

# Understanding Why Telephones in the United Kingdom Connected to Cisco FXS Interfaces May Fail to Ring

Document ID: 25800

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## Introduction

This document explains why a telephone approved for the United Kingdom (UK) may fail to ring when connected to a Cisco Foreign eXchange Station (FSX) port and explains how to correct the failure.

The failure results from a physical interoperability issue and is independent of Cisco hardware or software. British Telecom did not implement RJ11 type connectors when it adopted a plug and socket connection methodology. RJ11 connectors allow parallel connectivity for the transmission path and the ringer circuit. The reason they weren't used was that older telephones had needed to have their ringer circuits connected in series because the ringing devices needed high current.

Outside the UK, ringer circuitry is self-contained in each phone. The UK implementation puts the capacitor, which provides the AC ring path, and the anti-tinkle feature (prevents the bell or ringer from sounding when pulse dialing is used) externally in the first socket, connected to the local loop.

## Prerequisites

### Requirements

There are no specific prerequisites for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

### Conventions

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

## Problem

In the UK certain British Approval Board for Telecommunications (BABT) telephones fail to ring when they are connected to FXS ports on Cisco voice-enabled routers and switches. Outgoing calls can be made and voice communication in both directions can be established, however with incoming calls, the telephones will

