TANDBERG

The Sound Investment

The Tandberg Story

Vebjørn Tandberg founded Tandbergs Radiofabrikk in 1933, determined to satisfy peoples demand for better radio reception. Quite a challenge, as Norway's high mountains and deep fjords place extreme demands on the equipments' reception capabilities.

He was born in a small fishing village in northern Norway in 1904. After successfully confusing the Norwegian Coast Guard with the Morse transmitter he designed at the age of 13, Vebjørn Tandberg developed a great passion for radios, and decided to become an engineer.

His first product was a portable radio with an extraordinary sound quality. Sonic qualities were already then, and still are, of the utmost importance to the company.
Vebjørn Tandbergs designs were often highly unconventional, but proved to be superior. Instead of protecting his inventions by patents, he strongly believed there always was room for further improvements. Vebjørn Tandberg set his mind on continual new development.

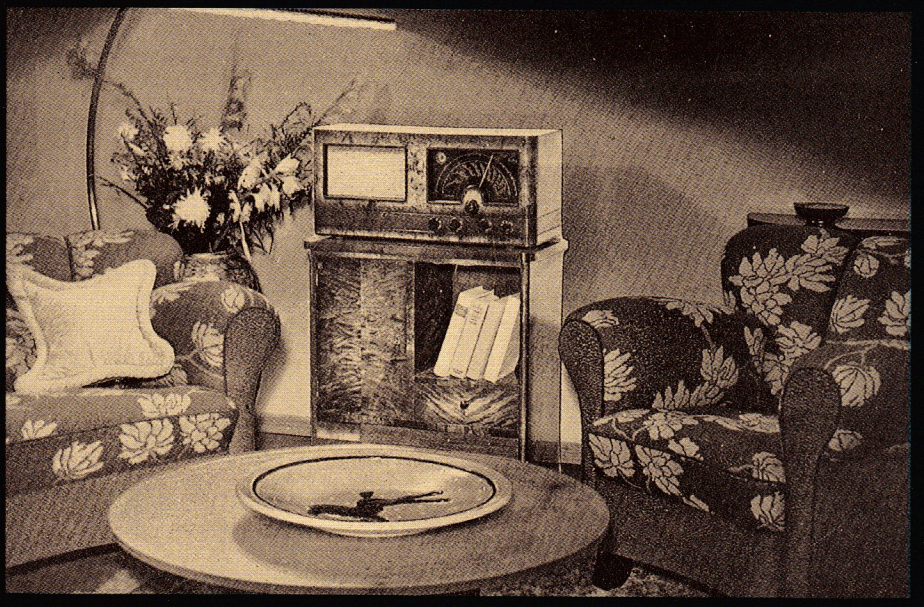
The first "Huldra" radio was launched in 1934. This legendary radio was continually improved until the late 1970's.

The name comes from Norwegian folklore. The Huldra is said to be an irresistable woman, living inside the mountains.
She would appear before lonely hikers; singing, dancing and dazzling men with her beauty.
If they did not cover their ears and close their eyes in time, they would be spellbound by her and trapped in the mountains forever. The Huldra reflects human striving for perfection and reaching for the unattainable.

After The Second World War, the "Huldra" and the equally successful "Sølvsuper", were to be found in a substantial number of Scandinavian households - many of them are still in daily use.

The first model reel-to-reel tape recorder was completed already in 1952 and exports started the year after. The high standard of the products formed the basis for exports. In the late 1950's Tandberg became recognised world wide for their reel-to-reel tape recorders and radio receivers, later also for their cassette decks and the high-end 3000 series.

The production of the 3000 series started in the late 1970's. A number of the products have achieved legendary status.The products in the line have of course been upgraded over the years, but they have maintained their market position. The 3001 FM tuner was first



The Sølvsuper: A typical Norwegian living room from the late 1930's, featuring the Tandberg Sølvsuper Model 1939

The Company

launched in 1979 and is today regarded as one of the best tuners ever. Having been on the market a full 15 years, the 3000 Series has the longest life span of any product range in the business. A 3000 product from 1994 blends perfectly in with a product from 1979.

Most manufacturers tend to change their designs quite frequently. Usually this is perceived as a market necessity in order to generate new interest, rather than a genuine desire to provide a better product. The Tandberg tradition is engineering products for the future, but leaving the possibility to incorporate changes and upgrades without altering the design. The customer then has the advantage of being able to complete and upgrade the system over time, enhancing the joy of owning the products.

The 4000 Series is designed to incorporate possible future improvements such as interactive remote control and optical communication between the units.

Tandberg Radiofabrikks' continuous struggle for being the first and best with new inventions for better products gave results. Throughout the 1960's, production of language laboratories, computer terminals and televisions were new additions to the range and the company continued to expand. By the end of the 1970's, Tandberg was a fairly large enterprise with more than 3000 employees.

Today, Tandberg is split into 4 independent companies. Tandberg Data A/S is the largest of the four, and specialises in tape streamers, computer terminals and other computer related products. Tandberg Education A/S develops and produces language laboratories for educational purposes. Tandberg A/S produce satellite reception equipment and has also developed a picture telephone. Tandberg Audio Products A/S designs and manufactures high quality hi-fi products.

The Tandberg Numerology

The Tandberg hifi products have had a four digit model number for the last 20 years. The first digit tells you what Series the product belongs to.

The second digit has never been used. The intention was to differ between products with discreet components and products with hybrid circuitry. Tandberg chose to stick to discreet component circuitry.

The third digit relates to the price bracket. A "1" or a "2" shows that the product is a high-end product. A "3" to a "6" shows that it is an upper mid-fi to high-end product, mainly competing with high class American or European products in regards to sonic qualities. The last digit explains what kind of a product it is.

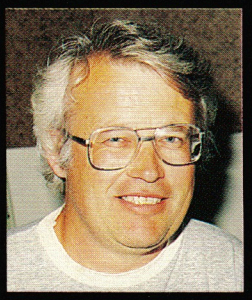
When the last digit is a "1" the product is a tuner. A "2" is always an integrated amplifier. A "3" will be a receiver. A cassette deck is recognized by a "4", and a CD-player by a "5". The power amplifiers have a "6" as their last digit, whilst the control amplifiers have an "8". The "9" is always a mono-block.

Do you wonder what happened to the "7"? Even Tandbergs' numerology is prepared for new technology.

Sverre Nord
R & D Coordinator

TANDBERG

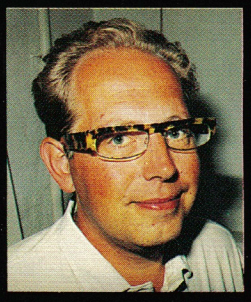
The Tandberg 4000 series started out as a desire to make a unique hi-fi system. Unique in sound reproduction, design and operation. The design should clearly indicate its Norwegian heritage, using aluminium and solid wood. It should be stylish, clean and blend in anywhere. Special care was taken in regards to ergonomics, keeping it as simple as possible in use, but still sufficiently advanced to please even the most demanding user.
It took a full five years of research and painstaking development to fulfil these goals.



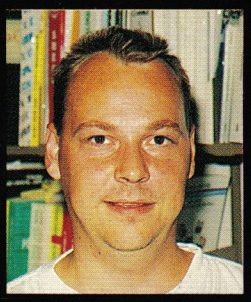
Tore Haug
Electronic Engineer

Tandberg has always been at the forefront of new developments in the industry. Tandbergs' innovative ideas have resulted in many breakthroughs. The latest being the remarkable new CD transport. Top load CD-players are often superior in their ability to retrieve information from the CD. They are usually fairly expensive and not very convenient in use. With this in mind Tandberg developed a CD transport with the top loaders advantage of dampening the vertical vibrations, combined with the convenience of the drawer mechanism.

Both the control and power amplifiers are true Zero Negative Feedback amplifiers. This gives a remarkably warm and realistic sound reproduction. Zero Negative Feedback allows a design without the need for stability compensation. This results in a higher slew-



Eivin R. Larsen
Industrial Designer



Bob Andersen
Electronic Engineer

4000 Series

rate compared to conventional designs and there is no internal circuit overload with normal use.

Eivin Rudberg Larsen gave the 4000 Series its' timeless and classical design. Thor Østhus engineered a cabinet to house all the various components. All products in the range use the same basic cabinet, resulting in few non-interchangeable parts.

All the Tandberg 4000 products are designed by our own research and development staff and are manufactured in Norway.

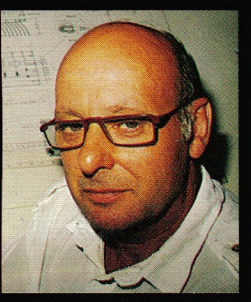
The Sound Investment

TANDBERG TIA 4062

Integrated Amplifier

After completing the basic electronic design of the 4062 integrated amplifier, it still took more than a year of continuous listening and alternations before the designer, Lars Ernestus, was completely satisfied with the sound. As a result, this fully remote controlled 2x50W amplifier, sets a new standard of performance, effortless power and refinement. Most integrated amplifiers combine a control and power amplification stage. The 4062 has a single gain stage for maximum transparency. Advanced circuit techniques and careful selection of parts, makes it possible to maintain and improve linearity and band-width.
The 4062 integrated amplifier should satisfy every audiophiles need for versatility.

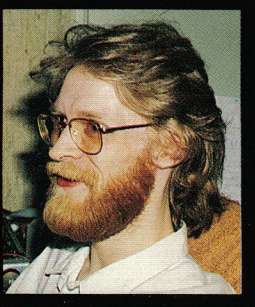
The Tandberg 4000 Series is available in black or champagne finish. Special care has been taken to ensure easy operation whilst giving the products their clean and stylish appearance.



Thor Østhus
Mechanic Engineer

Tom Helgesen
Electronic Engineer

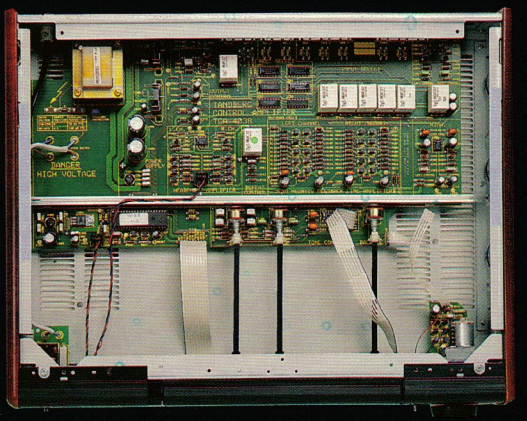
Lars Ernestus
Electronic Engineer



Are Leistad
Micro Code Programmer

Five years from i

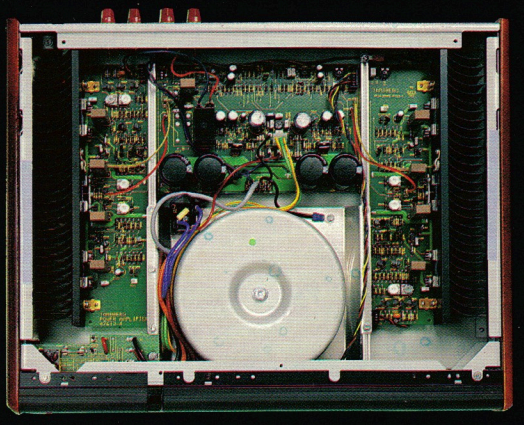
TANDBERG TCA 4038 Control Amplifier



The Control Amplifier: The 4038 is extremely tidy, almost without any wiring. The phono stage is placed as far away as possible from the power supply.

The Tandberg 4038 is designed by Bob Andersen. It is partly based on two Tandberg high-end control amplifiers, the acclaimed 3018A and the more recent 3028A.
The 4038 contains discreet Class-A circuitry for line level amplification. It also features separate listen and record selections and defeat for it's bass and treble controls. The source selection is achieved by high quality relays, in conjunction with a microcontroller. This establishes a short signal path. Ease of use is provided with a remote control.
The 4038 delivers a remarkably open and richly detailed sound reproduction.

TANDBERG TPA 4036 Power Amplifier



The Power Amplifier: The 4036 is built as a dual mono amplifier sharing the same massive toroidal transformer. It also features two highly efficient heat sinks, one for each channel.

The Tandberg 4036 power amplifier is based on Jens Werner Werenskiolds' fabulous 3036A. The amplifier has been redesigned and enhanced by Tore Haug and Bob Andersen.
The 4036 is equipped with a large toroidal transformer, ensuring power deliverance into relatively difficult speaker loads.
The amplifier has a Zero Negative Feedback design, with local error correction circuitry contained in the output stage. This results in very low distortion and a high wide-band damping factor.

Do not let the stylish design and modest size fool you, this is a full grown 100W per channel power amplifier!

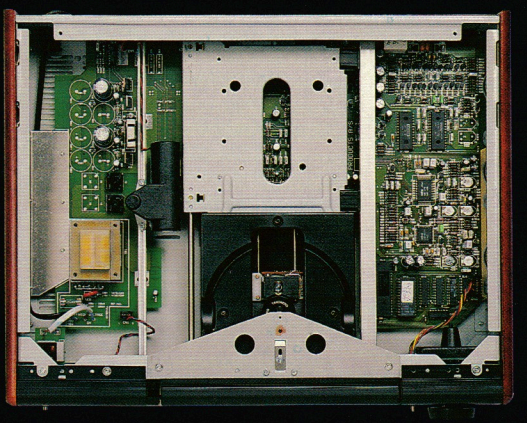
dea to perfection

TANDBERG TCP 4035/4025 CD Players

The 4000 series features two CD-players, almost identical in mechanical design and functions. Both are "stackable top-loaders", combining the benefits from the top loaders often superior ability to subdue vibrations, with a drawer mechanisms functionality. The transport mechanism is a Tandberg design.

Both models share this transport that enables them to read CD's with fewer errors than a conventional CD-player. This gives a more detailed reproduction of music and results in exceptional sonic qualities. Tom Helgesens design features high quality Burr-Brown digital filters and digital to analogue converters.

The analogue circuitry is a discrete Class-A design, with selected low noise semiconductors. Are Leistads micro-controller software assures logical and easy operation from the unit or from the remote control.



The CD Players: Most high-end producers tend to use transports and microcodes from other manufacturers. Tandberg chose to design, from scratch, an uncompromising and complete CD-player for the 4000 Series. This picture shows the TCP 4035.

The 4025 has a more advanced power supply and analogue circuitry than the 4035. This gives even better data and sound reproduction.

The factory also adjusts the Most Significant Bit (MSB) on each and every 4025, thereby enabling the CD-player to reproduce the exact level of every sample set.

TANDBERG TPT 4031 Tuner

The 4031 tuner is based on the acknowledged 3031A tuner by Larry Schotz and Tore Haug. Bob Andersen has redesigned it for the 4000 Series.

The 4031 is a remote controlled digital tuner, offering a high degree of stability in combination with an easy to read and accurate LCD display. The tuner features 16 pre-set FM stations, stored in a non-volatile memory.

The 4031 front end employs digitally controlled tuned circuits. The first RF amplification stage uses dual gate MOSFET's. In conjunction with four tuned circuits, this design feature achieves stable accurate tuning, combined with good sensitivity and superior headroom. The audio circuits are high quality Class-A designs, not usually found in tuners. This enhances the FM listening experience.