



Amplification Position Statement

Background

A well-known issue in the telephone industry is the lack of standardization and industry accepted method to evaluate the "amplification performance" of amplified products.

The primary acoustic properties for which an amplified telephone may provide enhanced features, relative to a "normal" phone, are gain and tone control.

- Gain is some measure of the increase in acoustic signal level over some reference level. Methods used historically for measuring the gain performance of amplified telephones are numerous and diverse.
- Tone control is some measure of how much a telephone can be adjusted to emphasize or de-emphasize higher frequencies relative to lower frequencies. Tone controls provided on telephones may be simple (e.g. 2 to 3 settings) or they may be more elaborate (e.g. an equalizer type control where the frequency response of the acoustic output of the telephone may be shaped).

Due to the non-standardization of measuring and reporting gain and tone control for amplified telephones, products offered for sale will often be advertised with some performance description of these parameters and the advertised performance may be very different for two telephones that actually provide similar performance.

For example, phone #1 communicates a dB level of 50, phone #2 communicates a dB level of 30 but both phones provide an actual output level of 120 dB SPL. How is that possible? It is relative to the input level on the test. If phone #1 is tested with the input level set at -40dB, which is the lowest level of power input on a phone line, and with the phone being set at max volume the test reflects +10dB, that equals an increase of +50 dB over the input level. +10dB equates to an output level of 120dB SPL. Now, with the phone #2, the input level is increased to -20dB and with the phone set at max volume, the test also reflects +10dB, the increase is only 30 dB over the input level. However the output is still 120dB SPL. In terms of loudness, both phones produce the same level of output. The first phone however was able to produce the same level of output even with a lower input level. This is meaningful data.

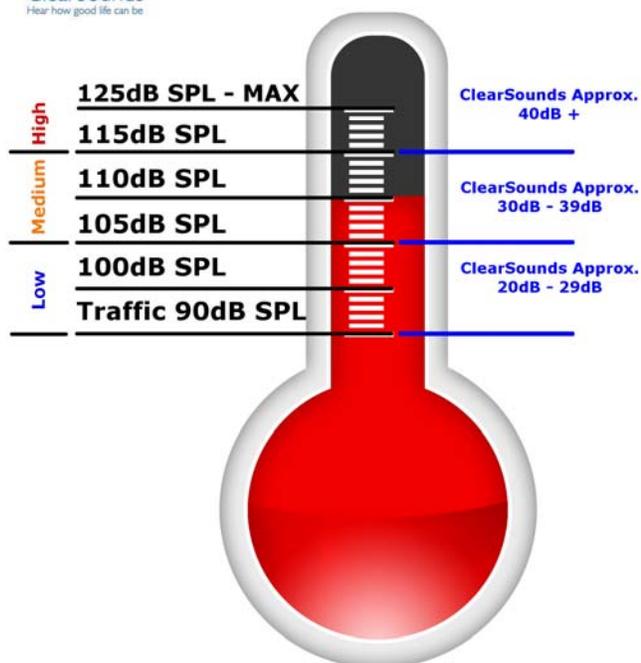
ClearSounds' Position

Based on these facts, communicating the dB levels of amplified telephones as has been traditionally done in the industry, although acceptable, may have limitations that may be improved upon by using dB SPL. The dB SPL is a measurement of the output at the handset. Factors in the phone such as handset design, component quality, and speaker size impact the quality of sound as it is delivered to the ear. This measurement provides the consumer with meaningful data. This output measure is communicated in decibels and is referred to as Sound Pressure Level. (SPL)

ClearSounds believes this is a more meaningful measurement of performance of loudness. ClearSounds is now providing the max dB SPL as the specification that communicates amplification performance of our phones.



DB SPL CHART



ClearSounds Initiatives

ClearSounds is working with a leading telephone industry-testing lab and has engaged in the development of a testing specification, which is technically sound within the telephone measurement industry. This testing specification will address both loudness/amplification and tone range.

This is a testing standard not a manufacturing standard. The intent is to provide a consistent and accurate platform to test and communicate the amplification performance of telephones designed for people with hearing loss that puts all amplified telephone manufacturers on a level playing field in terms of how we communicate the performance of our phones.

Conclusion

ClearSounds feels privileged to be in an industry where we have the opportunity to have such massive positive impact. We, along with all manufacturers in this industry, make products that make a difference, that have the potential to change lives. We believe there is such a diversity of need among consumers, we as developers and producers of solutions should be compelled to work in cooperation with each other with integrity, focusing our collective energies on positive improvement and raising the industry.

ClearSounds will be providing testing data and charts for all of our products as we move forward with our performance initiatives.

If you are interested in being added to our Standards & Testing mailing list and receiving updates on the status of testing standards development and to receive detailed information on our products, please send an email with your contact information to standards@clearsounds.com