

Oticon ♦ Syncro

[Syncro 2]
Forever better



Kaizen the philosophy of continual improvement – that every process can and should be continually measured, evaluated and improved. When applied to hearing care, Kaizen means continuous improvement involving everyone – manufacturers, hearing care professionals, and clients alike. Kaizen is not limited to work. It also means continuing improvement in personal life and social life.

The secret to client satisfaction?
It's inside you, your clients. And Syncro 2



THE BEST JUST GOT BETTER

Syncro, the first hearing instrument with Artificial Intelligence, is the standard against which all other hearing instruments are judged.

Now, we've made it even better. Syncro 2 introduces innovative new features like:

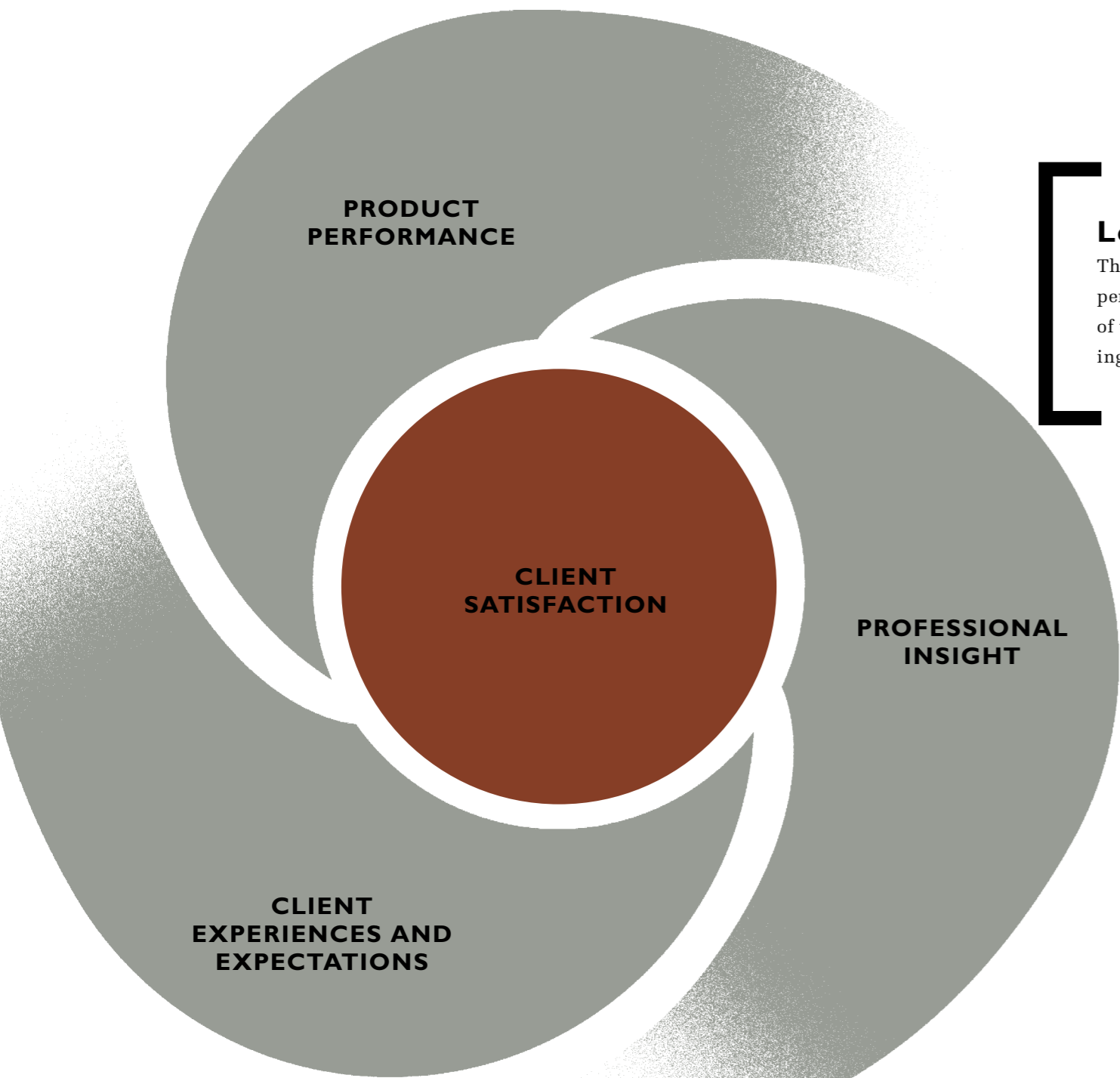
SYNCRO ACTIVITY ANALYZER
AUTOMATIC ADAPTATION MANAGER
INCREASED FITTING RANGE

It is all part of the Oticon promise to continuously improve everything we do - to help you build higher levels of client satisfaction and the success of your practice.



FOREVER BETTER

Artificial Intelligence - Voice Priority Processing - Multi-band Adaptive Directionality - Split directionality - TriState Noise Management - Voice Aligned Compression - Parallel processing - Syncro Activity Analyzer - Syncro Live - Adaptation Manager - Automatic Adaptation Manager - Syncro Power - Syncro Identities - Dual mode directionality - Enhanced Surround mode - Automatic Microphone Matching - Wind speed detector - Front/back detection - 8 channel compression - Broad bandwidth - Modulation detection - Advanced VoiceFinder speech detection - Multiple kneepoints - Low compression knee-points - OpenEar Acoustics - Col-



Learning Cycle

The continuous process in which instrument performance, client experiences and the skills of the Hearing Care Professional are the building blocks for increased client satisfaction.

THE LEARNING CYCLE

OPENING UP NEW FRONTIERS IN HEARING CARE

Syncro delivers the highest level in product performance in our industry today. Recently, an international clinical study (see page 17) confirmed that Syncro outperforms other hearing instruments on all critical parameters.

THE BEST JUST GOT BETTER

Now, Syncro 2 offers you new tools to help evaluate and to help the user adjust to amplification. They include: Syncro Activity Analyzer and Automatic Adaptation Manager. These features provide the foundation necessary for a continuous learning cycle.

Additionally, we have introduced a whole new level of power - Syncro 2 Power - a new compact power BTE that allows you to provide the Syncro experience to those with severe hearing losses.

FACTS REPLACE GUESS WORK

Syncro 2 provides you and your clients with detailed and objective information through a comprehensive activity analysis system we call - Syncro Activity Analyzer. Syncro 2 collects detailed information about the sound environments in which your client has been and records how Syncro 2 responded to these environments. Your client's reported experiences and your expertise will benefit from this objective information during counseling and the fitting process.

SEAMLESS ADAPTATION

Syncro 2 improves the process of adapting new users to amplification through a seamless Automatic Adaptation Manager. The Automatic Adaptation Manager allows you to set the pace of the adaptation process for each client. It will automatically make incremental gain adjustments over the time you specify.

POWERFUL INTELLIGENCE

Syncro 2 Power uses the benefits of Artificial Intelligence to provide superior performance and sound quality for those with severe hearing losses. It uses Syncro's unique Multi-band Directionality system, TriState Noise management system, and Voice Aligned Compression system to master the delicate discipline of simultaneously being able to provide comfort in noisy situations while preserving speech understanding.

NEW FRONTIERS IN HEARING CARE

Syncro 2's innovative new tools support a paradigm shift from traditional problem-focused fine tuning to proactive counseling and follow-up care. A shift in which the process is just as important as the product, and where new tools like Syncro Activity Analyzer are crucial in raising client satisfaction to new levels.

With Syncro 2 you will be able to open up new frontiers in hearing care.



Knowledge is empowerment



THE LEARNING CYCLE

SYNCRO ACTIVITY ANALYZER – REPLACES GUESS WORK WITH FACTS

Syncro Activity Analyzer is a groundbreaking new feature that tracks actual client usage patterns and the performance of Syncro 2's automatic systems. Syncro Activity Analyzer gives you the data you need to make adjustments faster and more accurately.

Information from Syncro Activity Analyzer will give you a better insight into your clients' actual needs and provide a strong basis for proactive and engaging counseling. It also enables you to verify and show how Syncro 2's advanced systems are benefiting your client over time.

ACTUAL USAGE

Syncro Activity Analyzer collects data about client usage patterns and preferences, such as use of volume control in different environments, use of programs and average use per day.

This data can be used to help your client articulate their experiences and

provide deeper insight into how they actually use different features. It will also provide information about the types of environments your clients frequent throughout the day. This information will enable you to make immediate improvements to instrument settings and increase the degree of individualization even further.

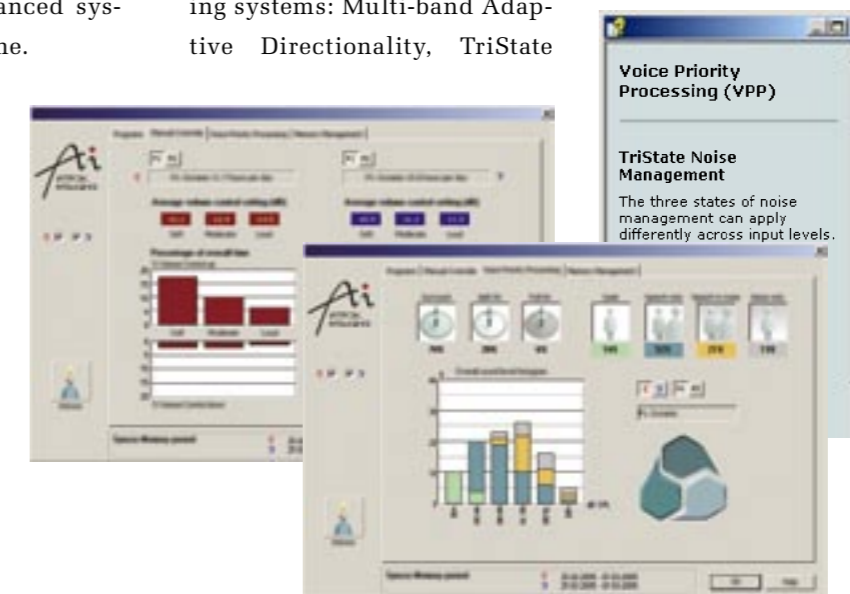
AUTOMATIC SYSTEMS

Syncro Activity Analyzer also provides performance data for each of the Voice Priority Processing systems: Multi-band Adaptive Directionality, TriState

Noise Management and Voice Aligned Compression. You will be able to quickly investigate to what extent and under which conditions these systems have responded to your client's everyday listening environments. This is particularly useful to validate and discuss the performance of Artificial Intelligence in challenging listening environments.

ADVISOR - A NEW DECISION SUPPORT TOOL

The Advisor is an integrated software tool that provides advice on how to interpret and use data generated by the Syncro Activity Analyzer. It is an excellent tool to balance objective data taken from the hearing instrument and the subjective experience described by your client. It allows you to use your insight with the objective information and suggestions supplied by the Advisor to provide a common starting point for initial follow-up visits and counseling.



TriState Noise Management – different strategies in different environments

**Intelligent
adaptation
makes for a
smooth start**



THE LEARNING CYCLE AUTOMATIC ADAPTATION MANAGER

Helping clients to successfully adjust to their instruments is crucial for ensuring initial acceptance and satisfaction. Oticon introduced the concept of step-wise adaptation management in 1997.

The Automatic Adaptation Manager in Syncro 2 combines the concept of adaptation management with the intelligence of Syncro 2 to provide a smooth transition experience for clients.

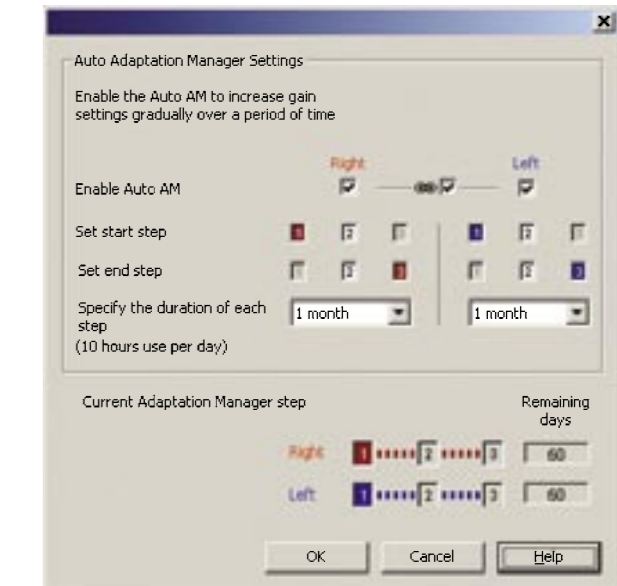
SEAMLESS ADAPTATION

By selecting adaptation steps and time between steps, the Automatic Adaptation Manager will automatically calculate and adjust gain in small, imperceptible increments, smoothly moving the client's adaptation process towards the desired end point.

EASING THE TRANSITION TO BETTER HEARING

The Automatic Adaptation Manager will help clients experience a smoother adaptation period, reducing the likelihood of rejection during this crucial phase.

Furthermore, the smooth adaptation will help ensure that your clients get the maximum benefit of Syncro's advanced features as the adaptation process progresses.



Setting start and end step as well as the time period between these steps will automate the adaptation process by applying imperceptible increases in gain.

The benefits of Artificial Intelligence to severe losses

SYNCR0 2 POWER BTE

THE BEST JUST GOT MORE POWERFUL

The new Syncro 2 Power is a compact BTE that provides the benefits of Artificial Intelligence to people with severe hearing losses.

SPLIT DIRECTIONALITY

People with severe hearing losses can benefit greatly from directionality. However experience shows that they are easily disturbed by the loss of low frequency amplification when in directional mode or when using automatics.

Syncro 2 Power uses a dual-mode directional microphone system with Surround and Split directional modes. In Split Directionality mode directionality is only active at frequencies above 1000 Hz. This unique system allows the user to retain the low frequency gain they need while greatly benefiting from the improved speech understanding provided by the directionality of the mid and higher frequency bands. The system can eliminate multiple noise sources in three distinct frequency bands, simultaneously. Syncro's unique Split directionality allows your clients to benefit from directionality in far more situations.

Syncro 2 Power's Split Directionality works in unison with the TriState Noise Management

system to provide best Voice-over-Noise ratio in every situation.

EFFECTIVE NOISE MANAGEMENT

The unique TriState Noise Management system combines advanced VoiceFinder speech detection technology and an 8 channel, modulation-based noise reduction system, to ensure that vital speech cues and comfort are never compromised. It operates in three distinct states: Speech in Quiet, Speech in Noise, and Noise Only (see page 15).

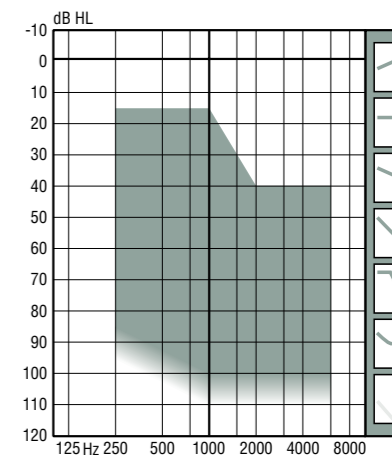
Clients with severe hearing loss are very dependent on speech cues when trying to understand speech in noisy situations. But in loud environments, high-gain, high-output instruments typically reach saturation, preventing the user from accessing the important temporal cues of the speech signal.

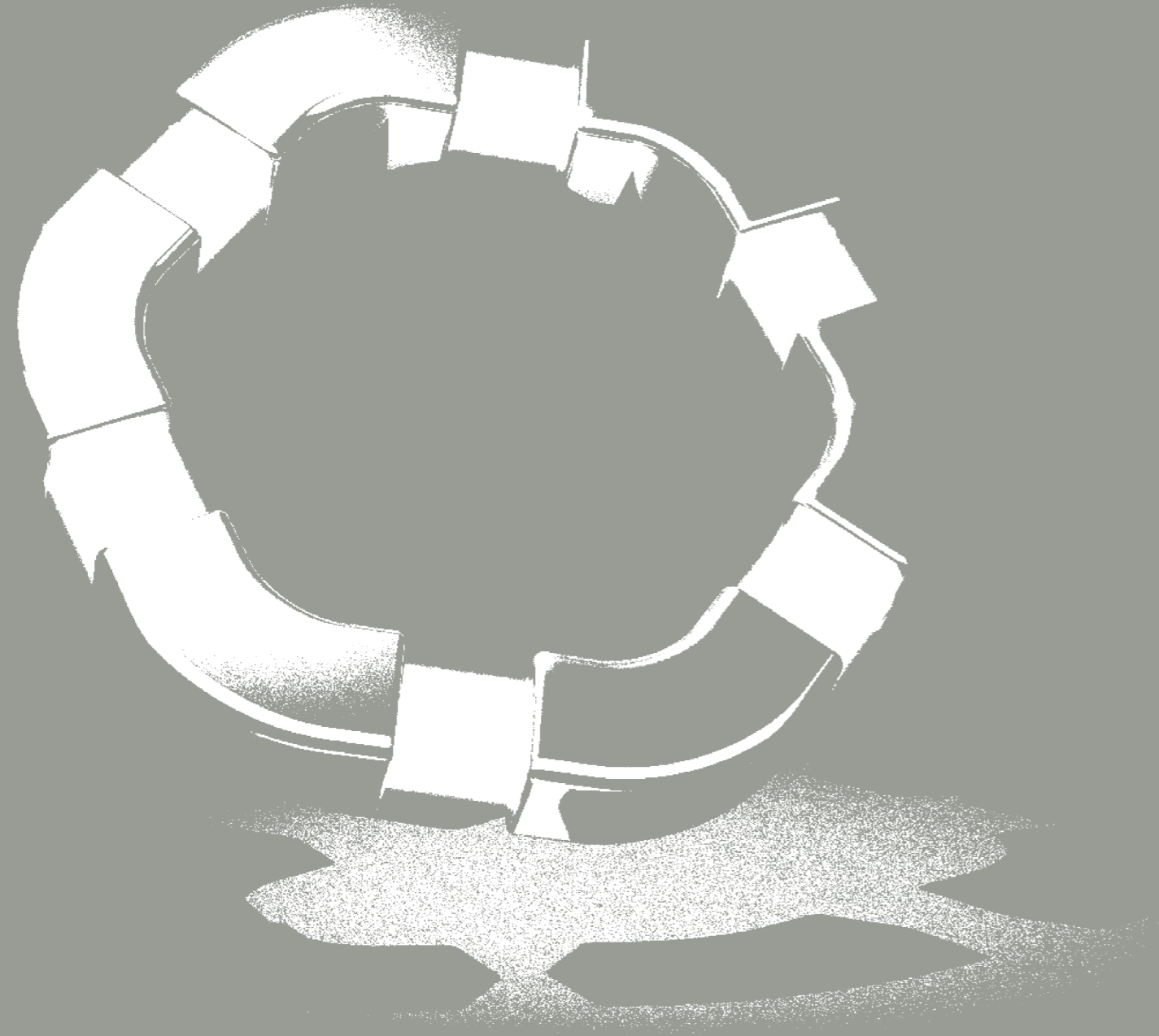
By optimizing the noise reduction in the affected channels, the TriState Noise Management system preserves the speech cues, thereby preserving speech audibility. The system actually repositions loud noises correctly within the user's dynamic range to ensure optimum acceptance of amplification.

SEAMLESS INTEGRATION OF POWER PROCESSING

The more severe a hearing loss, the more factors such as distortion and deteriorating auditory resolution, must be taken into account. Fragile high frequency sounds should not be distorted by applying too much compression. The attack and release times as well as automatics should reflect auditory resolution and take the lifestyles of users into account. In Syncro 2 Power, all these factors are integrated into the fitting through the use of Identities. Therefore, fitting Syncro 2 Power is just as easy as fitting other Syncros.

FITTING RANGE FOR SYNCR0 2 POWER





**Artificial
Intelligence
changes
everything**

**For life as it
really happens**

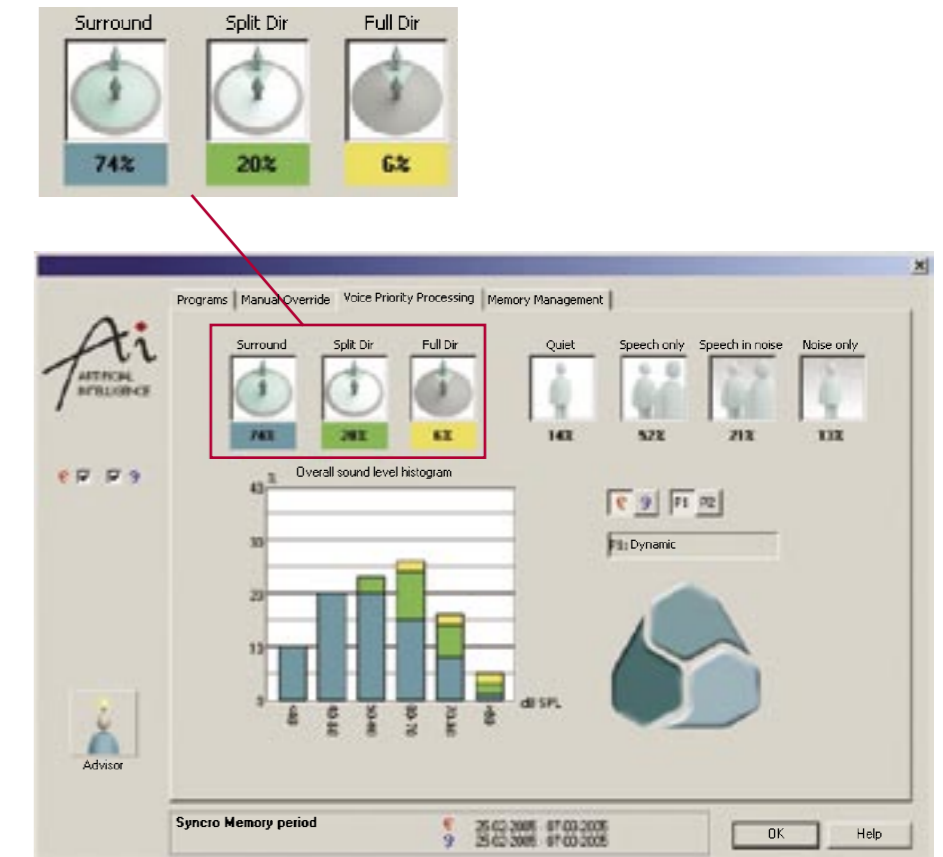
ARTIFICIAL INTELLIGENCE THE GREAT ENABLER

Artificial Intelligence (A.I.) is the cornerstone of Syncro's success. It represents a fundamental change in the way hearing technologies work. Rather than using traditional pre-defined "sound scenes", or "might-be" environmental classification methods, Syncro uses parallel processing to simultaneously compare all possible combinations of its advanced Voice Priority Processing features. Based on the reality of the sound environment, it chooses the combination that provides the best possible Voice-over-Noise ratio at any given moment in time. This way, Syncro will always provide the clearest signal because its decision-making is designed to handle the complexity and unpredictability of real sound situations as they happen.

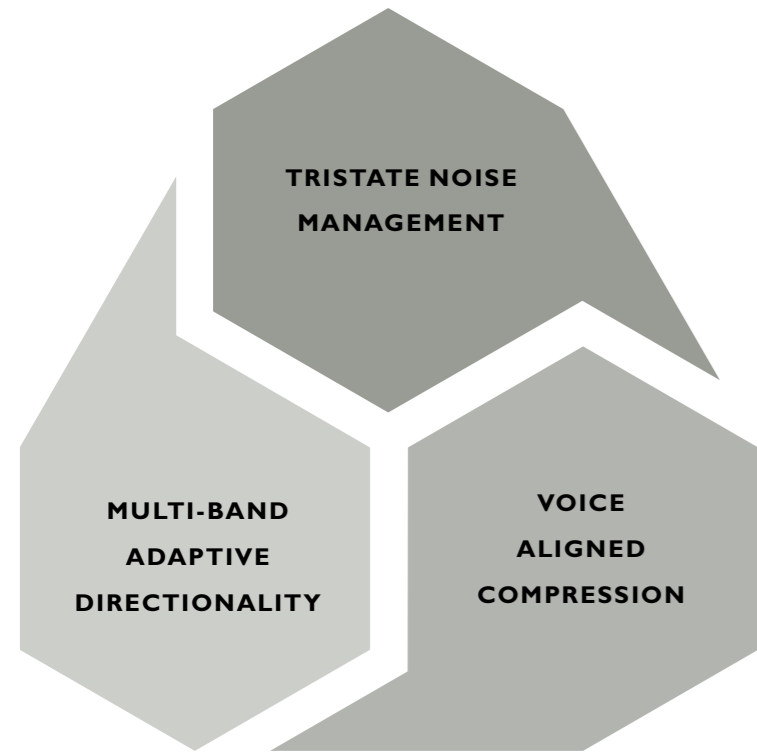
ARTIFICIAL INTELLIGENCE AT WORK

The screen shot shows an example of how the Multi-band Adaptive Directionality system deploys different directional strategies in response to the user's sound environments. It can be seen that Full, Split or Surround directional modes are applied as needed in different environments, represented here by the colors yellow, green and blue. This is the essence of A.I. at work. It proves that it has the unique ability to use the best strategy for any given situation.

With a unidimensional approach, where level detection is the sole determinant for the activation of the directional system (e.g. >70 dB SPL), all bars above 70 dB SPL would be yellow irrespective of whether this actually provides the maximum benefit. Syncro, on the other hand, will employ all three directional modes even at the highest input levels. This is because it is choosing its directional mode on a strategy which maximizes the Voice-over-Noise ratio.



Multi-band Adaptive Directionality – different strategies in different environments.

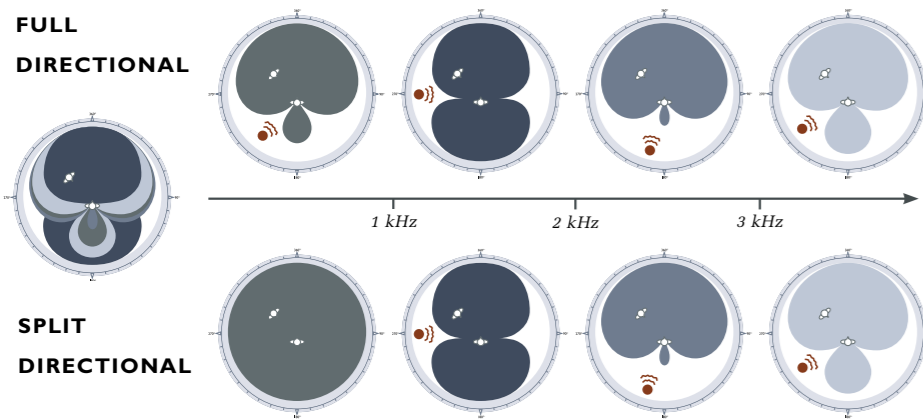


VOICE PRIORITY PROCESSING SYSTEM 3 UNIQUE SYSTEMS – ONE COMMON GOAL

The Voice Priority Processing (VPP) system is at the heart of Syncro 2. While each of its components represents its own technological breakthrough, it is the way these components work together that makes it truly unique. By working in synergy the Voice-over-Noise ratio is maximized at any given moment in time.

MULTI-BAND ADAPTIVE DIRECTIONALITY
The Multi-band Adaptive Directionality system works in four frequency bands to enable simultaneous attenuation of up to four noise sources. It is the only directionality system that has three modes: **SURROUND, SPLIT DIRECTIONALITY AND FULL DIRECTIONALITY.**

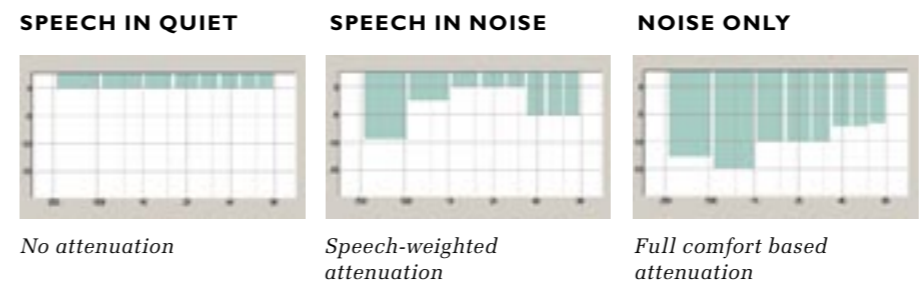
- **SURROUND** mode is activated in soft to moderate level environments where the Voice-over-Noise ratio is best. It is also activated in any outdoor situation with a strong wind noise or when the dominating speaker is situated behind the user. The Surround mode provides no directional effect, but the two microphones work in parallel to reduce internal noise.
- **SPLIT DIRECTIONALITY** is a novel intermediate mode. It keeps the low frequency band in Surround mode while the three mid and higher frequency bands work in an adaptive directionality mode. This has several advantages - directionality can be provided at lower input levels, mode switching is smooth and transparent, and directionality can be maintained even in the presence of moderate wind noise. This mode is activated in moderate and loud level environments where the Voice-over-Noise ratio is best in Split Directional.
- **FULL DIRECTIONALITY** mode provides adaptive directionality in all 4 frequency bands. It is activated in loud environments where the Voice-over-Noise ratio is best in full directional mode.



TRISTATE NOISE MANAGEMENT

TriState Noise Management is the only system available that combines advanced Voice Finder speech detection technology with an 8-channel noise reduction system. This system operates in three distinct states: Speech in Quiet, Speech in Noise and Noise Only.

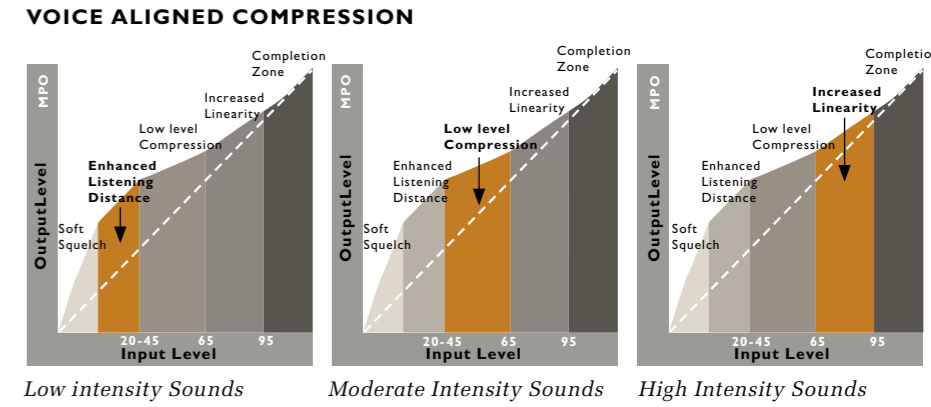
- **SPEECH IN QUIET** mode ensures the signal is left untouched by the noise reduction system. Advanced VoiceFinder acts as a safeguard to make sure that audibility is never compromised.
- **SPEECH IN NOISE** mode applies a speech-weighted channel specific attenuation, reducing noise without affecting the integrity of the speech signal.
- **NOISE ONLY** mode offers more aggressive noise reduction. The advanced VoiceFinder system verifies that there is no speech in the signal, so full comfort-based channel specific attenuation can then be applied for maximum comfort.



VOICE ALIGNED COMPRESSION

Syncro 2 uses a Voice Aligned Compression strategy with multiple kneepoints across eight channels to ensure smooth frequency response and superior sound quality at all input levels. Syncro 2 accomplishes this by using different compression tactics for different input levels.

- **LOW INTENSITY SOUNDS** receive more amplification to increase audibility, enhance listening distance and to improve the perception of ambient sound.
- **MODERATE INTENSITY SOUNDS** receive less amplification and more compression. This can be done because the signal is very robust at soft-moderate input levels, thus making it possible to keep the signal close to the Most Comfortable Level.
- **HIGH INTENSITY SOUNDS** receive less compression to make the amplification more linear and to preserve the dynamic properties of the speech signal – increasing speech understanding in more difficult listening situations.



**Intelligence
you can hear**



ARTIFICIAL INTELLIGENCE

CLINICALLY PROVEN TO INCREASE CLIENT SATISFACTION

SYNCR0 IS A PROVEN SUCCESS

The results from a comprehensive international clinical study* confirm that Hearing Healthcare Professionals as well as experienced and new users find that Oticon Syncro outperforms other hearing instruments on all critical parameters. Syncro was also shown to meet or exceed client expectations on key indicators that are critical to long-term client satisfaction.

93% OF NEW USERS SAY SYNCR0 MEETS OR EXCEEDS THEIR EXPECTATIONS

Facts speak louder than words. More than 90% of new clients reported that Syncro meets or exceeds their expectations of sound quality, adjustment to the hearing instrument and overall preference.

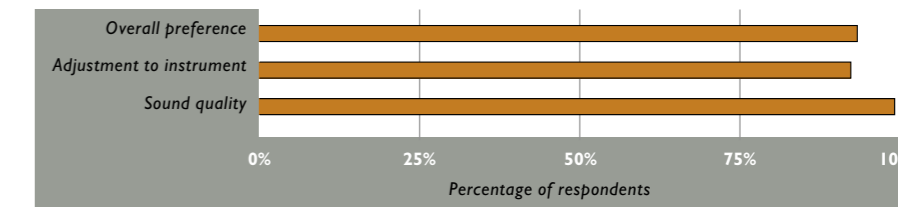
93% OF PROFESSIONALS RATE CLIENT SATISFACTION WITH SYNCR0 SUPERIOR

Of the 121 hearing healthcare professionals participating in the study, a remarkable 93% rated overall client satisfaction good or excellent. 92% of the same group rated the time needed for a successful fitting as average or better.

89% OF EXPERIENCED USERS PREFER SYNCR0

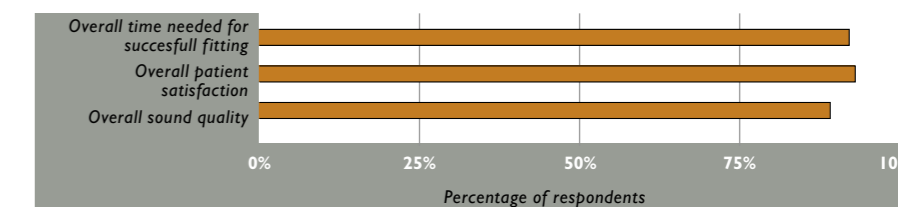
Among experienced users, perhaps the most critical judges of new technology, Syncro outperformed other instruments. 89% of experienced users preferred Syncro to their previous instrument, while 85% rated Syncro as better when it came to speech understanding in noise.

NEW USER (n=119)



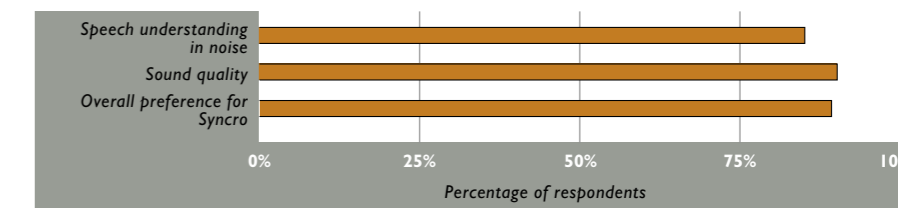
Results from 119 new hearing aid users comparing Oticon Syncro to their expectations of the benefits of amplification.

HEARING HEALTHCARE PROFESSIONAL (n=121)



Results from 121 Hearing Healthcare Professionals comparing the fitting and success of Oticon Syncro to other premium hearing instruments.

EXPERIENCED USER (n=183)



Results from 183 hearing aid users comparing Oticon Syncro to their previous hearing instrument.

Multinational Clinical Evaluation of Oticon Syncro 2005; Flynn, Pogash & Schum.

* Eight countries with 119 new users, 183 experienced users and 121 Hearing Care Professionals participated in this study. The entire study, Multinational Clinical Evaluation of Oticon Syncro (Flynn, Pogash & Schum, 2005), is available upon request.



**Distinguish your practice
with a “PRICELESS”
patient experience**

SYNCRO LIVE AND eCAPS

CREATING THE ULTIMATE HEARING CARE EXPERIENCE

PREMIUM INSTRUMENTS -

A CHALLENGE AND AN OPPORTUNITY

Client satisfaction is closely correlated to the management of expectations. This issue is particularly relevant for Oticon Syncro. Not only because it is a premium instrument featuring highly sophisticated technologies that deliver superior performance, but because it represents an opportunity to serve the growing ranks of clients who are choosing premium healthcare products.

BEST PRACTICES

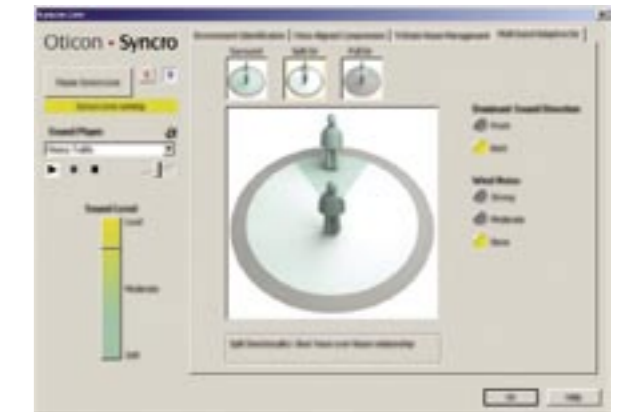
Success in selling premium instruments is often a direct result of your ability to communicate the benefits of advanced technologies to consumers. Research shows that consumers have high expectations towards professional practices. They look to authoritative experts for advice on the best and latest technologies available. Consumers expect a consistent quality of experience – from advertising, to the interior design of clinics and the level of personalized service they are given.

Oticon offers two tools specifically designed to support these practices: eCaps and Syncro Live.

OTICON eCAPS

Oticon eCaps* is a PC based toolbox for general education on hearing, hearing loss, hearing instruments, and product/feature selection to enhance your counseling process. Oticon eCaps is the latest release of the original counseling tool introduced with Syncro. Oticon eCaps is designed to become an everyday part of your practice.

Details from your counseling session, including advice on aural rehabilitation, can be included and printed out on a personalized client report. It's just one more way eCaps makes it easier than ever to provide service that matches high client expectations.



SYNCRO LIVE

Syncro Live offers insights into how the automatic systems in Syncro 2 perform. Syncro Live lets you and your clients see decision making as it happens. This makes it easier to show and explain how these advanced technologies work.

**CAPS stands for Client Assisted Product Selection.*



Syncro 2 is a complete family of state of the art hearing instruments suitable for all types of hearing losses from CIC - BTE Power.

Syncro 2 uses Artificial Intelligence to optimize the performance of the Voice Priority Processing system - providing significant benefits to users in demanding listening environments.

Overview



VOICE PRIORITY PROCESSING SYSTEM

Multi-band Adaptive Directionality

- Independent, adaptive directionality in 4 frequency bands
- More directionality in far more situations
- Shifts automatically between Surround mode, Split Directionality and Full Directionality
- Unique Split Directionality mode

TriState Noise Management

- Balancing the needs of comfort and preservation of speech understanding
- Three mode noise management: Speech in Quiet, Speech in Noise and Noise Only
- 8 independent channels
- Combined 8 channel modulation-based noise reduction system and advanced VoiceFinder technology

Voice Aligned Compression

- Preservation of sound and voice dynamics in adverse communication environments
- Eight channel intercoupled compression
- Multiple kneepoints providing a smooth compression characteristic
- Low compression knee-points
- Improved listening distance, improved speech understanding in loud environments



A RANGE OF ADVANCED TOOLS AND CONCEPTS TO INCREASE CLIENT SATISFACTION

Syncro Identities

- Five unique combinations of amplification parameters and advanced feature settings
- Increase client satisfaction through individual and lifestyle optimized fitting
- Make initial fitting easier and more accurate

Syncro Activity Analyzer

- Comprehensive data collection
- Increase client satisfaction through proactive follow-up
- Advisor – integrated help for data interpretation
- Program and Volume Control usage
- Tracks performance Multi-band Adaptive Directionality, TriState Noise Management, and Voice Aligned Compression in different sound environments

Automatic Adaptation Manager

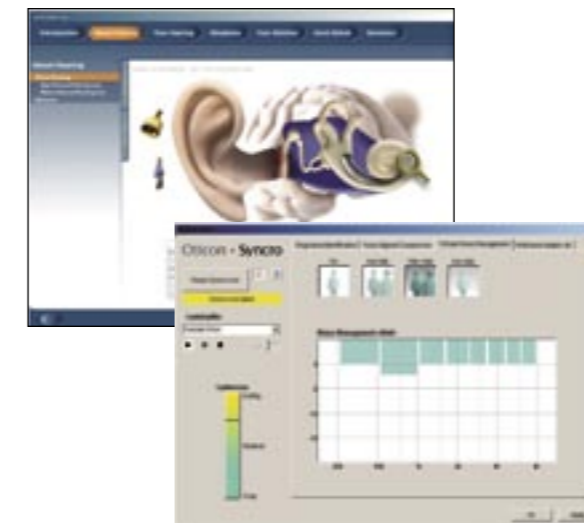
- Increases client satisfaction through smoother adaptation
- Configuration of transition time
- Configuration of transition steps

Syncro Live

- Shows the Voice Priority Processing technologies live in real-time
- Increases client satisfaction through confirmation of advanced technology

Oticon eCaps

- Client-focused counseling and feature demonstrations
- Increased client satisfaction through clear and structured presentation of information



SYNCRO 2 POWER

- All the benefits of Syncro for clients with severe hearing losses
- Unique dual mode directionality
- Syncro Identities optimized for severe hearing losses
- TriState Noise Management optimized for severe losses
- Uses size 13 battery



OPENEAR ACOUSTICS™

- Reduced occlusion are improved comfort
- Large collection vents and open earmolds
- Dynamic Feedback Cancellation
- Low frequency vent compensation

OTHER FEATURES

- 4 independent, fully programmable programs
- Auto Phone - Automatic Shift to Microphone or Telecoil/Acoustic phone program
- Fully configurable telecoil
- Optional VC*
- Switch-on time delay
- Standby function

* Directionality and volume control are not available in CIC/MIC styles.

People first



We believe that it takes more than technology and audiology to create the best hearing instruments. That's why we put the individual needs and wishes of people with hearing loss first in our development of new hearing care solutions.