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# Field Study News

November 2013



## Phonak DECT CP1 cordless phone Binaural speech signal and easy handling

The Phonak DECT CP1 cordless phone is a standard DECT phone with additional functions that include the 'Volume Boost' button and the direct wireless sound transmission into both hearing aids. The main focus of this usability study was to investigate the handling of the Phonak DECT CP1 and the stability of the wireless link for binaural speech signal on the phone. 32 test subjects took part and the overall results show that all subjects could handle the installation and setup. There was also an additional benefit from the 'Volume Boost' and the binaural wireless link. Overall, 85% of the subjects rated the overall satisfaction as good, and 80% said they would buy the Phonak DECT CP1.

### Introduction

The Phonak DECT CP1 cordless phone is a standard digital enhanced cordless telecommunications (DECT) phone with additional functions including the 'Volume Boost' button and the direct wireless sound transmission known since 2008. This wireless feature uses 10.6 MHz to send the telephone signal to both hearing aids. Previous Phonak field studies have shown the benefit of speech intelligibility on the phone with the binaural signal (Stürmann 2009, Nyffeler 2010), and the binaural telephone signal of the mobile phone with the Click'nTalk (Nyffeler 2009). The main focus of this usability study was the setup and handling of the Phonak DECT CP1 as well as the stability of the wireless link for binaural listening on the phone.

### Goal of the study

The goal was to show how well the subjects could handle the installation and setup, and if there was a benefit from the additional functions.

### Test subjects

5 subjects tested the Phonak DECT CP1 in a long term study for 8 weeks at home, and 27 subjects tested the phone for 2-3 weeks at home. All subjects wore their own compatible Phonak hearing aids (Phonak CORE, Phonak Spice, Phonak Quest). No changes or fine tuning were done on their hearing aids, and no audiograms were measured. Based on the hearing aids of the subjects, the hearing loss range was from mild to profound (13 mild, 14 severe to profound and 5 profound). The age range was between 23 and 86 years, which was separated:

- 1 subjects in the range of 18-25 years
- 4 subjects in the range of 26-45 years
- 14 subjects in the range of 46-65 years
- 10 subjects in the range of 66-80 years
- 3 subjects in the range of 81-90 years

## Results

The overall results of the usability study with the 32 study subjects showed that over 90% of the study subjects could easily handle the phone (figure 1) and the binaural link was stable (figure 2). Also the overall satisfaction was rated as good or very good for 85% of the subjects. The other 15% rated the Phonak DECT CP1 as neither/nor. None of the subjects had any problems installing the Phonak DECT CP1 at home.

### Handling of the Phonak DECT (n=32)

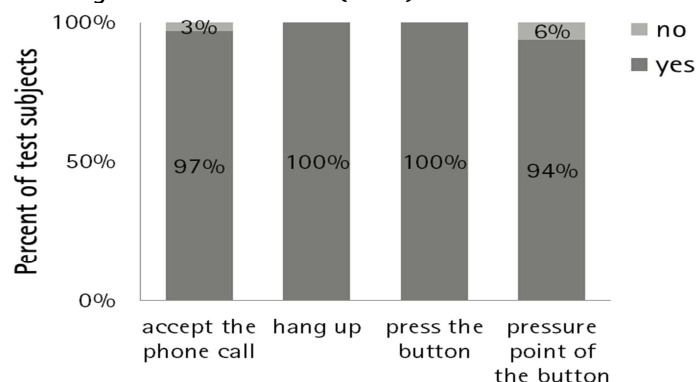


Fig. 1: 93% -100% of the subjects were able to use the Phonak DECT CP 1 without any issues.

### HiBAN link (n=32)

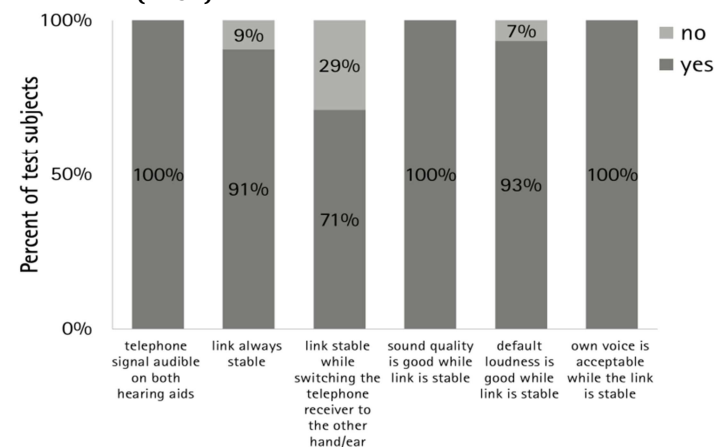


Fig. 2: More than 90% rated the wireless link as stable and also 70% reported a stable HiBAN link when changing the phone to the other ear.

Within the group of 32 subjects, three typical users were chosen in order to highlight the results and their impression. These subjects were 23, 48, and 64 years old.

The first subject was a 23 year old woman wearing binaural Phonak Audéo Q50-312 hearing aids. As a frequent phone user, she has to take her hearing aids out several times a day, before making a phone call. In the test phase she made less phone calls, but without taking her hearing aid out. The 'Volume Boost' and the wireless link for a binaural telephone signal worked fine for her. Her overall impression was good (on a scale of good, neither/nor or bad), and she said that she would buy the product. She only needs the Phonak DECT CP1 at work, and sees the benefit of using it. She reported that the sound quality of the speech signal was good, and the speech intelligibility was improved.

The second subject was a 48 years old man, fitted binaurally with Phonak Naída V SP. At home he always takes one hearing aid out of the ear before making a phone call. He also has a DECT phone at home. Compared to his DECT phone, he rated the handling, the 'Volume Boost' and the binaural link of the Phonak DECT CP1 as better. He was surprised how good the speech intelligibility and the handling was. In this study he rated the Phonak DECT CP1 as very helpful. Compared with his own DECT phone, he doesn't have to remove his hearing aids. He now makes more phones and always reported good speech intelligibility when on the phone.

The third subject was a 64 year old man who was fitted binaurally with Phonak Naida IX CRT. Before the usability study and during the test phase he made phone calls several times a week. This subject had past experiences with telephones for hearing impaired people. He rated the Phonak DECT CP1 as very good, and would buy it. He rated the wireless link as stable in a very wide range (>25 cm). Bilateral speech intelligibility and sound quality was good. He really appreciated that the Phonak DECT CP1 works automatically within the 25 cm range and that no additional accessory was needed. While he usually he makes phone calls with his mobile phone and the ComPilot, he recommended the Phonak DECT CP1 as a good alternative for home.

## Conclusion

This usability study showed that the Phonak DECT CP1 cordless phone is easy to install and to handle. For many subjects the new 'Volume Boost' was helpful and the wireless signal for the bilateral speech signal was stable. The three case reports showed that hearing impaired people in all age groups could improve their telephone behavior on a landline phone with the Phonak DECT CP1. The October 2013 Field Study News 'Improvement of speech intelligibility and client satisfaction' discusses the improvements in speech intelligibility improvements with the Phonak DECT CP1.

## References

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