AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for EPOS IMPACT SDW 5000 series headsets using CEHS-AV 04 adapter connecting to Avaya J100 Series Endpoints on Avaya Aura® Session Manager 8.1 and Avaya Aura® Communication Manager 8.1 - Issue 1.0

Abstract

These Application Notes document interoperability of the EPOS IMPACT SDW 5000 Series Headsets using the CEHS-AV 04 adapter to connect to Avaya J100 Series Deskphones on Avaya Aura® Session Manager 8.1 and Avaya Aura® Communication Manager 8.1. Compliance testing included both SIP and H.323 endpoint configurations. The compliance testing focused on the integration of the EPOS Headsets using the CEHS-AV 04 adapter and the Avaya J179 endpoint.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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

1. Introduction

These Application Notes describe the configuration steps required for the EPOS IMPACT SDW 5000 series headsets to interoperate with Avaya J100 Series Deskphones using the CEHS-AV 04 adapter cable. Testing included SDW 5016 (monaural) and 5066 (binaural) headsets as representative models. See Attachment 1, which provides details of other EPOS IMPACT SDW 5000 series models for which this testing applies.

2. General Test Approach and Test Results

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

Avaya's formal testing and Declaration of Conformity is provided only on the headsets/handsets that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headset/handset to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/handsets for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different handset/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality.

2.1. Interoperability Compliance Testing

All test cases were performed manually. The following features were verified.
- Placing calls to internal extensions to verify two-way audio.
- Placing calls to the PSTN to verify two-way audio.
- Answering and ending calls using the call control button on the headset and the headset button on the J179 endpoints.
- Using the headset button on the J179 endpoints to hold and un-hold the audio.
- Using the volume control buttons on the headset to adjust the audio volume.
- Using the voice control button on the headset and the soft button on the J179 endpoints to mute and un-mute the audio.
- Placing calls to the voicemail system. Voice messages were recorded and played back to verify that the playback volume and recording level were good.
- Verifying incoming call notification on headset.

Serviceability tests included rebooting the J179 endpoints, cycling power on the base unit, and disconnecting/reconnecting the CEHS-AV 04 adapter cable.

2.2. Test Results

All tests completed successfully with the following observations noted:
- The mute and unmute actions initiated from the headset and the base stations were not synchronized to the J179 endpoints (actions initiated from the headset and base station were independent from those initiated from the J179 endpoint).
- Hold and off hold actions were not synchronized in a similar manner to the mute action.

2.3. Support

For support on the EPOS headsets, refer to:
https://www.eposaudio.com/en/dk/enterprise/support

3. Reference Configuration

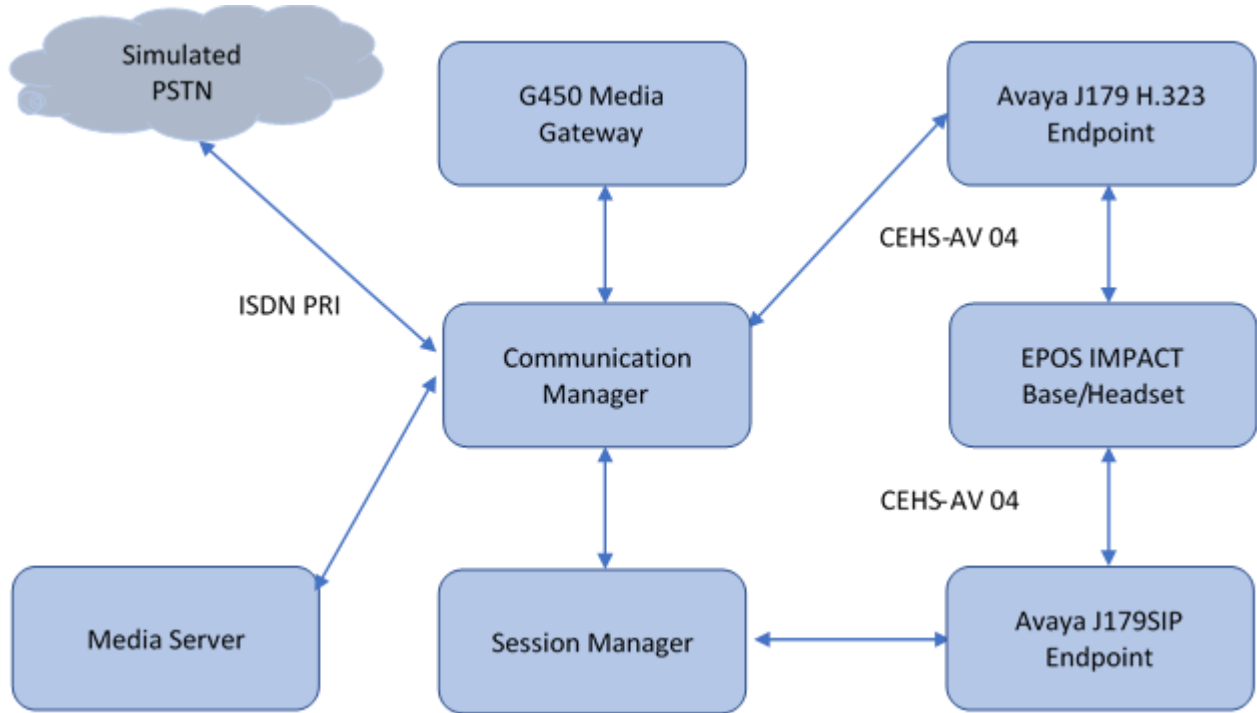**Figure 1** illustrates the test configuration used.

Figure 1: Test Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager	8.1.0.1.1.890.25763
Avaya Aura® Session Manager	8.1.0.0.811021
Avaya Aura Media Server	8.0.0.21
Avaya G450 Media Gateway	41.24.0
Avaya J179 IP Telephone	6.8.3.04 (H.323) / 4.0.7.0.7 (SIP)
CEHS-AV 04 Adapter	N/A
EPOS 5066 SDW5 BS/SDW60 HS	1.7.56/1.7.56
EPOS 5016 SDW5 BS/SDW10 HS	1.7.56/1.7.56

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Verify System Capacity (License)
- Avaya J179 Endpoint configuration

The Avaya reference configuration is assumed to have proper administration for both the SIP (Session Manager dial plan, entity links, and SIP user) and H.323 (Communication manager extension) for the J179 endpoints. See references **[1]** and **[2]** in **Section 9**.

5.1. Verify System Capacity

The license file installed on the system controls these attributes. If a required feature is not enabled or there is insufficient capacity, contact an authorized Avaya sales representative. Use the **display system-parameters customer-options** command to determine these values. On **Page 1**, verify that the **Maximum Off-PBX Telephones** allowed in the system is sufficient. One OPS station is required per SIP device.

```
display system-parameters customer-options                    Page   1 of 12
                          OPTIONAL FEATURES

    G3 Version: V18                          Software Package: Enterprise
      Location: 2                              System ID (SID): 1
      Platform: 28                             Module ID (MID): 1

                                                          USED
                          Platform Maximum Ports: 48000      88
                                Maximum Stations: 36000      63
                         Maximum XMOBILE Stations: 36000       0
                Maximum Off-PBX Telephones - EC500: 41000       0
                Maximum Off-PBX Telephones -   OPS: 41000      30
                Maximum Off-PBX Telephones - PBFMC: 41000       0
                Maximum Off-PBX Telephones - PVFMC: 41000       0
                Maximum Off-PBX Telephones - SCCAN:     0       0
                     Maximum Survivable Processors: 313         0

          (NOTE: You must logoff & login to effect the permission changes.)
```

On Page 2 of the system-parameters customer-options form, verify that the number of **Maximum Concurrently Registered IP Stations** supported by the system is sufficient. If there is insufficient capacity in either one of these parameters, contact an authorized Avaya sales representative

```
display system-parameters customer-options                    Page   2 of 12
                          OPTIONAL FEATURES

IP PORT CAPACITIES                                        USED
                Maximum Administered H.323 Trunks: 12000       0
       Maximum Concurrently Registered IP Stations:  2400       2
           Maximum Administered Remote Office Trunks: 12000       0
Max Concurrently Registered Remote Office Stations:  2400       0
          Maximum Concurrently Registered IP eCons:  128        0
   Max Concur Reg Unauthenticated H.323 Stations:   100        0
                    Maximum Video Capable Stations: 36000       2
                Maximum Video Capable IP Softphones:  2400      19
                     Maximum Administered SIP Trunks: 12000      10
  Max Administered Ad-hoc Video Conferencing Ports: 12000       0
   Max Number of DS1 Boards with Echo Cancellation: 688        0
```

5.2. Avaya J179 Endpoint Configuration

The Avaya J179 endpoint configuration should have the following settings. They are configured through the administration screens.

- The **Settings → Audio → Audio Path** set to **Headset**
- The **Settings → Audio → Headset Signaling** set to **Switchhook and Alert**

6. Configure EPOS IMPACT SDW 5000 Series Headsets

The CEHS-AV 04 adapter has two color coded connectors which are attached to the corresponding ports on the base station. The other end of the adapter should be plugged in to the headset port of the Avaya J179 endpoint.

Figure 4: CEHS-AV 04

The firmware of the headsets can be updated using the EPOS connect software. See reference **[5]** listed in **Section 9** for details. All testing using the CEHS-AV 04 adapter was performed with the included power supply unit connected to the base.

7. Verification Steps

This section verifies that the headset is integrated with the Avaya J179 endpoint.

7.1. Verify Avaya J179 Connection

Make a local call to the J179 endpoint and answer using the handset. Verify two-way audio path exists.

7.2. Verify EPOS Headset Connectivity

Make a local call to the J179 endpoint and answer the call using the EPOS headset. Verify two-way audio path exists.

8. Conclusion

Interoperability testing with representative EPOS IMPACT SDW 5000 series headsets using the EHS-AV 04 Adapter connected to the Avaya J179 endpoint was successful. Observations noted in **Section 2.2** are that mute and hold functionality is unsynchronized between headset activation and endpoint activation.

9. Additional References

The following Avaya product documentation can be found at http://support.avaya.com.

[1] *Administering Avaya Aura® Communication Manager*, Release 8.1.x, 10 December 2020.
[2] *Administering Avaya Aura® Session Manager*, Release 8.1.x, Issue 6, August 2020

The following EPOS documentation can be found at https://www.eposaudio.com/en/us
[3] *CEHS-AV_04_cable_US_-_Fact_Sheet*
[4] *EPOS SDW 5000 Series User Guide*
[5] *EPOS Connect End User Manual*

EPOS

Declaration of Compliance

We, EPOS A/S, declare under sole responsibility that product series IMPACT 5000 consist of 12 SDW 5000 variants.
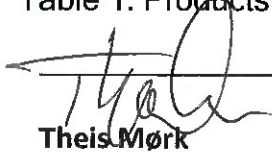
There are 3 different types of headsets SDW HS: Binaural, Monaural and 3-in-one. All headsets can use used with any base station SDW BS.
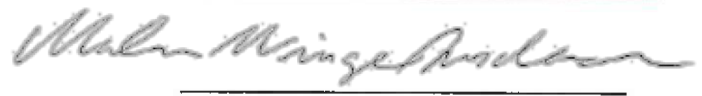
The are 2 different types of Base Station SDW BS: USB and Phone connection or USB connection only.

The difference in the SDW BS have no other impact on firmware (FW) functionality or acoustical performance of the chosen headset SDW HS. The schematics of RF board is 100% the same. The FW is also the same. The attached headsets SDW HS which defines the acoustics are 100% the same. Mechanically you will find more buttons and switches on the SDW BS with dual connectivity.

	USB & Phone Connectivity	USB Connectivity only
Product sales name	IMPACT SDW 5015, 5016, 5035, 5036, 5065 and 5066	IMPACT SDW 5013, 5014, 5033, 5034, 5063, 5064
Product similarities	Firmware image Headsets supported RF PCBA Schematic Acoustical design	
Product differences	Connectivity of basestation	
Avaya Workplace client	USB	USB
Avaya One-X Agent	USB	USB
Avaya desk phones J100 or 96x1	CEHS-AV 04 - phone cable	N/A

Table 1: Products overview

Theis Mørk
Theis Mørk
Vice President, Product Management
& Strategic Alliances
EPOS A/S

Martin Winge Andersen
Global Strategic Alliance Manager
EPOS A/S

EPOS

SDW 5000 explanation of elements

SDW 5000 consist of a **BS** = Base Station and a **HS** = Headset

For the Base Station BS we have:

SDW 3 BS = Base station with USB only connectivity
SDW 5 BS = Base Station with both USB and Phone connectivity

For the headsets HS we have:

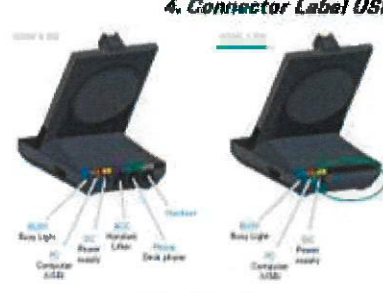SDW 10 HS = 3-in-one-headset
SDW 30 HS = Monaural
SDW 60 HS = Binaural

Below you see an overview of the SDW 5000 family.

'SDW 3 BS' Product, Connections & New Mechanical Parts
Exact same as SDW 5 BS, but with below features, buttons, functions & parts removed.

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	SDW 50X3 bundle	SDW 50X4 bundle	SDW 50X5 bundle	SDW 50X6 bundle
SDW 3 BS	✔	✔		
SDW 5 BS			✔	✔
BTD 800 USB		✔		✔

SDW 50XY – Explanation:

X=1	3-in-one headset wearing style	SDW 10 HS
X=3	Monaural headset	SDW 30 HS
X=6	Binaural headset	SDW 60 HS

Y=3	bundle with SW 3 BS (USB only connectivity) w/o BTD 800
Y=4	bundle with SDW 3 BS (USB only connectivity) with BTD 800 included
Y=5	bundle with SW 5 BS (USB and phone connectivity) w/o BTD 800
Y=6	bundle with SW 5 BS (USB and phone connectivity) with BTD 800 included

eposaudio.com

EPOS

SKU names to be referred to on the Marketplace are the following variants:

SDW 5015:   SDW 5 BS (USB and phone connectivity) and 3-in-one-headset
SDW 5016:   SDW 5 BS (USB and phone connectivity) and 3-in-one-headset + BTD 800 USB dongle

SDW 5013:   SDW 3 BS (USB only connectivity) and 3-in-one-headset
SDW 5014:   SDW 3 BS (USB only connectivity) and 3-in-one-headset + BTD 800 USB dongle

SDW 5035:   SDW 5 BS (USB and phone connectivity) and Monaural headset
SDW 5036:   SDW 5 BS (USB and phone connectivity) and Monaural headset + BTD 800 USB dongle

SDW 5033:   SDW 3 BS (USB only connectivity) and Monaural headset
SDW 5034:   SDW 3 BS (USB only connectivity) and Monaural headset + BTD 800 USB dongle

SDW 5065:   SDW 5 BS (USB and phone connectivity) and Binaural headset
SDW 5066:   SDW 5 BS (USB and phone connectivity) and Binaural headset + BTD 800 USB dongle

SDW 5063:   SDW 3 BS (USB only connectivity) and Binaural headset
SDW 5064:   SDW 3 BS (USB only connectivity) and Binaural headset + BTD 800 USB dongle