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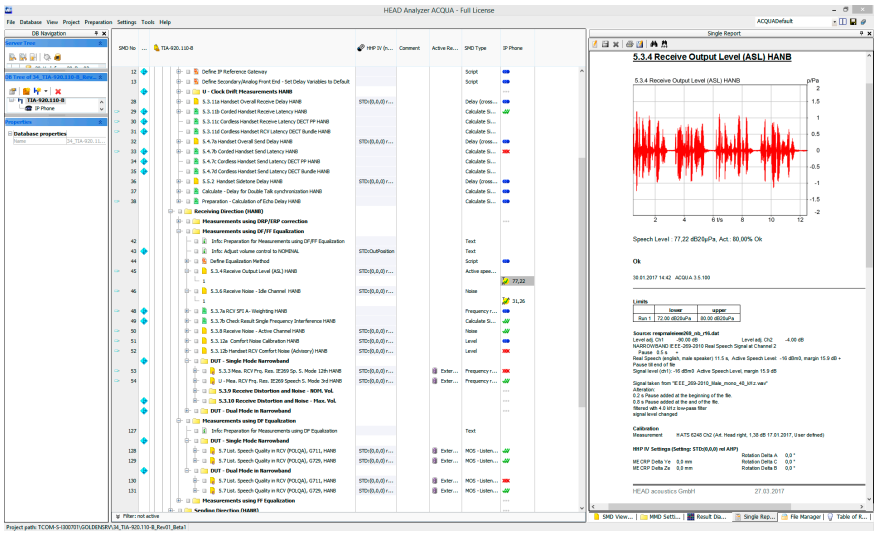
DATA SHEET

TIA-920.110-B (Code 60041)

ANSI/TIA-920.110-B,
Digital Interface Communications Devices with Handsets



TIA-920.110-B Measurement Tree and Result Diagram in Analysis System ACQUA

OVERVIEW

The standard ANSI/TIA-920.110-B specifies audio performance requirements for **narrowband and wideband digital interface communications devices with handsets** and defines corresponding test methods.

HEAD acoustics provides the **full implementation*** of all measurements specified by ANSI/TIA-920.110-B as automated test suite for the analysis system ACQUA.

By testing their devices with the TIA-920.110-B test suite, manufacturers can ensure **conformance** with the ANSI/TIA-920.110-B specification.

**Note: The ANSI/TIA-920.110-B specification refers to requirements for "Magnetic Field for Hearing Aid Coupling" as specified by ANSI/TIA-1083-B, which are not part of this test suite. For this purpose, the HEAD acoustics products HAC II and HAC-Suite are required.*

DESCRIPTION

The audio performance requirements for narrowband and wideband digital interface communications devices with handsets are specified by the test specification ANSI/TIA-920.110-B.

The test methods required by this specification have been implemented by HEAD acoustics into a measurement standard for the advanced communication quality analysis system ACQUA. The measurements can be modified or extended if required in order to conduct additional tests. The tests can be arranged in any way to create individual test sequences.

In conjunction with the analysis system ACQUA and various other HEAD acoustics components (cf. system requirements), the TIA-920.110-B test suite with its predefined measurement descriptors and automated test sequences allows the fast and easy acquisition, analysis and documentation of measurement data.

APPLICATIONS

- **Automated measurements for digital interface communications devices with handsets** according to test specification ANSI/TIA-920.110-B (10/2015)

SYSTEM REQUIREMENTS

TIA-920.110-B requires the following system components:

- **ACQUA** Advanced Communication Quality Analysis System as one of the following versions (3.5.100 or later):
  - Full-license (Code 6810)
  - Workplace (Code 6830, for post-analysis and documentation only)
  - Compact Systems (Code 6860.xx)
- **ACOPT 09 (Code 6819)**, ACQUA Option SLVM P.56 (Speech Level Voltmeter)
- **MFE VI.1 (Code 6462)**, USB Measurement Front End Analog with Integrated Power Amplifier
- **MFE VIII.1 (Code 6484)**, VoIP Reference Gateway with Ethernet Interfaces and SIP-VoIP Client
- **MFE X (Code 6481)**, Digital Front End for DECT/NG-DECT/CAT-iq™ *(only required for separate DECT Portable Part measurements)*
- **MFE XI (Code 6482)**, Universal Bluetooth® Access Point *(only required for Bluetooth® handset measurements)*
- **HMS II.3-33 (Code 1230.1)**, HEAD Measurement System with Pinna Type 3.3.
- **HHP IV (Code 1406)**, HEAD Handset Positioner, *MotoMount* Version
  Alternatively:
  ***HHP III.1 (Code 1403)**, HEAD Handset Positioner, VariMount Version*
- **HAC II (Code 6594)**, Coil for hearing aid compatibility tests, with positioner for handset
- **HAC-Suite (Code 60021)**, Hearing Aid Compatibility Test Suite *(Rev02 or later)*

Database Revision	Based on Specification Version	Min. ACQUA Version
1	ANSI/TIA-920.110-B (10/2015)	3.5.100

Overview of database revision and specification version.

OPTIONS

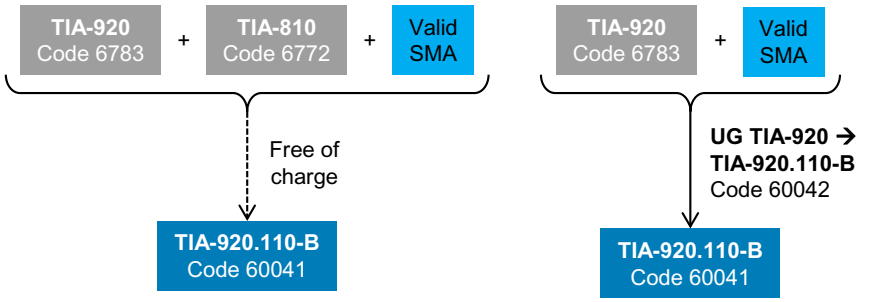
For objective speech quality measurements according to Section 5.7 and Annex G of the ANSI/TIA-920.110-B specification, the following components can be used:

- **ACOPT 21 (Code 6844)**, Option 3QUEST, 3-fold Quality Evaluation of Speech in Telecommunications
- **ACOPT 30 (Code 6857)**, ACQUA Option POLQA
- **HAE-BGN (Code 6971)**, Background Noise Simulation, including necessary system components, cf. separate data sheet for Code 6971

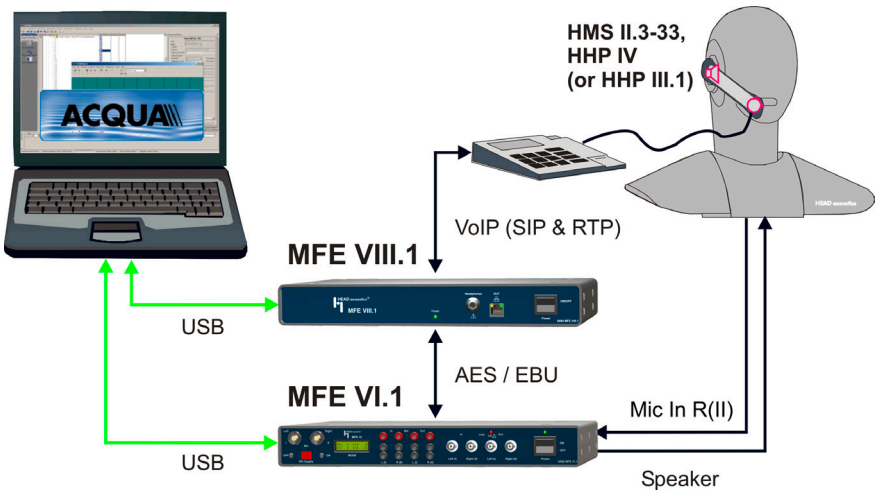
MEASUREMENTS

The following table gives a summary of the measurements included in TIA-920.110-B:

	Handset Narrowband	Handset Wideband
SMD Title	**HANB**	**HAWB**
Delay RCV	•	•
Receive Loudness Rating Speech	•	•
Receive Output Level ASL	•	•
Receive Idle Channel Noise	•	•
Receive single Freqency Interference	•	•
Receive Noise Active Channel	•	•
Receive Comfort noise	•	•
Receive Frequency Response	•	•
Receive Distortion and Noise	•	•
Receive List. Speech Quality POLQA	•	•
Receive Volume Control - Conversational Gain	•	•
Delay SND	•	•
Send Frequency Response	•	•
Send Output Level ASL	•	•
Send Loudness Rating Speech	•	•
Send Idle Channel Noise	•	•
Send Single Frequency Interference	•	•
Send List. Speech Quality POLQA	•	•
Send Distortion and Noise	•	•
Talker Sidetone Masking Rating	•	•
Weighted Terminal Coupling Loss	•	•
Handset Stability Loss	•	•
Speech Quality in the Presence of BGN	•	•
U - Receive Frequency Response 3rd Oct.	•	•
U - Clock Drift Measurements	•	•



Upgrade paths for TIA-920.110-B



Example configuration for test setup

DELIVERY

- **TIA-920.110-B** (Code 60041), delivered as ACQUA database
- **V2C file**
- **Manual** as PDF

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