

Configuration Example

DATASHEET

TIA-920 (Code 6783)

Transmission Requirements for Digital Wideband Wireline Terminals

Overview

Advances in digital voice communications over non-traditional channels such as the Internet and Local Area Networks have made it necessary to redefine the way digital terminals are evaluated for voice quality.

ANSI/TIA/EIA-920 establishes handset, headset and handsfree telephone audio performance requirements for digital wideband (150 to 6800 Hz) wireline terminals regardless of protocol or digital format.

HEAD acoustics has implemented the measurements specified by TIA-920 into an automated test suite for the communication quality analysis system ACQUA.

DESCRIPTION

The transmission performance requirements for digital wideband wireline terminals specified by the North American standard TIA-920 were implemented by HEAD acoustics into a measurement standard for the communication quality analysis system ACQUA.

In conjunction with the advanced communication quality analysis system ACQUA, the measurement front end VI.1 and other components, the TIA-920 test suite with its predefined measurement descriptors and automated measurement sequences allows the fast and easy acquisition, analysis and documentation of measurement data.

The measurements can be modified or extended if required in order to conduct additional tests. The tests can be combined in any way to create individual test sequences.

APPLICATIONS

- **Automated Analysis** of wideband digital wireline terminals according to TIA 920 Nov. 2012 which refers to IEEE Standard 269a-2010 (Amendment 1) and IEEE Standard 1329-2010.

SYSTEM REQUIREMENTS

TIA-920 requires the following system components:

- **ACQUA** Communication Analysis System as one of the following variants (version 3.1.300 or later):
 - Full-license (Code 6810)
 - Standard Workplace (Code 6830, for post-analysis and documentation only)
 - Compact Systems (Code 6860.xx)
- **ACOPT 09, SLVM P.56** ACQUA Option, speech level voltmeter according to internat. standard ITU-T P.56, method B (Code 6819)
- **MFE VI.1** Measurement Front End with integrated power amplifier (Code 6462)

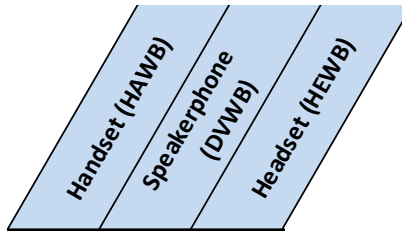
- **MFE VIII.1** VoIP Reference Gateway (Code 6484) with Stand-alone Controller Software
- **HMS II.3-33** Head and Torso Simulator (HATS) with artificial ears pinna type 3.3, right and left (HER/HEL IV.2, Code 1381/1382) according to ITU-T P.57 and P.58 (Code 1230.1).
For binaural headset measurements additionally required:
 - Ear simulator, left (HIS L, Code 1231)
- **HHP III.1** Handset Positioner according to ITU-T P.64 (Code 1403)
- **Free-field microphone** or option **MFEVI-BEQ** (Code 6461), only required for handsfree measurements

DELIVERY

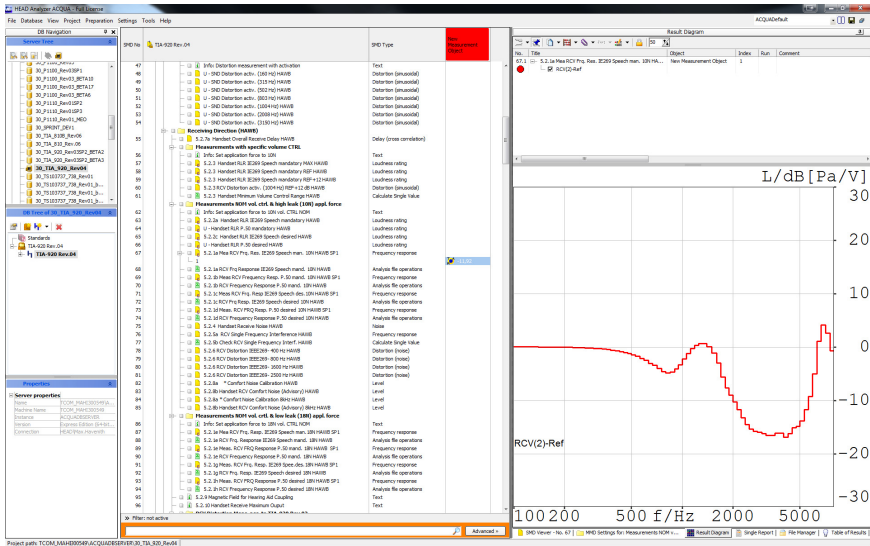
- **TIA-920** (Code 6783), delivered as ACQUA database
- **V2C file**
- **Standard documentation** as PDF

MEASUREMENTS

The measurements included in the TIA-920 test suite are summarized below:



SMD Title	Handset (HAWB)	Speakerphone (DVWB)	Headset (HEWB)
5.1.1/2 SND Frequency Response	●	●	●
5.1.2/1 SND Loudness Rating / Active Speech Level	●	●	●
5.1.3/4 SND Noise	●	●	●
5.1.3 SND Directionality	n/a	●	n/a
5.1.4/5 SND Single Frequency Interference	●	●	●
5.1.5/6 SND Distortion	●	●	●
5.1.6/7 SND Delay	●	●	●
5.2.1/3 RCV Frequency Response	●	●	●
5.2.2/1 RCV Loudness Rating	●	●	●
5.2.3/2 RCV Volume Control	●	●	n/a
5.2.4/3 RCV Noise	●	●	●
5.2.5 RCV Single Frequency Interference	●	●	●
5.2.6 RCV Distortion	●	●	●
5.2.7 RCV Delay	●	●	●
5.2.8 RCV Comfort Noise	●	n/a	n/a
5.3.1 Talker Sidetone	●	n/a	●
5.3.2 Sidetone Delay	●	●	n/a
5.4.1 Weighted Terminal Coupling Loss	●	●	●
5.4.2 Stability Loss	●	n/a	●



ACQUA User Interface with Measurement Tree and Result Diagram Window for TIA-920

