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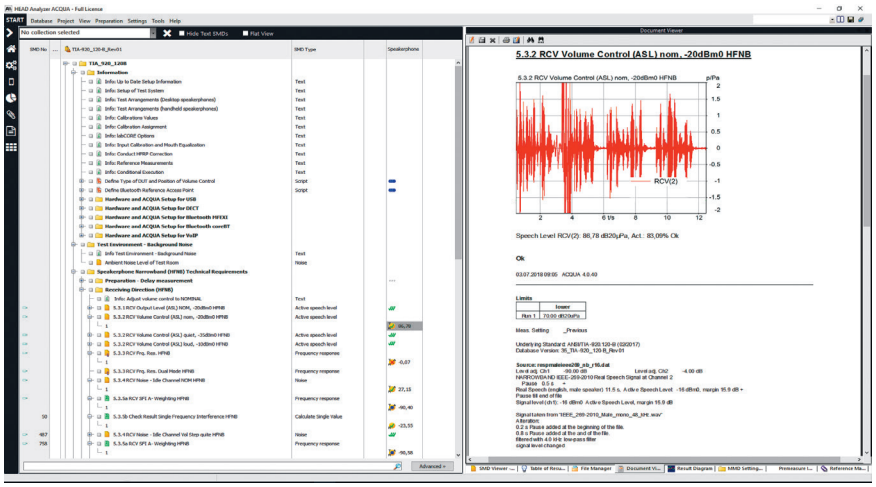
DATA SHEET

TIA-920.120-B (Code 60047)

Digital Interface Communications Devices with Speakerphones



Measurement standard TIA-920.120-B in communication quality analysis software ACQUA

Overview

The standard TIA-920.120-B (released 2017/2) incorporates transmission requirements for digital interface communications with speakerphones. HEAD acoustics provides all measurements in a database to verify compliance with TIA-920.120-B.

The implementation of the database including the measurements is executed with the analysis software ACQUA and various other HEAD acoustics equipment.

The database combines requirements for narrowband and wideband measurements, according to the specification.

Description

Code 60047 provides the complete implementation of TIA-920.120-B for the HEAD acoustics analysis system ACQUA in conjunction with HEAD acoustic hardware components. All measurements for the different applications covered in TIA-920.120-B can be executed fully automated when using ACQUA with the hardware platform *lab*CORE.

The database provided is developed for the usage of *lab*CORE. The USB audio interface of *lab*CORE supports the test of USB speakerphones. Note, when using the previous HEAD acoustics front end MFE VI.1 the tests of USB audio is not possible directly, MFE VI.1 does not support USB audio testing.

Applications

- USB speakerphones
- VoIP phones (cordless, corded) in speakerphone mode
- Bluetooth® speakerphones
- DECT phones in speakerphone mode

System requirements

Software

- **ACQUA (Code 6810)**, Advanced Communication Quality Analysis, Version 4.0.40 or later
- **ACOPT 09 (6819)**, option speech level voltmeter

Hardware

- ***lab*CORE (Code 7700)**, modular multi-channel hardware platform with *lab*CORE modules:
  - ***core*BUS (Code 7710)**, I/O bus mainboard
  - ***core*OUT-Amp2 (Code 7720)**, power amplifier output module (two channels)
  - ***core*IN-Mic4 (Code 7730)**, microphone input module (four channels)
- Alternative to *lab*CORE with *core*OUT-Amp2 & *core*IN-Mic4:
  - MFE VI.1 (no USB audio interface)
- **Artificial mouth**, according to ITU-T P.56
- **Free-field microphone**

Options

- ***core*IP (Code 7770)**, *lab*CORE I/O module, VoIP reference gateway
- Alternative to *core*IP:
  - MFE VIII.1
- ***core*BT (Code 7780)**, *lab*CORE I/O module, Bluetooth reference access point
- Alternative to *core*BT:
  - MFE XI
- ***core*BT-EXT (Code 7781)**, *lab*CORE Bluetooth extended codec option, incl. wideband capability
- Alternative to *core*BT-EXT:
  - MFE XI-EXT
- **MFE X (Code 6481)**, digital hardware platform for DECT/NG-DECT/CAT-iq™
- **HRT I (Code 6498)**, HEAD acoustics remote-operated turntable
- **ACOPT 21 (Code 6844)**, option 3QUEST
- **ACOPT 30 (Code 6857)**, option POLQA
- **3PASS *lab* (Code 6990)**, background noise simulation software

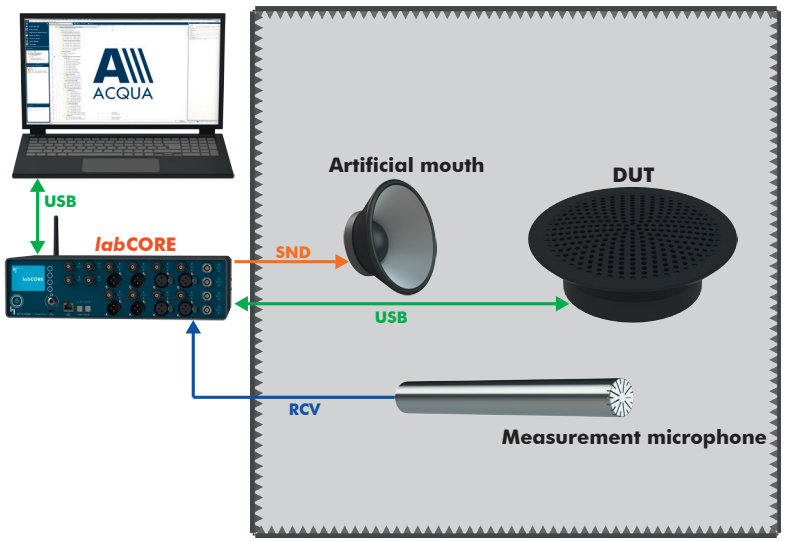
Delivery Items

- **TIA-920.120-B (Code 60047)**, delivered as ACQUA database
- **V2C file**
- **Manual** as PDF

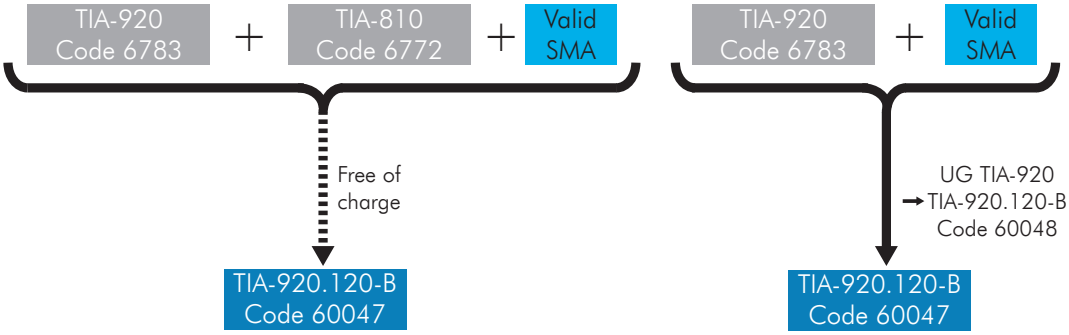
Database Revision	Based on Specification Version	Min. ACQUA Version
01	ANSI/TIA-920.120-B-2017	4.0.40

Overview of database revisions and specification versions.

Valid since standard implementation Rev. 01, subject to change



Measurement configuration for USB communication device (exemplary)



Upgrade paths for TIA-920.120-B

Measurements

The table gives an overview of the measurements included in TIA-920.120-B (numbering according to standards).

	Speakerphone Narrowband	Speakerphone Wideband
SMD title	**HFNB**	**HFWB**
Delay RCV	•	•
Receive Output Level ASL	•	•
Receive Volume Control	•	•
Receive Frequency Response	•	•
Receive Idle Channel Noise	•	•
Receive Single Frequency Interference	•	•
Receive Noise Active Channel	•	•
Receive Distortion and Noise	•	•
Useful - Receive List. Speech Quality POLQA	•	•
Delay SND	•	•
Send Frequency Response	•	•
Send Level Directionality	•	•
Send Noise without / with Stimulus	•	•
Send Single Frequency Interference	•	•
Send Distortion and Noise	•	•
Weighted Terminal Coupling loss	•	•
Useful - Speech Quality in the Presence of BGN	•	•
Useful - Clock Drift Measurements	•	•

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