AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for Konftel 50 and 60W Conference Units with Avaya Telephones - Issue 1.0
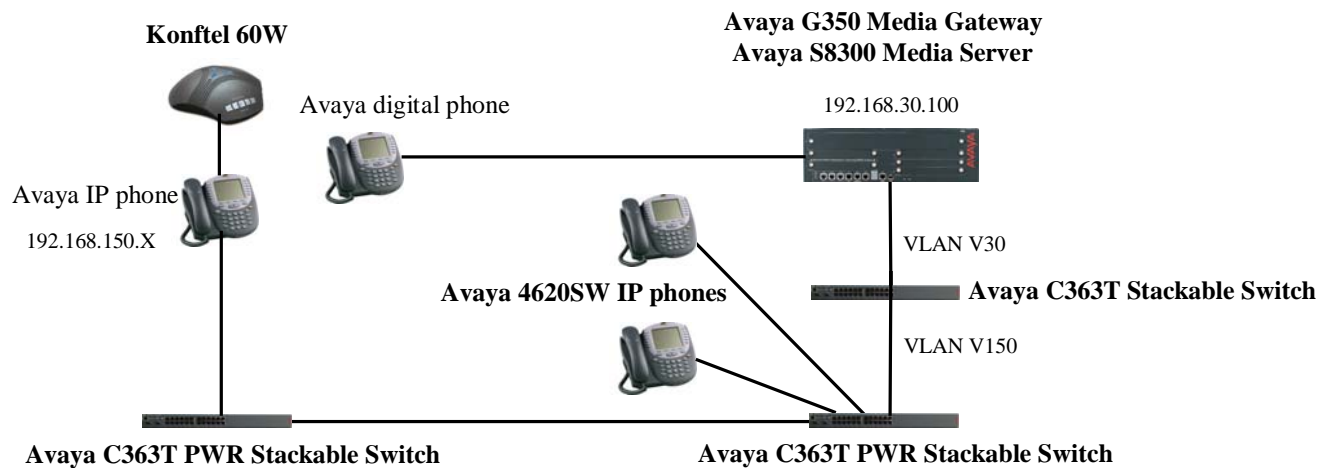
Abstract

These Application Notes document compliance testing the Konftel 50 and 60W conference units to with Avaya IP and digital telephones controlled by Avaya Communication Manager. These devices can be attached to the handset port of an Avaya IP or digital telephone which enables meeting or conference participants to simultaneously participate in a telephone conversation. The Konftel units passed the tests described herein.

Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

MRR; Reviewed:
SPOC 3/23/2006

Solution & Interoperability Test Lab Application Notes
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konftel-acm.doc

1. Introduction

The purpose of these Application Notes is to illustrate how the Konftel 50 and 60W conference units can be used within a telephone system consisting of Avaya IP and digital telephones controlled by Avaya Communication Manager. The Konftel conference unit attaches to the handset port of an Avaya telephone, and contain a microphone and loudspeaker which effectively extend the range from which the telephone can be used to include an area of 30 square meters. Placed within a conference room, the Konftel unit enables all of the participants in the room to take part in a telephone conversation. The unit also performs echo cancellation to avoid feedback problems which might otherwise occur.
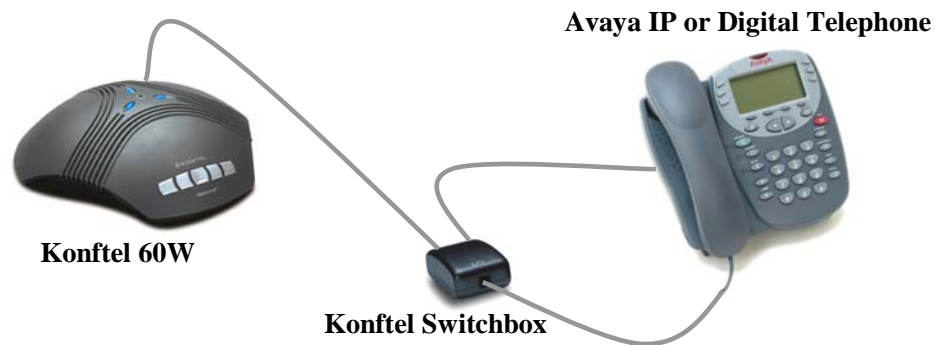
This document details the compliance testing with Konftel units, including the test configuration, test procedure, and the test results. The diagram below depicts the configuration used for compliance testing.

Figure 1: Test configuration

As can be seen in the diagram, the Konftel unit under test has no direct connection to the Avaya telephone network other than via the handset port on the Avaya telephone.

The following diagram shows in detail the connection between the Konftel unit and the Avaya telephone.

Avaya IP or Digital Telephone

Konftel 60W

Konftel Switchbox

Figure 2: Konftel connection to handset and telephone

The T-switch shown in the diagram, which is included in the Konftel product package, connects the Konftel conference unit, the telephone handset, and the handset port of the telephone. When the Konftel unit is inactive, the telephone/handset functions normally. When the Konftel unit is activated, the audio input/output is diverted from the handset to the Konftel conference unit, assuming that the handset is off-hook.

The normal mode of operation is to originate or answer a call with the handset, activate the conference unit when conference attendees are ready to participate in the call, and lay the handset on its side next to the phone for the duration of the call.

Since there is no direct connection between the Konftel unit and the telephone network, the exact configuration of the telephone network is not of critical importance for testing. All that is required for this purpose are the telephones for which compliance is to be verified and two other telephones within the telephone network. One of the additional telephones is used alternately to generate an audio signal to test the sound reproduction of the Konftel unit's loudspeaker or to listen to the sound detected by the Konftel unit's microphone. The second telephone is used to test three way-conference operation.

The configuration that was used for testing consists of an Avaya G350 Media Gateway, and an Avaya S8300 Media Server. Ethernet switching is performed by Avaya C363T and C363T PWR Converged Stackable Switches, the latter of which also supplies power for the Avaya IP telephones. It is important that the telephones used for monitoring be at a location which is sufficiently isolated from the Konftel unit under test to ensure that sound from the test location cannot be heard other than via the telephones.

Compliance testing was done with various Avaya telephone terminals. For each of the telephones listed in the following section, both the Konftel the 50 and 60W units were attached to the telephone in a conference room setting and individually tested. The test results for each telephone are also shown within this document.

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration:

Equipment	Software
Konftel 50 Conference Unit	R1C
Konftel 60W Conference Unit	R1B
Konftel Switchbox	N/A
Avaya G350 Media Gateway	23.17.0
Avaya S8300 Media Server	Communication Manager R013x.00.1.346.0
Avaya MM712 DCP media module	HW05/FW011
Avaya C363 Converged Stackable Switch (with layer 3 license)	4.3.12
Avaya C363 PWR Converged Stackable Switch	4.5.14
Avaya C363 PWR Converged Stackable Switch	4.5.14
Avaya 2402 Digital Telephone	N/A
Avaya 2410 Digital Telephone	N/A
Avaya 2420 Digital Telephone	N/A
Avaya 4602SW IP Telephone	1.800
Avaya 4610SW IP Telephone	2.0
Avaya 4620SW IP Telephone	2.100
Avaya 4621SW IP Telephone	2.150
Avaya 4625SW IP Telephone	2.500
Avaya 4620SW IP Telephone (used as monitor/caller)	2.100
Avaya 4620SW IP Telephone (used as 3-party conference participant)	2.100

3. Configuration of the Avaya G350 Media Gateway

The exact configuration of the G350 is not of critical importance for these tests. An MM712 media module was used to attach the Avaya digital telephones.

4. Configuration of the Avaya S8300 Media Server

The S8300 must be configured to support the Avaya digital and IP telephones which are to be connected to the Konftel units. The default configuration parameters were used in all cases. No special configuration was required to support the Konftel units.

5. Configuration of the Konftel units

The **Type** switch on the Konftel switchbox (which designates telephone type) was set to **I.** This is a two position slide switch which is accessible via a slit in the bottom of the switchbox. The position of the switch can be changed with a paper clip.

The Konftel units replace the handset of a telephone. To go off-hook, press the "on/off" button on the Konftel unit. To go on-hook, press the same "on/off" button.
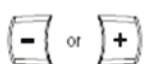
Figure 3: Konftel 60W conference unit controls

For all of the tests, microphone and loudspeaker levels were set to maximum. The microphone can be adjusted as follows:
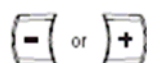
Adjusting the microphone volume

The microphone volume can be adjusted during the call, but to avoid disturbing the call, it may be best to adjust it during a test call after the telephone has been paired.

⇨ Press and hold the **mute** button for 2 seconds until the LEDs start to flash and you hear a tone.

⇨ Increase the microphone volume using **+** and reduce it using **−**.

Adjust the microphone volume one level at a time until you can hear well in the other end. Please note that too high a level may cause echoes and feedback.

⇨ Press the **mute** button to conclude setting the selected microphone volume.

The loudspeaker can be adjusted as follows:

Adjusting the speaker volume

⇨ Increase the speaker volume using **+** and reduce it using **-**.

6. Interoperability Compliance Testing

Interoperability compliance testing covered connectivity and feature functionality. Feature functionality testing verified the ability of the Konftel units to act as a bidirectional speech conduit, including the participation in a three-way conference call. The ability to manually activate/deactivate the units was verified. It was also verified that the attachment of the Konftel units did not interfere with the operation of the speakerphone feature of the Avaya IP and digital telephones.

6.1. General Test Approach

Testing was done manually. All calls made during testing were made manually. To test the microphone operation of the Konftel units, an MP3 voice source was played at a PC located 3 meters from the conference unit and the voice quality verified manually at the other telephone. The operation of the Konftel loudspeaker was verified by placing an audio voice source at the telephone that was used as the monitoring unit, and voice quality verified at a distance of 3 meters from the Konftel units.

6.2. Test Results

All test cases were completed successfully for both of the Konftel units.

Note that speakerphone operation of the Avaya 2402 digital telephone is different than the other Avaya telephones included in the test: alternate depressions of the **SPEAKER** button on this telephone turn on/off the telephone loudspeaker, but do not disconnect the audio source from the earpiece (nor the conference unit if it is active). For the remainder of the telephones in the test (including the 4602SW IP telephone), pushing the **SPEAKER** button on the phone switches the audio source between the handset earpiece (or the conference unit if it is active) and the telephone loudspeaker.

7. Verification Steps

The configuration can be verified by initiating a call to the telephone attached to the Konftel unit and confirming that the "on/off" button on the Konftel unit causes the call to switch between the Konftel unit and the Avaya telephone to which it is attached.

8. Support

Support for Konftel products is available at
- Web-based support: http://www.konftel.com/
- Email: info@konftel.com
- International help desk: +46 90706489
- North American help: +1 866-606-4728

9. Conclusion

The Konftel models 50 and 60W conference units can be attached to the handset port of various Avaya telephones to enable all those present in a room to participate in a telephone conversation. The configuration described in these Application Notes has been successfully compliance tested.

10. Additional References

"Quick Guide Konftel 60W Conference Unit", 3118-61-001, rev B. This is available at the Konftel web site: http://www.konftel.com/

"2402 Digital Telephone User's Guide", 555-233-789, October 2003

"2410 Digital Telephone User's Guide", 16-300133, November 2004

"2420 Digital Telephone User's Guide", 555-250-701, November 2004

"4610SW IP Telephone R2.2 User's Guide", 555-233-784, April 2005

"4620/4620SW/4621SW IP Telephone R2.2 User's Guide", 555-233-781, April 2005

Please e-mail any questions or comments pertaining to these Application Notes along with the
full title name and filename, located in the lower right corner, directly to the Avaya
Developer*Connection* Program at devconnect@avaya.com.