contaminants to hinder contact performance, which results in intermittent operation. Press and release the hookswitch rapidly a dozen times or so to clean the contacts.

## Cleaning Contacts

Disassemble the 2 pieces of the phone shell (front and back, should be 4 screws). On the front half, where all of the electronics are attached, find the hookswitch and remove it. Underneath, there is a small white contact pad. Lift the contact pad and clean the contacts underneath with an eraser, until they are as silver as possible.

**Note:** If none of the solutions above remedy the situation, Return Material Authorization (RMA) the phone.

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