TUCANA
MASTERS IN MEASUREMENT

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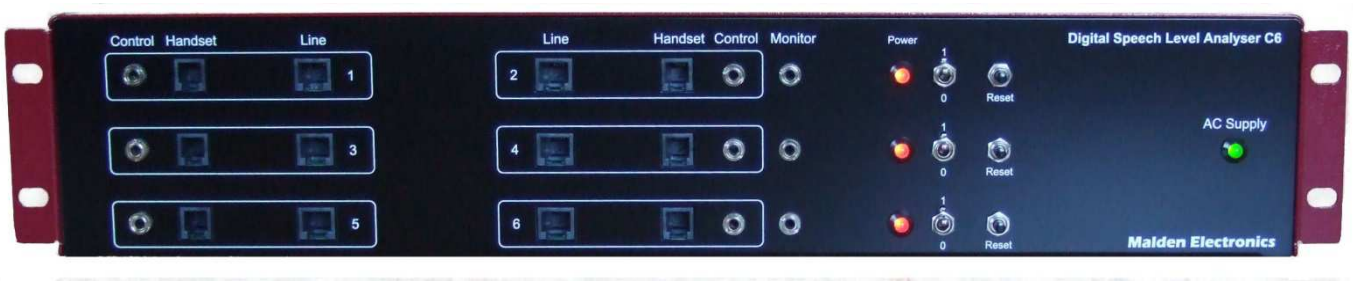
Malden Electronics Ltd

Malden's
4 and 6 Channel DSLA Now Available

And how to test HD Voice



Tucana and Malden are proud to announce the New Four and Six Channel Digital Level Speech Analyser

Both versions have the Handset Ports (RJ22), Phone Ports (RJ11), Control Jacks and Monitor Outputs on the front panel. On the rear panel is a Sync Port, a Serial Port and an Ethernet Port for each channel pair.

Like the Two Channel DSLA, the Four and Six Channel versions are an excellent solution for Active Monitoring, Product Development and Regression Testing. The New Four and Six Channel units are compact, multi-channel systems delivering test flexibility and accurate measurement of speech transmission performance of Smartphones, ATAs and other voice capable devices.

HD Voice

What is HD Voice?

HD Voice is short for High-Definition Voice, and is also called Wideband. In Internet and mobile telephony, it refers to the use of Wideband technology to provide a deeper clarity and better audio experience during a telephone call. The higher frequencies transmitted in Wideband make for easier recognition of un-voiced sounds such as "ss" "f" "sh". Understanding is better, particularly when there is a high level of background noise or more than one person speaking.

Wideband frequency range is from 50Hz to 7.5 kHz, which is double the highest Narrowband frequency. This adds significant depth and nuance to the transmitted sound.

HD Voice technology uses advanced codecs to transmit the higher quality sound without using more bandwidth than Narrowband transmission. HD Voice currently uses a number of Wideband codecs including AMR-WB, EVRC-WB, G.722 and G.722.1. Other codecs, including SILK and iSAC, can operate in Narrowband, Wideband and Super-Wideband modes. Fourth-generation (4G, or Long Term Evolution, LTE) mobile services will enable network operators and service providers to offer "Voice over LTE" (VoLTE) which in many cases will provide HD Voice and even super-Wideband services.

Where is HD Voice Used?

HD Voice is used in internet telephony and mobile communications, audio and video conferencing and also in some office communication systems.

What is the best method of testing HD Voice performance?

ITU-T Rec. P.863 POLQA is the prime choice for testing HD Voice and services up to Super-Wideband.

Testing HD-Voice with PESQ: Potential for Confusion

When PESQ is used to compare the performance of, for example, mobile devices/networks that can operate in both Narrowband and Wideband modes, there is an understandable expectation that the Wideband score will be higher than the Narrowband score. The Wideband score may be only equal to or even lower than than the Narrowband score, even though the Wideband sample sounds "better" than the Narrowband sample. This makes testers inclined to distrust objective methods, as the intuitive belief is that "what sounds better should score higher".

No Confusion with POLQA

POLQA has solved this problem by defining a Super-Wideband (SWB) scale such that Narrowband, Wideband and Super-Wideband performance can be measured, and compared, on a common scale. Using the POLQA SWB scale, the relative scores are generally in line with intuitive expectation if the same handset is tested in Narrowband or Wideband mode.

Narrowband scores on the POLQA SWB scale will tend to be numerically lower than those on the PESQ Narrowband scale, because the POLQA Narrowband scores are compressed so that the better Wideband and Super-Wideband scores can fit into a common scale of 1 to 5.
More information on http://www.tucana.com/products/product/malden_mdsla_21/

About Tucana Telecom

We believe that our success and competitive advantages lies in providing our customers with a combination of telecom know-how, price efficient products, and fast access to expert support. Our products and services are all built on a solid platform of signalling and data protocol know-how. This platform is continuously strengthened through our tight hands on interrelations with our largest customers.

It is our ambition to contribute to increased revenues and reduced costs for our customers by providing them with powerful operations and business support systems. If you would like to know more about the company, do not hesitate to contact us!

More information on www.tucana.com

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Tucana is a value-added distributor of Test- and Measurement-solutions and related applications/services for telecom- and IT-networks. The T&M solutions are used for quality & performance testing, advanced protocol diagnostics, security, network management and monitoring in converged communications networks. Our primary focus are the service providers, fixed and mobile operators, broadcasting companies, OEM's and Enterprises.. The company has offices in Belgium, France, Germany and The Netherlands.

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