The RETI-port/scan 21

Features:
- Deferred with standard ISCEV programs for ERG, PVEP, PERG, mfVEP, mfERG
- Additional programs: Visual Acuity, Discus Screening, ISCEV ERG, Prismatic regenerative mfPVEP and mfPERG in the same time, mfVEP
- Ability to create individual pupil values
- Automated impediment test on each start
- Possibility to arrange the pupils during the examination
- Automatic artifact elimination in all programs including mfPVEP and mfPERG
- ERG fixation cameras during PVEP, PERG and mfPVEP/mfPERG
- Possible to measure the pupil size automatically
- Optimized short screening tests for children
- Digital Filter for signal processing
- Offline averaging of single response
- Show original curves in the analyzer and printout mode
- Delivery with normal values, and is easy to insert own normal values
- Customized print outs
- Branch data to RETI3
- Windowing the ICA, Reader Stations
- Signal via Team Viewer
- Operating unit:
  - AdjustmentSoftware: State of the art
  - Software: Windows 10, Advanced Team Viewer
  - Technical Features improve in line with technical progress

Biological amplifier:
- Z 2 or Rechnet
- Impedance 2 x 100 kΩ
- Gain Mode: variable +/-110 dB
- Gain step to 100 kΩ
- Sensitivity: 2.1A to 3 kV/V
- High pass: 50 Hz to 1 kHz
- Low pass: 0.02 Hz to 1 kHz

Monitor Stimulator unit:
- High-Field Brand Industrial FC-System
- 10” colour monitor: luminance 240 cd/m² high contrast
- Chargeboards, barn finder i.s. half or quarter
- Posterior invert / appearance / disappearance
- Software controlled contrast setting (0 % - 99 %)
- Saturation and/or different color settings
- Variable fixation points, special pictures for children

Ganzfeld Q450 SC
- Ganzfeld consists of the 400 mm full field globe, with the central fixation LED and two DSG Feature LEDs. The heights of these LEDs are adjustable, whereas the central 400 mm area is integrated.
- There are two models Q450 C and Q450 SC
- Model Q450 C white, red, blue
- Model Q450 SC white, blue, red
- Flash Luminance white: standard flash 3.0 cd/m²
- Blue: (455nm) range -45 dB to 0 dB in steps of 5 dB
- Green: (525nm) range -45 dB to 0 dB in steps of 5 dB
- amber: (580nm) range -45 dB to 0 dB in steps of 5 dB
- red: (630nm) range -45 dB to 0 dB in steps of 5 dB
- Stimulus ON-OFF:
  - all colours, 1 ms to 1000 ms adjustable in steps of 1 ms

Background luminance adjustable 0.01-0.05 cd/m²
- white: 1000 cd/m²
- blue (470nm) range -40 dB to 0 dB in steps of 5 dB
- green (525nm) range -40 dB to 0 dB in steps of 5 dB
- amber (580nm) range -40 dB to 0 dB in steps of 5 dB

Stimulus ON-OFF:
- red (630nm) range -40 dB to 0 dB in steps of 5 dB
- blue (470nm) range -40 dB to 0 dB in steps of 5 dB

Standard ISCEV:
- Dark-adapted 3.0 ERG and PVEP
- Light-adapted 3.0 ERG
- Dark-adapted 0.01 ERG
- Dark-adapted 10.0 ERG
- Stimulus ON-OFF response

Technical progress:
- Technical features improve in line with technical progress

Options:
- Examination settings: Number of cycles, cycle time, resolution pupil size 0.1 mm
- Resolution time 33 ms (30 images per second)
- Full field Ganzfeld stimulation
- Option: Pupilometer
- Stimulation frequency: 1 Hz - 150 Hz
- Contrast: 0,1% -100 % in steps of 0,1 %
- Phase shift: 0°- 359° in steps of 1°
- Triangular wave, ramp up or ramp down
- Adjustable in 1,0 cd/m² steps
- Background Luminance: all colours: 1 ms to 1000 ms adjustable in steps of 1 ms

Stimulus ON-OFF:
- red interval -45 dB to 0 dB in steps of 5 dB
- blue interval -45 dB to 0 dB in steps of 5 dB

- Light-adapted 3.0 flicker
- Flash Luminance white: standard flash 3.0 cd/m²
- Flash Luminance blue: standard flash 3.0 cd/m²

- Dark-adapted 10.0 PERG
- Light-adapted 3.0 PERG

- Post-receptoral a-wave: Cones with ON-off pathways
- Post-receptoral a-wave: ON-off bipolar cells

- Off pathways b-wave: ON-off bipolar cells
- On-off bipolar cells (on pathways)
- Dark-adapted 3.0 PERG
- Light-adapted 3.0 PERG

- Retinal layers reflecting middle
- On pathways
- Oscillatory potentials

- On pathways
- Dark-adapted 0.01 PERG
- Light-adapted 3.0 flicker
- Flash Luminance white: standard flash 3.0 cd/m²
- Flash Luminance blue: standard flash 3.0 cd/m²

- Standard ISCEV programs for ERG, PVEP, PERG, mfVEP, mfERG

- All in one

ERG, PVEP, EOG, mfERG, mfVEP

Roland Consult
Electrophysiology and Imaging

Made in Germany
Summary of Indications for Specific Tests

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>EOG</th>
<th>mf ERG</th>
<th>Bright Flash ERG</th>
<th>Pattern ERG</th>
<th>Flash VEP</th>
<th>Pattern VEP</th>
<th>Special VEP</th>
<th>mf VEP</th>
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<tbody>
<tr>
<td>Inherited retinal dystrophies</td>
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<td>Opacified media or trauma</td>
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<td>Retrobulbar neuritis</td>
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<td>Glaucoma</td>
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The Roland RETI port/scan 21 unit includes the stimulator units and the data recording and analyzing system. The biosignal amplifier includes a preamplifier near the patient data and the results are stored in a database. The biosignal and averaged curves from all channels can be displayed on the monitor. In the analyze mode the system automatically sets all markers and calculates all the defined parameters.

Electrophysiological Test Unit is usable for Pattern ERG, Pattern VEP, mf ERG stimulation and mf VEP stimulation. All ISCEV standards and guidelines are included.

The Roland RETI port/scan 21 unit includes the stimulator units and the data recording and analyzing system. The biosignal amplifier includes a preamplifier near the patient data and the results are stored in a database. The biosignal and averaged curves from all channels can be displayed on the monitor. In the analyze mode the system automatically sets all markers and calculates all the defined parameters.

RETI-port/scan 21 product overview

Visual acuity

Visual field

Analyze regression curve

Analyse curves

EOG result

EOG printout normal result

Nystagmography stimulus

Nystagmography remaunment left

Nystagmography results

Pupilometry

Pupilometry result

MINiganzfeld E18 flash ERG/VEP

Sctopic ERG

Photopic ERG

Steady state photopic 30 Hz ERG

Transient VEP

EOG printout normal result

Nystagmography measurement left

Nystagmography results

BABYflash E130 flash ERG/VEP

BABYflash E130 flash ERG/VEP

Transit VEP

Suspected intracranial lesion

GBGfeild G450 EOG stimulus

Ganzfeld G450 EOG stimulus

1

Ganzfeld G450 EOG stimulus

Ganzfeld G450 EOG stimulus

2

Ganzfeld G450 EOG stimulus

Ganzfeld G450 EOG stimulus

3

Ganzfeld G450 EOG stimulus

Ganzfeld G450 EOG stimulus

4