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Tinnitus Therapy 2.0: Tinnitracks, tinniwell and Tinnitus Pro in comparison

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The market for alternative tinnitus therapies has gained momentum in recent years. Not surprisingly, the number of tinnitus patients is constantly growing. Therefore, this group represents a market in the healthcare sector that should not be underestimated.

Thanks to rapid technological advancements since the mid-2010s, especially in the field of smartphones, a handful of companies have proposed a tinnitus therapy that is based on frequency-filtered music. This treatment procedure is mostly based on research conducted by the University of Münster. These studies examined the effectiveness of various pieces of music, especially when they were adapted to the tinnitus frequency of the patient.

First the exact frequency of the tinnitus is determined, and then this frequency is filtered out of the piece of music. This creates a notch in the music in the area of the tinnitus. This notch specially protects the nerve cells in the hearing center when the patient hears the music. This helps the nerves to relearn, and as a result the tinnitus subsides. The "Tailor-Made Notched Music" procedure was investigated for four months in a study of 100 tinnitus patients with positive results.

Several products that take advantage of these research results have been released to market by various manufacturers since 2012. In what follows we present the three most popular ones and compare them.

The top dog: Tinnitracks

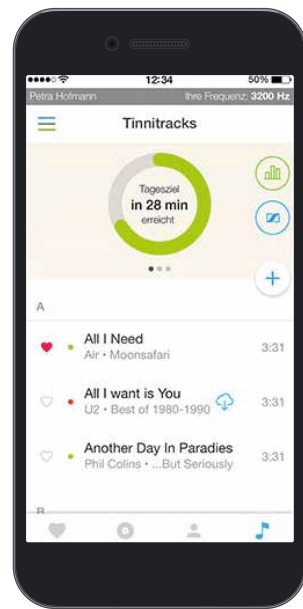


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The German company Sonormed, which is considered the industry leader, brought one of the first therapy applications to the German market with Tinnitracks.

After you enter the tinnitus frequency, the app analyzes existing music on the smartphone for its therapeutic potential and individually adapts it to the patient. The app is self-intuitive to use and very attractively designed, so that even users who are less technically experienced should be able to use the application with ease.

According to the manufacturer, Tinnitracks is only suitable for patients with chronic subjective tonal tinnitus with a stable frequency of between 200 Hz to 20 kHz and a hearing loss of less than 60 Db HL.

The application does not offer the ability to specify different settings for each of the ears or hearing loss compensation, nor does it offer therapies for changing frequencies or more complex tones. Since 2015 the manufacturer has maintained that it would expand the application's functionality, but this has not yet happened (as of February 2018). According to Sonormed, patients must visit the doctor to determine their tinnitus frequency. The application does not provide a way for patients to determine

the frequency themselves.

The price is EUR 19.00 per month. At present, however, the therapy is covered by many German health insurance organizations. Thus, at first glance it would seem to be one of the most economical procedures.

However, you should not lose sight of the total bill: in addition to purchasing a smartphone (if the patient does not have one), headphones from Sennheiser should also be purchased, because the Tinnitracks therapy is only optimized for these. Price point: The headphones cost up to EUR 200.00. If a smartphone is needed, then the total bill will be increased by the cost of that device.

Sonormed states that it may take a year or more for the patient to achieve success. However, since health insurance only covers the costs for one year, after that period, the patient will need to pay EUR 19.00 per month out of pocket.

Interim conclusion

The application is a modern therapy solution with an elegant look. However, there are drawbacks in many areas of the application. Due to the functional limitations of the service for tinnitus patients with variable frequencies, the need to visit the doctor to determine the frequency, and the lack of a hearing loss compensation feature, this application may only be of limited use for many patients. And although numerous health insurance providers are willing to cover the cost of the application subscription, which may be viewed as a positive feature, this does not do much to offset the high initial costs and above, all subsequent costs should the therapy not produce a positive result after one year.

The fact that numerous experts, such as the German Tinnitus League and other specialists, have evaluated the application critically clouds the image of the current top dog in the market.

The Chaser: tinniwell

The Swiss company Resaphene Suisse AG entered the market in 2015 with a device called the tinniwell, which is aimed at Tinnitracks customers.

tinniwell is offered as an independent therapy system as opposed to being based in an app. The somewhat clunky base unit is approximately the size of a chocolate bar and as thick as two of them. It has a touch screen and comes with two pairs of headphones.

Just like Tinnitracks, tinniwell relies on frequency-filtered music. However, it applies significantly different approaches. This begins with the first use: Because even if the manufacturer expressly recommends that the patient visits an ENT specialist, the patient is able to determine his tinnitus frequency himself and separately for each of the ears. The manufacturer is so convinced of the effectiveness of this method that it even advertises frequency determination without needing to visit the doctor as a feature. A free hotline is available for questions about configuring the device and the therapy itself. Provided that it works, this is a clear advantage for many patients whose frequency may change over time. The operation of the device is surprisingly simple and self-explanatory. The menu navigation is intuitive and easy to learn even for technically inexperienced patients.

In addition to the "classic" whistling tone, tinniwell can also detect noise and filter it accordingly. An Active Noise Canceling (ANC) headset from Plantronics is supplied for capturing sound (with a list price of approx. EUR 250.00) together with a pair of special inear earphones for the actual therapy. These offer a special function that was patented by the Swiss manufacturer: heat treatment of the inner ear. This is intended to stimulate blood circulation and create a greater relaxation effect, which increases the chances of the therapy's effectiveness. Initial studies have indicated that this approach may actually work: After a three-month examination by specialists, an average

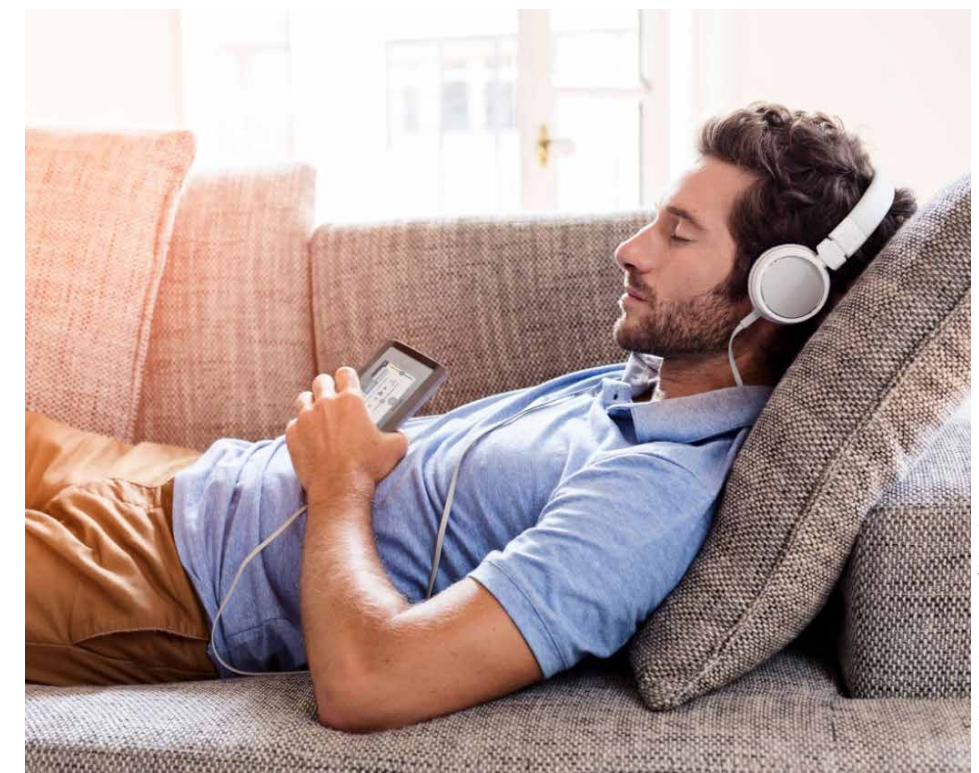


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of over 50% of patients reported relief from their tinnitus complaints.

tinniwell is delivered direct from the factory with pre-installed relaxation music chosen by Dr. Arnd Stein. However, you can also load your own music selections, as is true of Tinnitracks. Unfortunately, there is no way of testing the suitability of the product beforehand, so at best the patient can become familiar with the operating instructions before purchase and select the music accordingly himself. Due to the lack of integration with the music on your smartphone, you have to transport your own songs to the device via USB stick. Though this method works, it seems quite antiquated, as does the lack of usage statistics.

In addition to music therapy, tinniwell offers an integrated noise and hearing loss compensation function called Real-Audio. This should also enable patients with hearing loss in one or both ears to undergo therapy, which significantly expands the number of patients who can benefit from the product compared to the other products that we tested. However, such a wealth of functions has its price: The manufacturer allows patients to rent tinniwell for six weeks for EUR 379.00. The patient can then opt to purchase the device for EUR 1199.00 less the rental fee. While some health insurance organisations, including those

in Switzerland, already subsidise the device or cover all costs. In Germany, it varies from provider to provider and requires an application.

Interim conclusion

This is a comprehensive and easy-to-use therapy system that comes with all kinds of accessories. In addition, it is especially suitable for patients with more complex tinnitus tones and hearing loss.

Even if the appearance needs getting used to and the price is not a bargain at all, the functions and the service offered are convincing. Overall, however, the device could be somewhat more modern and, above all, lose some weight: it is only suitable to a very limited extent on the road.

“ Studies to date have demonstrated considerable positive therapy effects, with relief rates of up to 100%. ”

The original app: Tinnitus Pro



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The **Tinnitus Pro** app from the American manufacturer **ProMedicalAudio** can rightly be called the original digital tinnitus therapy.

The application was probably also used by the makers of **Tinnitracks** as a model, meaning that both widely share the same functionality. While **Tinnitracks** has been continuously developed over the years, **Tinnitus Pro** has not been updated since 2014. This is clearly visible in the application. However, it offers some features that have not found their way into competing products and are still appreciated by many users.

For example, it is possible to customise the settings for each individual ear. This is a function that **Tinnitracks** has so far completely lacked. The app also has extensive therapy settings, and it presents these settings in a transparent and easily understandable way – at least as long as you don't get lost in the depths of the menu structure.

And this is precisely one of the decisive weaknesses of **Tinnitus Pro**: the application is too sprawling and confusing in many places. It overburdens the user with too much information, and it has a steep learning curve. The fact that it

has not been completely localized into German does not make it any easier to use either.

Tinnitus Pro scores points for its features and price: Like **tinniwell**, the app comes with preinstalled relaxation music and can be expanded with your own tracks. To do this, you need to pay a one-time fee of about EUR 20.00. Besides this, there are no additional costs. However, there are no studies or other proof that the application has a therapeutic effect, and its lack of commitment to a certain pair of headphones suggests that demonstrable relief of symptoms is probably a product of chance.

It is also questionable how long **Tinnitus Pro** will remain available: Currently, it only runs flawlessly on older Apple iPhone models, and Apple, the manufacturer of the iPhone, is not exactly squeamish when it comes to disabling outdated apps.

Interim conclusion

The original tinnitus therapy app is obviously getting on in years, and it no longer works on new devices. What a pity, as the app was the model for **tinnitracks**. It offered more and much deeper functionality than its German counterpart, for example, preinstalled music or the ability to determine individual settings for each ear. If you depend on these functions, you will now have to take a look at the much more expensive alternative **tinniwell**, whether you like it or not.

Conclusion

The market for digital tinnitus therapy methods is booming and new apps are constantly springing up. However, even if the applications are promising, the manufacturers have so far failed to conduct meaningful studies to prove the effectiveness of their offerings. Nevertheless, one would like to say that with such an individual disease as tinnitus the result can vary greatly depending on the patient, and we would therefore at least initially welcome any new form of therapy that can help patients.

In addition to the three products that we reviewed here, there are at least two other application offerings on the market that function similarly to **Tinnitracks**: **tinnease** and **my Noise**.

Above all, a major shortcoming of the solutions that have been produced so far is a failing to provide a product that can be adjusted to each patient and his needs and a product that can treat hearing-impaired people or those affected by changing tinnitus tones.

The growing criticism from tinnitus associations and specialists should also not be underestimated.

Some critics have accused the health insurance organisations of wanting to achieve savings on patient treatment costs through the use of cheap apps.

Winner of our test: tinniwell

The Swiss product **tinniwell** takes a different approach. It does not rely on smartphones, but rather is a self-contained therapy system. The product offers the patient a complete system and extensive support.

The product is able to work without the need for additional devices. The study results to date are also promising, although caution should be exercised due to the number of participants in the study (about 20 patients).

However, there is currently no alternative on the market for patients with hearing loss or non-constant tinnitus. However, this solution is not cheap.

The high price ensures that not all patients will have easy access to the therapy solution – at least not until more health insurance organisations cover the cost of the treatment.

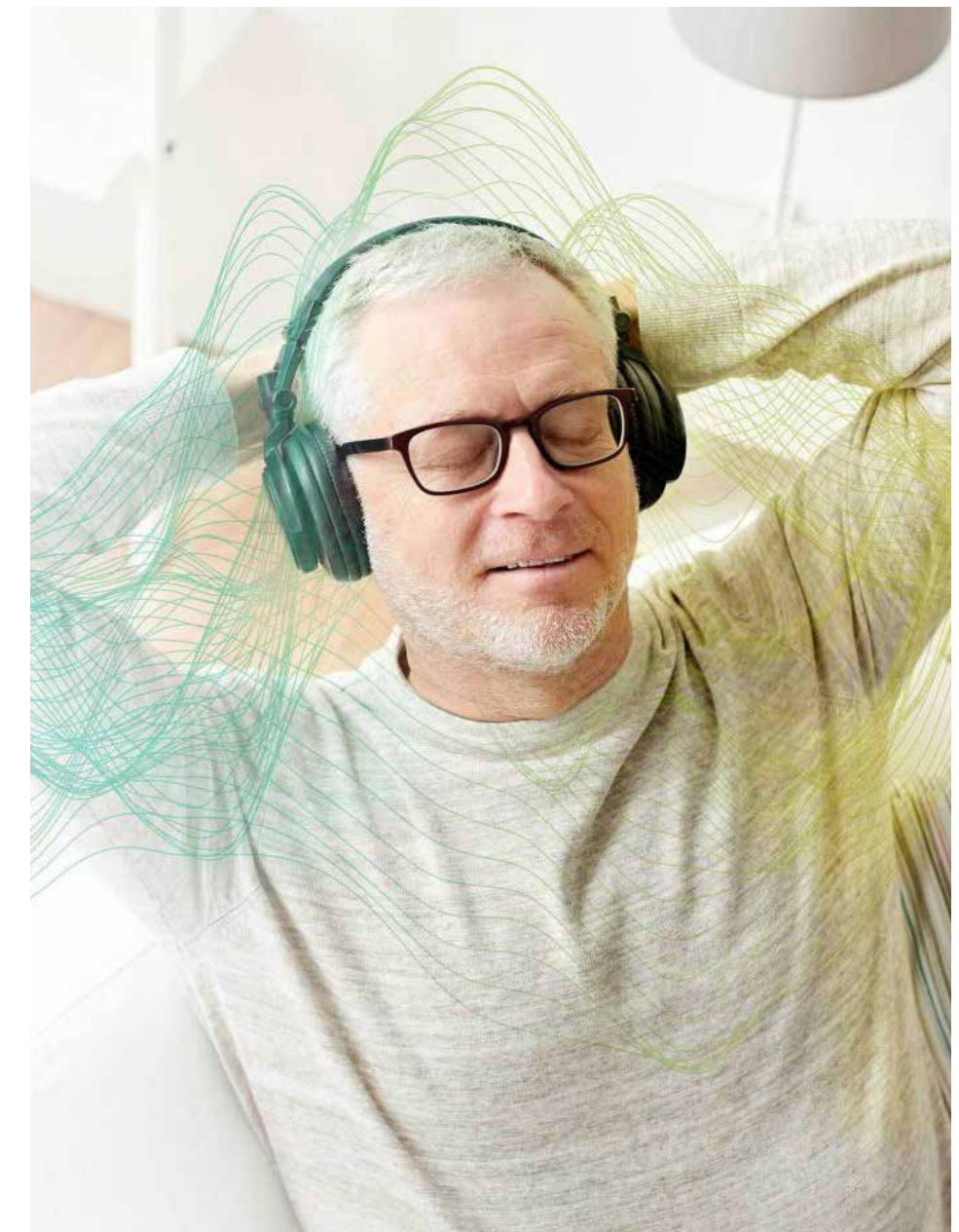


Foto: Tinniwell

Comparison table

Performance/Function	Tinnitracks	tinniwell	Tinnitus Pro
Determination of tinnitus frequency without a visit to the doctor	–	✓	–
Treatment of tinnitus with the help of frequency-treated music	✓	✓	✓
Effectiveness confirmed by a study	–	✓	–
Heat therapy	–	✓	–
Independent self-therapy is possible	✓	✓	✓
Telephone-based customer service	–	✓	–
Active ambient noise compensation	–	✓	–
Pre-installed relaxation music	–	✓	✓
Extended version with own music tracks	✓	✓	✓
Compensation for hearing impairments	–	✓	–
Separate therapy settings for each ear	–	✓	✓
Individually selectable therapy modes	–	✓	–
Noiser function	–	✓	–
System is usable without PC/smartphone	–	✓	–
Smartphone app	✓	–	✓
System can be used without PC/smartphone	–	✓	–
Cost absorption/subsidy by the health insurance	✓	✓	–