

## Jabra Engage 50 claim verification

### 1. Summary

FORCE Technology has verified the measurements and calculations, which contribute towards substantiating the audio and call related parts of the following claim. The claim wording is created by Jabra, for their newly released USB office headset, Jabra Engage 50.

Details of associated disclaimers are given in section 4.

| Product         | Claim  |
|-----------------|--|
| Jabra Engage 50 | "World's Best Professional Digital Corded Headset" |

### 2. Method

Jabra Engage 50 was tested against the two largest market leading manufacturers in the business, using 6 major competing products on the market.

Each product was measured on several audio or call related parameters, and a weighted average score was calculated. The measurements cover a wide range of audio characteristics that are relevant to corded headset usage and performance. A specialist from FORCE Technology monitored and verified all measurements, to ensure that all products were measured correctly, in the same way and under identical conditions.

The included measures, which are used as base for this claim are:

- **Microphone performance (Tx)**
  - POLQA.Tx TQL No background noise
  - POLQA.Tx G-MOS Call center noise
- **Flex microphone position performance**
  - Tx Distractor attenuation according to Microsoft Skype for Business audio specification custom settings v3.0, average of 3 distractor positions.
  - POLQA.Tx TQL average of 3 microphone positions, No background noise
- **Speaker performance in communication mode (Rx)**
- **Passive noise cancellation**
- **Device management and call analytics support**
- **Super wideband support**

Table 1 below shows the overall weighting of each parameter when the average is calculated, and the weighting of each measure, when a parameter is comprised of more than one measurement. All parameters and sub-measures were selected by Jabra. Weightings are mutually agreed by Jabra and FORCE Technology.

| Measure  | Weighting  |
|--|------------|
| <b>*Microphone performance (Tx)</b>  | <b>20%</b> |
| POLQA.Tx TQL No background noise   | 20%        |
| POLQA.Tx G-MOS Call center noise   | 80%        |
| <b>Flex Microphone position performance</b>  | <b>20%</b> |
| Tx Distractor attenuation according to Microsoft Skype for Business audio specification custom settings v3.0, average of 3 distractor positions. | 50%        |
| POLQA.Tx TQL average of 3 microphone positions, No background noise  | 50%        |
| <b>Speaker performance in communication mode (Rx)</b>  | <b>20%</b> |
| POLQA.Rx TQL No background noise   | 100%       |
| <b>Passive noise cancellation</b>  | <b>20%</b> |
| Passive noise cancellation   | 100%       |
| <b>Device management and call analytics support Yes/No</b>   | <b>20%</b> |
| Device management and call analytics support Yes/No  | 100%       |
| <b>**Super wideband support Yes/No</b>   | <b>0%</b>  |
| Super wideband support Yes/No  | 0%         |

Table 1 - Weightings of included parameters and sub-measures

\*For 'Microphone performance (Tx)' 20% weighting is given to the no background noise condition, and 80% to the call center background noise condition. This weighting is chosen, to match a realistic use case – where silent conditions are less common than noisy conditions.

\*\*Super wideband support influences POLQA measurement results significantly. For this reason, super wideband support, as a yes/no parameter, is not included in the overall calculation.

Based on these measures, an overall score was calculated for the weighted parameters.

Jabra Engage 50 scored significantly higher than any of the other tested products.

### 3. Definitions

**ITU-T P.863 "POLQA"** - Perceptual Objective Listening Quality Analysis – ITU-T Standard that covers a model to predict speech quality by means of analyzing digital speech signals.

**Tx** – Uplink/Transmit, meaning the signal which is captured by the device's microphone.

**Rx** – Downlink/Receive, meaning the signal which is reproduced by the device's loudspeaker (in this case the headphones).

**Distractor attenuation** – Measure based on Microsoft Skype for Business audio specification custom settings v3.0. A distracting speaker is added 60cm from the mouth of the primary speaker, and the headsets' ability to attenuate the distractor, and maintain signal from the primary speaker, is measured.

**TQL** – Property of the ITU-T P.863 standard. In this case, TQL covers an average measurement of 20 sentences, in a silent condition. No background noise was present during this measurement.

**G-MOS** – Overall Mean opinion score (Defined in ETSI EG 202 396-3). This measure is an average of several sentences and noise conditions.

**Passive noise cancellation** – Measured in reverberation chamber. The loudness (in Phon) is measured inside headset, under exposure to diffuse field pink noise. The loudness is compared with the loudness (in Phon) without headset, and a reduction value is calculated in Phon.

**Super wideband support** – Super wideband is defined in ETSI TS 102 924 V1.1.1 (2013-03). Super wideband support is determined by lookup in product datasheet.

**Device management and call analytics support** – By lookup in product datasheet/manufacturer website, product support for PC-control of device settings/call analytics is checked.

## 4. Disclaimers

This claim relates to audio and call performance only.

Involved competitor products were:

1. JABRA Engage 50
2. JABRA Biz 2400 USB II
3. Plantronics Encore Pro USB 525
4. Plantronics Encore Pro USB 720
5. Sennheiser SC660 USB
6. Plantronics Encore Pro USB HW 520 Digital
7. Plantronics Encore Pro USB HW 720 Digital

## 5. Document validation

FORCE Technology confirms the correct performance of measurements and calculations stated in this document.

FORCE Technology confirms that given associated disclaimers stated in section 4. On the 21's of August 2018 the claim within this document for the Jabra Engage 50 is accurate, in terms of validity of measurements and calculations it is based upon.

**Authorized by FORCE Technology**