

# RETI-port/scan21

ALL IN ONE

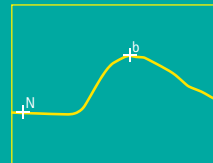
Made in Germany

new generation include wave let!

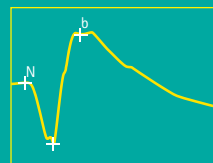
topography and function,

ERG, VER, EOG diagnostic for  
macula, retina,  
glaucoma  
and diabetic

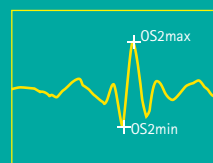
one step forward!



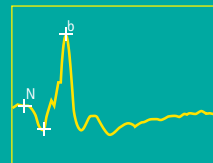
Rod ERG



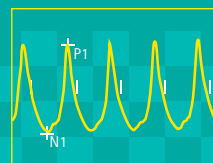
Standard combined ERG



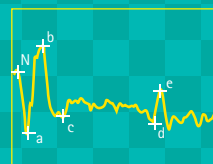
Oscillatory potential



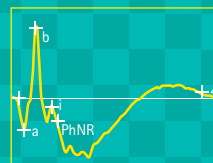
Single-flash cone ERG



30 Hz Flicker ERG



ON-OFF response



PhNR response

Certification:  
Quality Management System  
EN ISO 9001:2000  
EN ISO 13485:2003  
TÜV Rheinland CE 0197



**ROLAND  
CONSULT**

Electrophysiological diagnostic systems

# RETI-port/scan21 product overview

Electrophysiological Test Unit is usable for Pattern VEP + Pattern ERG + Flash VEP, for scotopic and photopic ERG, EOG fast and slow, mf ERG Flash stimulation and mf VEP Pattern stimulation. All ISCEV standards and guidelines are included.

The Roland RETI-port/scan21S unit consists of the stimulator unit and analyzes computer system. The bio signal amplifier includes

a preamplifier near the patient. All patient data and the results are storage in the database. The bio signal and averaged curves from all channels can display on the monitor. In the analyze mode the system set all markers and computing all defined parameters automatically.

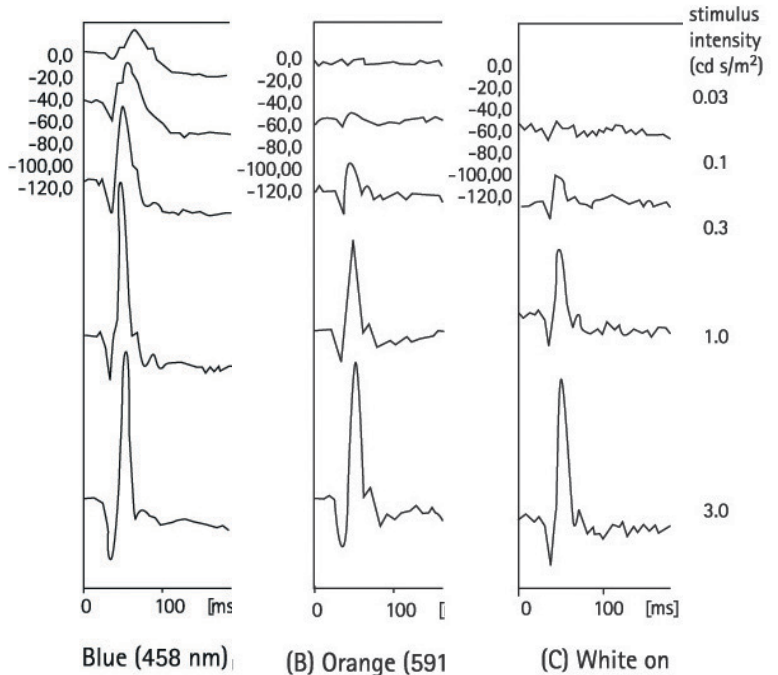
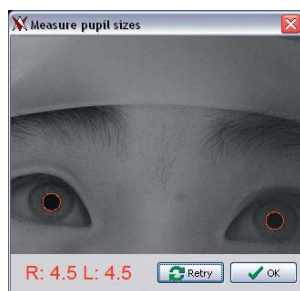
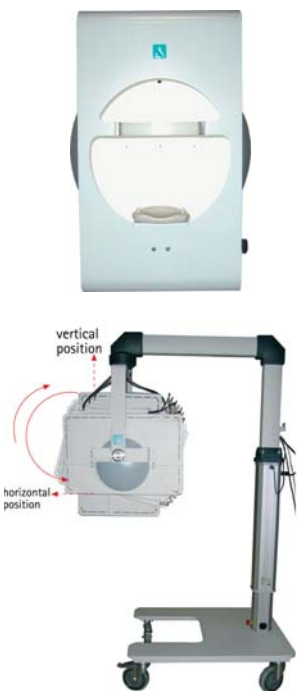
The Fast Fourier Transformation, OFF-Line Averaging, PreTrigger function are one of the advanced features of the system.



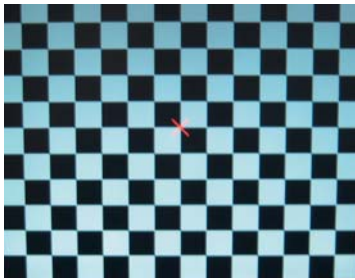
color-Ganzfeld Q450SC flash ERG

pupillometry

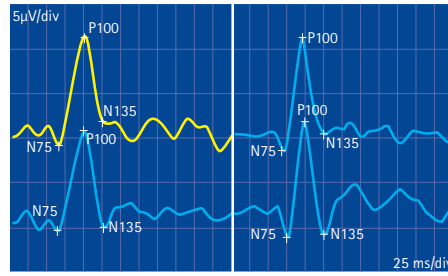
printout-result



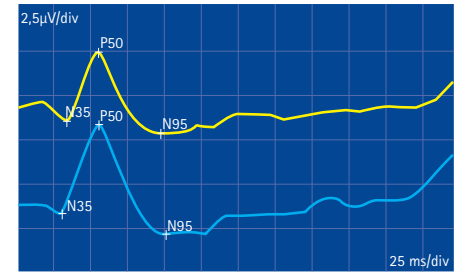
pattern stimulus ERG/VEP



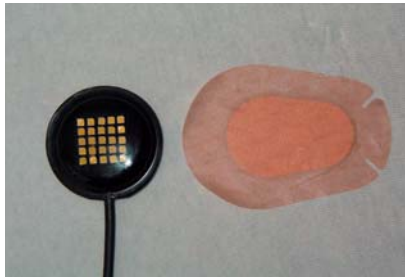
pattern VEP



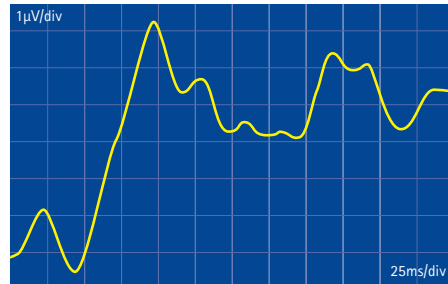
pattern ERG



LEDpat for IOM intraoperative monitoring



transient flash VEP



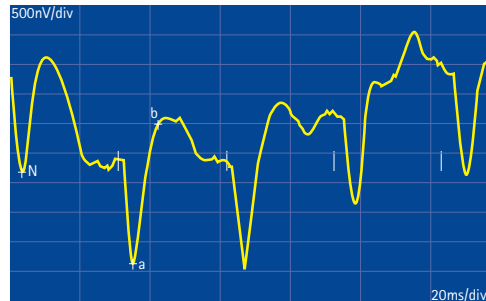
application



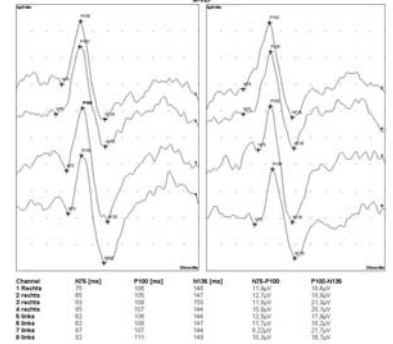
pattern hand held



steady state VEP



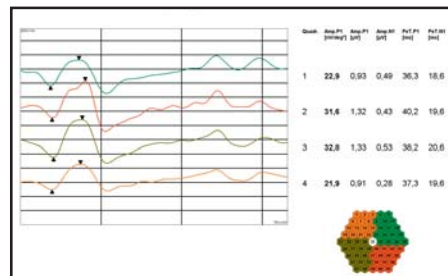
printout transient VEP



mfERG/LED stimulator 61 hexagon



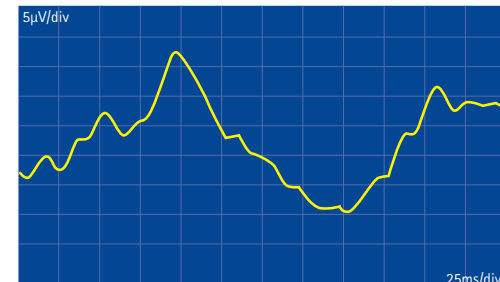
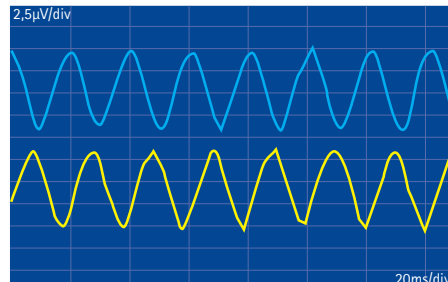
quadrant on/off mfERG with LED stimulator



baby-flash ERG/VEP



steady state photopic 30 HzERG (baby) transient VEP (baby)

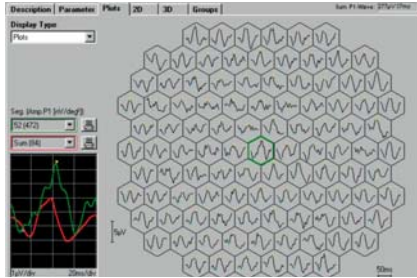




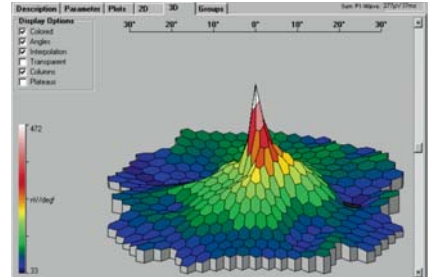
multifocal ERG



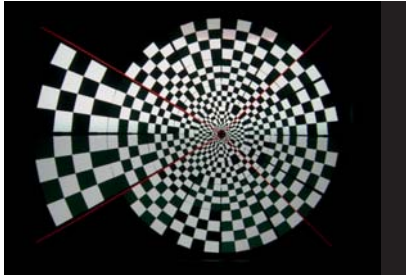
normal retina-plots



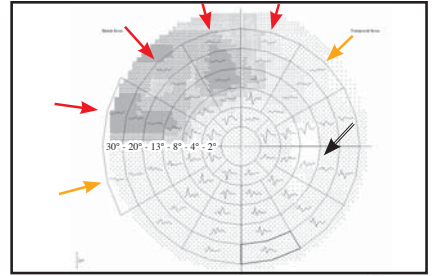
retina 3D plot normal eye



visualfield mfVEP



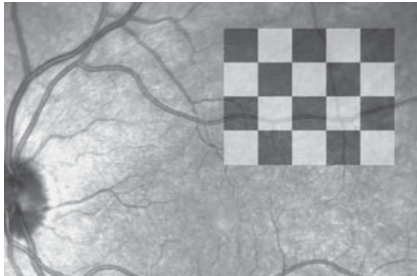
mf VEP plots Hz (glaucoma detection) overlapping with visualfield



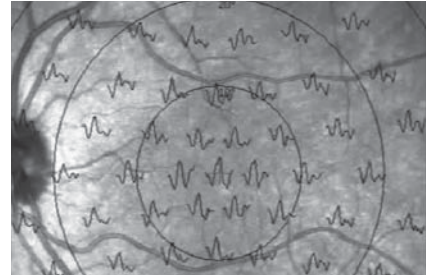
HRA II connected with RETI-scan



fundus controlled focal VEP



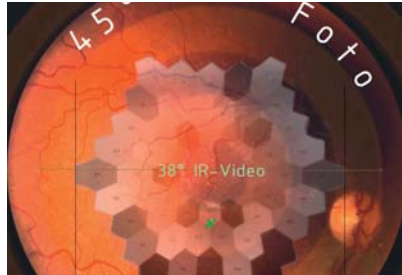
overlapped ERG result with retina view



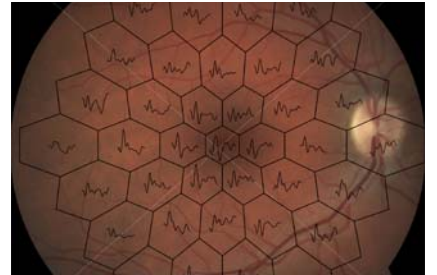
VISUCAM Zeiss color picture



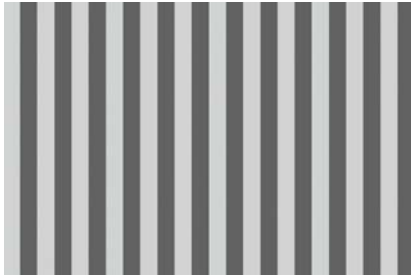
color retina picture with stimulus



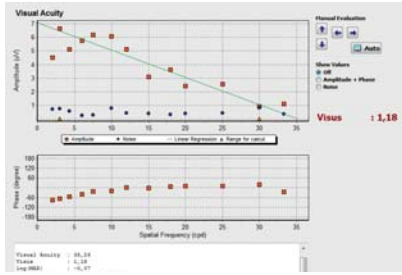
overlapping with ERG result



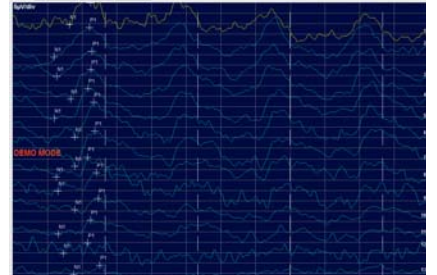
visual acuity



analyse regression cutout



analyse curves



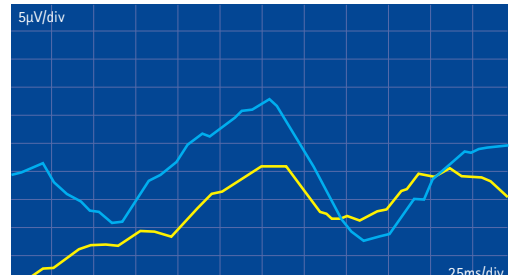
child with flash goggle



miniganzfeld for ERG/VEP



pathological VEP



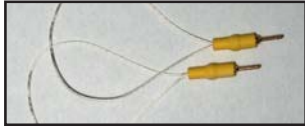
# ERG-Electrodes

## ERG jet Electrodes Disposable



Pack of 50, DIN connector 1,5 mm  
Pack of 50, 2 mm connector

## HK Loop Electrode



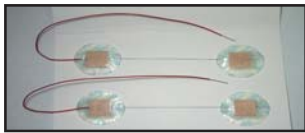
Pack of 2, Pack of 10

## DTL Electrode ERG draht



254 cm

## DTL Electrode RC



Set of 1 = 2 parts  
Set of 20 = 40 parts

## Connection cable for DTL Electrode



1 Set of connection cables,  
DIN connector 1,5 mm and 2 mm

## Henkes Electrodes



Lovac ERG lens of Henkes  
with 100 dioptr frontlens,  
DIN connector 1,5 mm and 2 mm



Standard, DIN connector 1,5 mm  
and 2 mm

All lenses are available in clear or black material small or large. Small type: 17 mm, large type: 20 mm. Please indicate large or small, clear or black.

## Gold Foil Electrode



DIN connector 1,5 mm and 2mm

## HK Loop Connection Cables Set



1 set of 2 cable, DIN connector 1,5 mm  
1 set of 10 cable, 2 mm connector

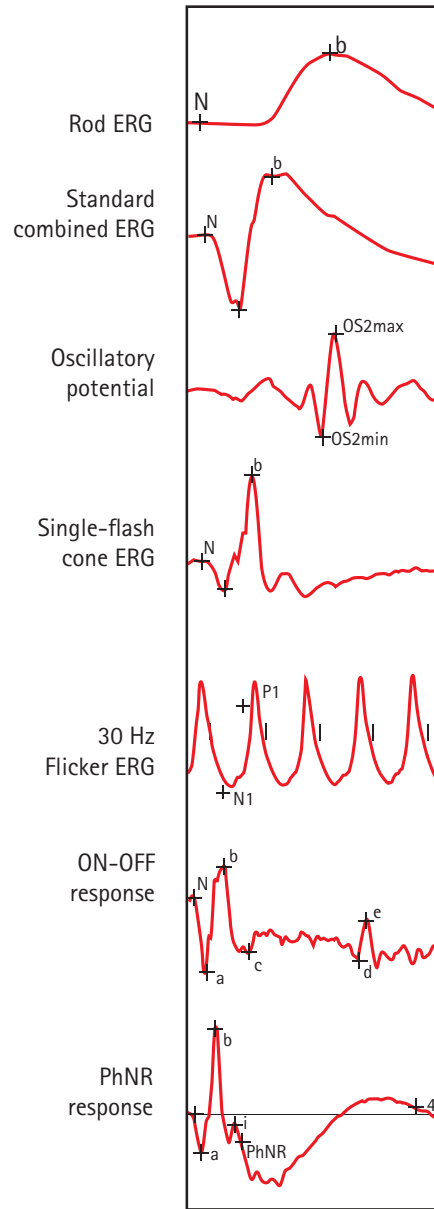
1 set of 2 Electrodes and 2 cable,  
DIN connector 1,5 mm or 2mm

## Kooyman/Damhof Electrodes



17 mm diameter, DIN connector  
1,5 mm or 2 mm connector

20 mm diameter,  
DIN connector 1,5 mm or  
2 mm connector



Distributor:



# ROLAND CONSULT

*Electrophysiological diagnostic systems*

ROLAND CONSULT

Office Brandenburg

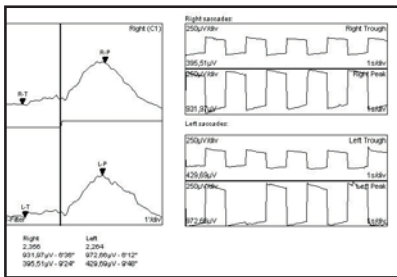
Friedrich-Franz-Str.19

D-14770 Brandenburg/Germany

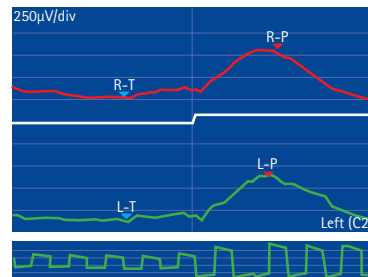
Phone: +49 (0) 33 81 - 38 26 20, Fax: -49 (0) 33 81 - 38 26 21

[www.roland-consult.de](http://www.roland-consult.de), e-mail: [info@roland-consult.de](mailto:info@roland-consult.de)

printout EOG normal eye



monitor screen



automatic ganzfeld and monitoring calibration GOSSEN MAVO-MONITOR via USB



## The RETI-port/scan21 features

- Delivered with standard ISCEV programs
- User can make different own programs
- Bio signal and average result can displayed on the screen
- Automatic artifact rejection
- All amplifier data are software-controlled
- Automated impedance test can be started any time.
- Easy graphical user interface with multiple independent windows
- Offline averaging of single response
- Multifocal analyze each signal with N1, P1 marker, 2D, 3D groups and user groups
- Many special mathematical features to calculate many different parameters
- FFT-Fast Fourier Transformation to analyze steady state results
- DSP-Digital signal Processing Filter
- Database with backup on DVDRW
- All data can export to EXCEL for statistic analyze
- Allow to analyze in local area network
- Compact interface technology in standard computers
- Full field globe 400mm
- All function full computer controlled, USB connection
- Flash and Backlight with white LED,
- Intensity Standard flash 3,0 cds/m<sup>2</sup>; interval from -40dB to +5dB in steps of 5
- Background 25 cd/m<sup>2</sup>, 100cd/m<sup>2</sup>, 450cd/m<sup>2</sup>
- ON-OFF Response white Flash Time from 100ms-500ms in steps of 50ms
- Flash intensity from -45 dB to 0dB in steps of 5 dB
- Background 10 cd/m<sup>2</sup>, 15 cd/m<sup>2</sup>, 20 cd/m<sup>2</sup>, 25 cd/m<sup>2</sup>, 50 cd/m<sup>2</sup>
- Option Xenon: Ganzfeld Q450 SCX
- Xenon tube for white High Flash (option)
- Intensity 10cds/m<sup>2</sup>, 30cds/m<sup>2</sup>, 100cds/m<sup>2</sup>
- Integrated video camera to watch the patient

### Operating unit:

- Intel Pentium Core-2-Duo CPU, 160GB HDD,1GB RAM
- DVDRW for database backup
- 19" TFT monitor
- Analog-digital-converter KPCI 12bit
- Color Ink-Jet printer
- Keyboard, mouse
- Windows XP Professional
- Bio signal amplifier 4 channel
- Type BF check-voltage 1,5 kV
- digital controlled amplifier
- Impedance 2 x 100 MOhm
- Noise <4µV(SS)
- Common mode reaction <110 dB
- Sensitivity 10µV/Div to 2 mV/Div
- High pass 0,02 Hz to 1 kHz
- Low pass 20 Hz to 10 kHz

### Monitor Stimulator unit:

- High Quality Brand industrial PC-System 21" color-monitor, luminance 120 cd/m<sup>2</sup> ; high contrast
- Pattern or strip position: full, half or quarter
- Computer calculated the check size by input the angel in deg and minutes
- Contrast controlled over the computer from 3% - 99%
- Pattern reversal, appearance/disappearance
- For work with children special fixation pictures during the test

### Ganzfeld Q450SC:

- All color Ganzfeld with white, royal blue, blue, green, amber and red LED's for advanced flash and backlight
- ISCEV Standard