

O SCOPE Development History



Vorotek was founded in 1971 by Australian ENT surgeon Dr John Vorrath. For over forty years Dr Vorrath has been developing and manufacturing fully integrated optical systems with illumination. He developed the original **Voroscope** and was the co-developer of the **LumiView** in 1993. His aim has always been to provide users with products which enhance their capability for examination, instrumentation and procedures.



1971 : FIRST PROTOTYPE

Frustrated with handheld otoscopes and frontal mirrors, Dr John Vorrath invented a head-worn binocular optical device with a built-in light source. It was portable, light weight and hands free. In ENT it greatly enhanced examination, instrumentation and procedures.



Late 1970's : FIRST PRODUCTION RUN

Rapid uptake by Australian ENTs with the first small scale commercial production – more than 100 units sold.



Mid 1980's : FIRST COMMERCIAL AGREEMENT

This Agreement resulted in 'blue & white' Voroscope manufactured by Australian Biomedical.



1993 – 2004 : SECOND COMMERCIAL AGREEMENT

10 year agreement reached with Welch-Allyn® resulted in the Lumiview™.



2004 – 2006 : VOROTEK TAKES THE INITIATIVE

Welch-Allyn® and Vorotek agree that redevelopment is needed – in particular, to incorporate Lithium Ion battery technology & white LED lighting. Vorotek proceeds with redevelopment and starts an intensive R & D phase, builds LED prototypes, and invests in production engineering.



2007 : VOROTEK BEGINS VOLUME PRODUCTION

In 2007 Vorotek moves to new premises and volume production begins. Now over 95% of Australian ENTs use the Vorotek O Scope with LED Illumination. The Vorotek O Scope is the successor to the Voroscope and Lumiview.



2018 : VOROTEK DOUBLES PRODUCTION CAPACITY

Vorotek builds a new office & production facility in Australia to meet increasing global demand for the Vorotek O Scope



O SCOPE

Head Worn Microscope

12MM CONVERGED BINOCULAR OPTICS & FULLY INTEGRATED & LED ILLUMINATION

VOROTEK
experience. knowledge. performance

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Made in Australia

VOROTEK
experience. knowledge. performance



SpecFrame Model



Flip-up Dual Functionality



Headband Model



Teaching Mirror



Cottonwool Carrier, 90 Degree Hook and Wax Ring

Speculums



The Vorotek O Scope is ideal for all ENT applications and is now used by approximately 95% of Australian ENTs. In the same way a microscope works, the Vorotek O Scope's optical pathway converges the eyes to just 12mm apart. This allows both eyes to reach the bottom of narrow cavities and deliver excellent depth perception. The result is consistently improved diagnosis and more effective instrumentation. The unique 12mm Converged Binocular Optical System is what differentiates the O Scope from Loupes, which are unable to achieve depth perception in narrow cavities (see figure 2).

Converged Binocular Optics & Magnification

The Vorotek O Scope provides 12mm converged binocular vision combined with 2 or 3 dioptre magnification. This is essential to achieve binocular vision and depth perception in narrow cavities. e.g. Ear and nose. Converged optical pathways are also a feature of operating Microscopes (see figure 1).

LED Illumination (Coaxial)

The location of the brilliant LED illumination (approx 55,000 lux) is as close to the visual pathway as possible, allowing shadow free illumination of the field of view.

Fully Integrated Design

The fully integrated design ensures that the converged binoculars and illumination stay precisely aligned.

Dual Function

The Integrated Converged Binoculars can easily be rotated in and out of use. Upward rotation of the Converged Binoculars allows uninterrupted vision, with or without headlight illumination.



Figure 1. 12mm Converged Binocular Optical pathway.

Portable Power Supply

The Battery Pack (Lithium ion), either belt or pocket worn, provides 10 hours of 'on time'.

Design Features

Head worn, light weight and hands free emphasising simplicity, durability and comfort. O Scope Interpupillary Distance (IPD) can be customised to the individual or supplied with fully adjustable IPD tabs.

O Scope Models

SpecFrame model Ideal for individual users. Prescription lenses can be fitted.

HeadBand model Ideal for shared use. Can be used over prescription glasses.

Designed For

ENT Surgeons, Audiologists, Nurses/Clinicians involved with ear wax removal.

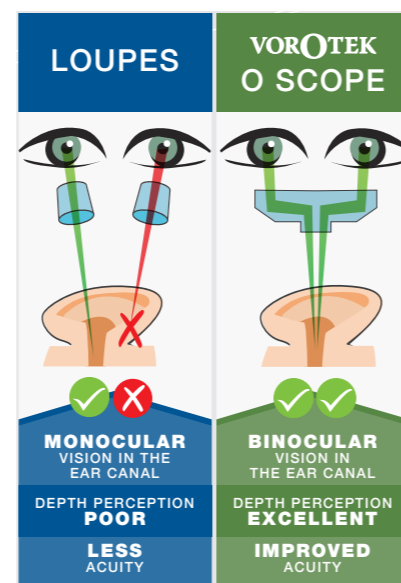


Figure 2. Depth Perception in the Ear Canal

O SCOPE Accessories

- **Teaching Mirror**
Allows visualisation by others. (Refer figure above).
- **Pneumatic Oscope**
6 dioptre Lens for increased magnification. A great deal of extra detail (including ear drum mobility) can be seen when a Pneumatic Oscope is used with the O Scope.
- **Speculums**
Autoclavable plastic. (Five sizes available: XS, S, M, L, XL). Designed to match the Pneumatic Oscope.
- **Speculum Dispenser**
For bulk orders and use in busy clinics.
- **Wax Rings**
Operating room quality. (Sizes available: 2.0mm, 2.5mm, 3.0 mm, 3.5mm, 4.0mm, 4.5mm)
- **90 Degree Hooks**
For ear and nose use – operating room quality. (Sizes available: Small and Large)
- **Cotton Wool Carriers**
Operating room quality.



10 Hr Battery Pack and Charger.

O SCOPE Kit

The performance & convenience of Vorotek Scopes & Instruments combined in an easy to carry case

Includes:

- Vorotek O Scope (SpecFrame or HeadBand)
- 10 Hr Lithium Ion Battery
- Charger
- Pneumatic Oscope (ENT Kit only)
- Wax Rings
- 90 Degree Hook
- Speculum set
- Protective Case

Designed for ENT Surgeons, Audiologists and Clinic Nurses. Includes all equipment required for wax management and otoscopy.



O Scope Kit.

Designed & Manufactured in Australia

Designed and Developed by Dr John Vorrath (ENT) the developer of the original **VOROSCOPE** and **LUMIVIEW**.

VOROTek

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