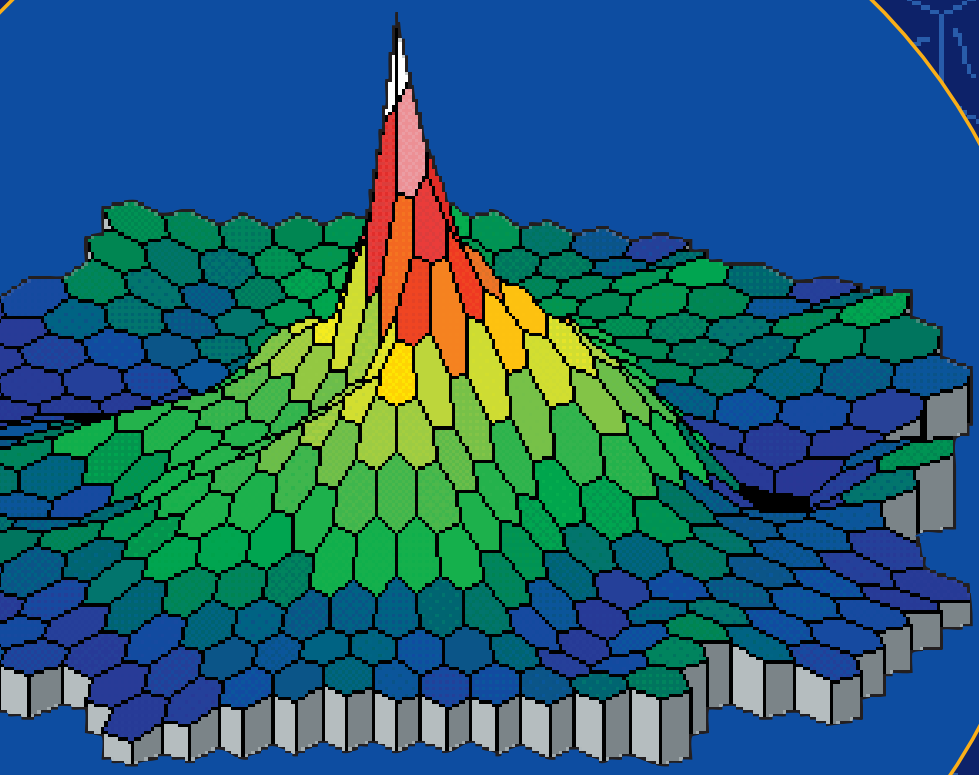
RETI*scan*®

multifocal ERG/VER

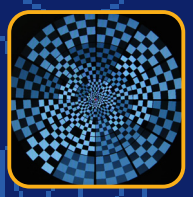
Made in Germany

The electrophysiological test unit

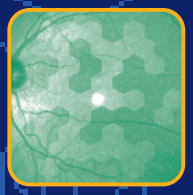


first order and second order ERG/VER • m-sequences ISCEV guidelines

mf ERG



mf VEP



HRA connection possible for fixation control

upgradeable to standard VER, ERG, EOG, Pattern ERG

ROLAND INSTRUMENTS

Electrophysiological diagnostic systems

RETI*scan*®

multifocal ERG/VER

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DESCRIPTION

Electrophysiological test unit RETI*scan*®, multifocal photopic ERG from 19, 37, 61, 103, to 241 points of the retina and multifocal VER to 60 points of the cortex

Utilizing the unique short corrected m-sequence (patend pending) to generate a stimulus (flash, pattern and color) via a high class specially selected 21 customs monitor (60 Hz frame rate) on 30 angle visual field, the state of the art **RETI***scan® offers an objective patient test to quantify the retinal response.*

The stimulated areas respond in accordance with the special algorithm and deliver an individual reproducible ERG signal for each segment (1 segment is 1 hexagon).
Each cycle comprises a complete short length m-sequence and takes as little as 30 seconds for up to 61 stimulus segments and less than one minute for 103 or 241 segments. The final raw data result is derived from a free selectable number of cycles by averaging. Artefacts are detected within a selectable range and are discarded automatically. A pre set testrun sequence may be interrupted for any reason, continued or the current cycle discarded.

Additionally the **RETI***scan® gives the opportunity to link it to different Rodenstock Scanning Laser Ophthalmoscope (SLO), red stimulus or Heidelberg Retina Angiograph (HRA), blue and green stimulus to give simultaniously a topographic and functionally electrophysiological result of the visually controlled retinal area. Markers for a and b wave from the ERG graph are set automatically but may be placed manually for each ERG to check the recorded amplitude and latency.*
The **RETI***scan® incorporat a high sensitive two channel amplifier with an outstanding signal to noise ratio.*

The instrument is useful for monitoring the disease process of the local retina or cortex. It is now also possible to measure the mfVER on the visual cortex.

TECHNICAL DATA

CRT stimulation unit
- *high quality brand industrial PC-System*
- *21" color-monitor, luminance 120 cd/m², high contrast 98 %*
- *frame frequency > 60/75 Hz*
- *resolution SVGA*
- *stimulation-software*

operating unit
- *ATX Pentium IV/2,1 GHz/60GB HDD/256 RAM/3,5" FDD*
- *CDRW for database backup*
- *monitor 15" TFT*
- *analog-digital-converter 12Bit*
- *printer HP desk jet*
- *keyboard, mouse*
- *Windows XP ®*
- *RETI*scan® *mfVER and mfERG software*

biosignal-amplifier 2-8 channel
- *type BF check-voltage 1,5 kV*
- *digital controlled amplifier*
- *input impedance 2 x 100 Mohm per input*
- *noise <4µV (peak-peak max)*
- *common mode rejection <110 dB*
- *high frequency filter 0,02 Hz to 1 kHz 12 dB/Okt.*
- *low frequency 20 Hz to 10 kHz 12 dB/Okt. gain approx. 600.000*
- *electrode impedance test*

OPTIONS

- *it's possible to use as option a special tube (IR light and camera) to control the eye movement*
- *All in one upgradeable with* **RETI***port® soft- and hardware (ERG, VER, EOG, Pattern ERG, ISCEV standard)*
- *special options for animals*

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ROLAND INSTRUMENTS
Electrophysiological diagnostic systems

Stasche & Finger GmbH

Dipl. Ing. M. Stasche • Willy-Borngässer-Str. 11
D - 65197 Wiesbaden, Germany
Tel +49 (0) 6 11 - 9 46 72 74 • Fax +49 (0) 6 11 - 9 46 73 29

Dipl. Ing. J. Finger • Friedrich-Franz-Str. 19
D- 14770 Brandenburg, Germany
Tel / Fax +49 (0) 33 81 - 38 26 21

www.roland-consult.de • e-mail: info@roland-consult.de

Distributor: