MODULAR ELECTROPHYSIOLOGY

EP-1000 PRO / MULTIFOCAL

- *High Intensity LED Colour Flash and Background Illumination*
- *Corresponds to ISCEV Recommendation*
- *VEP, ERG, PERG, EOG, Sweep VEP, Multi-Channel VEP, S-Cone Analysis*
- *Multifocal (mf) ERG & VEP, Short M-Sequences*
- *Program Editor for Individual Examinations*
- *Mf-Analysis Function: Traces, all Values, 2D, 3D, Periphery & Center Ring Analysis, Segment/Groups, Tables*

HS Optikmaschinen

THE EP-1000 SYSTEM IS THE ESSENCE OF 15 YEARS EXPERIENCE OF DEVELOPING ELECTROPHYSIOLOGY INSTRUMENTS

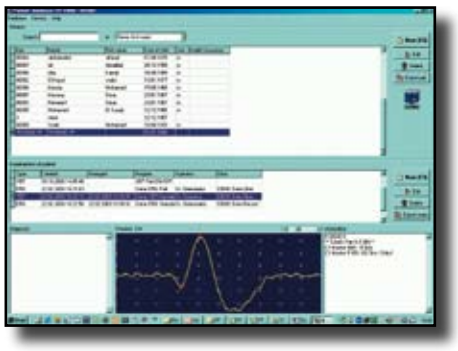
You can choose between the computerised professional system and the high-end multifocal device. Both systems confirm to ISCEV and are multilingual.

Due to our analog-digital converter box you receive pure patient responses. Tomey set a new standard with a sampling rate of 16 bits. This means more data, 32 times higher resolution and exact measurements.

Pro

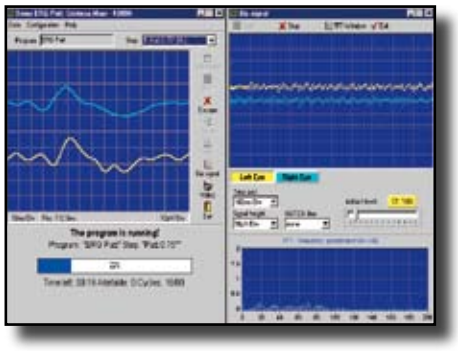
The EP-1000 Pro workstation provides full-computerised control of electrophysiology testing and data management

Up to 6 channels are possible for multi-channel VEP. With the EP-1000 Pro you are able to perform all standard tests like ERG, VEP and EOG, PERG and SWEEP VEP. Due to the LED-based flash technology you have unlimited number of flash stimulation colours on an also unlimited mix of background illumination colours. This allows you to separate S-cones from ML-cones and you are prepared for future test routines.



The initial screen simultaneously displays all information related to patients: personal data, stored exams, thumbnail pictures of curves with latency and amplitude and personal diagnostic information.
4-KV network isolation of the optional network kit provides full network capability of the EP-1000 Pro and multifocal workstation, e. g. to compare and discuss examinations with fellow experts.

Full computerised control of electrophysiology testing and data management

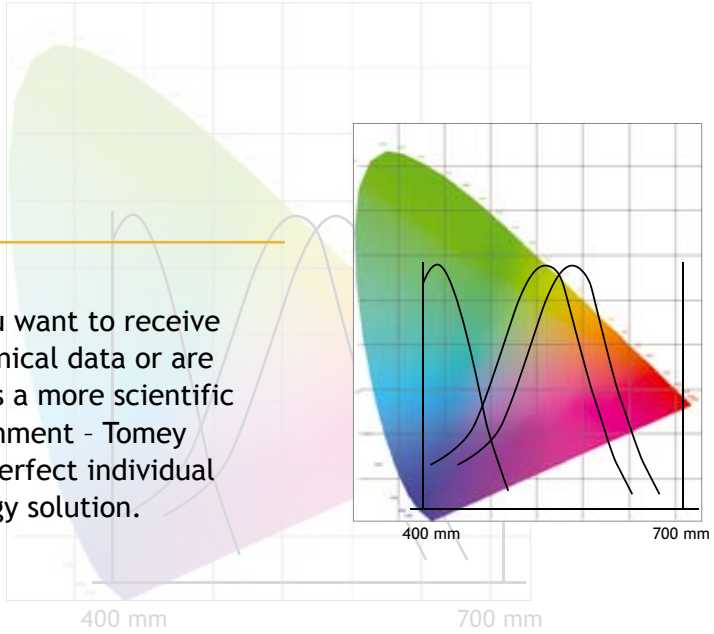


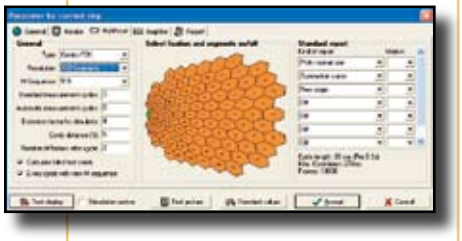
During examination, different windows are shown:

- Biosignal
- Averaged trace
- Fourier analysis
- Live video of patient's fixation

In addition, the impedance can be monitored before the actual exam starts. The curves can be compared to each other.

No matter if you want to receive standardised clinical data or are heading towards a more scientific oriented environment – Tomey offers you the perfect individual electrophysiology solution.





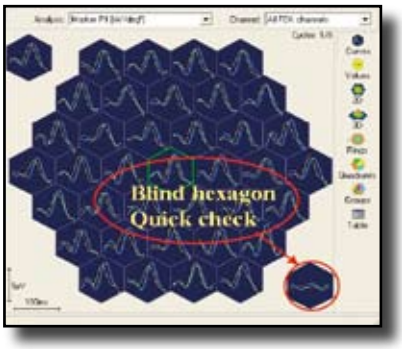
Full access to all settings
e. g. position of the fixation target

Whenever you need detailed information, the Multifocal will be your first choice

Multifocal

The EP-1000 Multifocal (mf) allows you to do all mf standard tests:

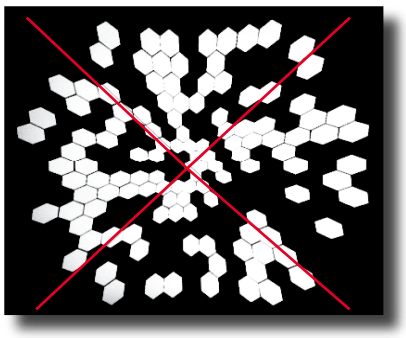
- mfERG flash (FOK, SOK, flicker)
- mfERG pattern (9 pattern for stimulation)
- mfVEP (dartboard stimulation) for analysing local retina functions



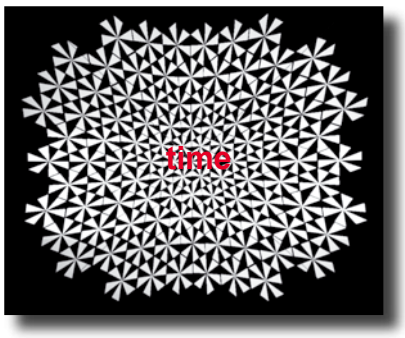
The EP-1000 Multifocal is based on short M-sequences. This allows you to re-check all conditions of the exam, such as proper fit of electrodes or acceptable responses within a very short time (8 sec.).

With the "fixation control hexagon" the results can be controlled after every cycle. You don't have to wait until the end of the whole examination for controlling the fixation of the patient.

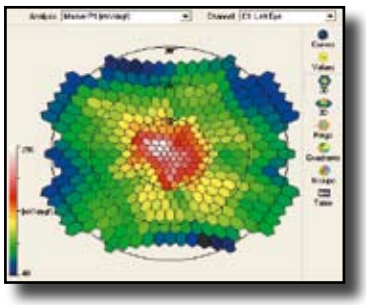
Different fixation targets are available: the cross-target covers the whole stimulation monitor to make exams possible for macula dystrophy patients. The changing animal target is for children and the scrolling text target for all other patients.



Cross-target for macula dystrophy patients



Mf pattern ERG with scrolling text target

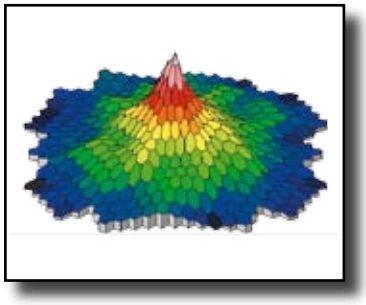


Analyses can be displayed in curves, values, 2D, 3D, rings, quadrants, groups and table.

Accessories and Optionals

TE-1000 Electrode

2 in 1 – it combines the large skin electrode with the DTL silver electrode with fascinating features. No need of any tape for fixation. No local anaesthetic is needed thanks to the very thin, economical and flexible DTL silver electrode. Even sensitive patients feel comfortable during the examination. Approximately 1000 exams are possible before the spool has to be replaced. For PERG the comfortable TE-1000 cornea electrode is recommended since the visus of the patient is not affected.



EP-1000
ELECTROPHYSIOLOGY

EP-1000

Accessories and Optionals

Goggle Stimulator Mini Dome

For paediatrics use, uncooperative or bedridden patients. The illumination of the mini dome confirms the ISCEV recommendations.

External Flash Lamp Stimulator

Up to 330 cds/m² for patients even with eyes closed (ISCEV standard flash is 3 cds/m²). Inclusive blue, red, -2.5 Ulog filters.

2-Channel-A/D Converter Box

Up to 6 channels for multi-channel VEP - extremely robust, durable and independet from environmental conditions due to latest amplifier technology.

SPECIFICATIONS PRO

Examinations

Pro	ERG / PERG / ERG 30 HZ VEP / FLASH VEP / Sweep VEP / EOG / S-Cone / ML-Cone

Ganzfeld Dome

Dome / Light Calibration	Automated
Flash / Illumination	RGB-LED + White LED
Flash Intensity	0.1 to 30 cds / m²
Flash Frequency / Time	0.1 to 90 Hz / 11 ms to 60 s
Light Intensity	0 to 600 cds / m²
	colour RGB
Internal Pattern	
Monitor	Colour TFT 1024 x 768
Contrast Intensity	1 :500 / max. 300 cds / m²
Connector	External Stimulator: CRT Monitor / Flash / Goggle / Video / External Flash / Optional Channel: 3/4 & 5/6

Dimensions & Electric Requirements

Dimensions WDH	390 x 480 x 540 mm
Weight	Approx. 12.0 kg
Power Supply	AC 100 to 240 V
Frequency	50/60 Hz
Power Consumption	Less than 210 VA

Bio-Signal Converter Box

Channel / Digitizing	2 Channel / 16 bit
Electrode Socket	1.5 mm / Din 42802-1
Internal Impedance	> 150 M. @ 10 Hz
Internal Noise	< 2.0 µ @ 1 ... 70 Hz
Input DC Voltage	± 250 mV (max.)
Measuring Maximum	< 0.05 µA

Dimensions & Electric Requirements

Dimensions WDH	158 x 95 x 33 mm
Weight	Approx. 0.35 kg

Isolation Transformer

Type	MTT 1000

Dimensions & Electric Requirements

Dimensions WDH	141 x 190 x 326 mm
Weight	Approx. 14.6 kg
Maximum Power	1000 VA
Frequency	50/60 Hz
Input	115 V / 240 V
Output	240 V on 9 plugs

TE-1000 Electrode

Type	DTL Silver Electrode
Length	80 m
Exams Each Eye	Approx. 1000 Exams

SPECIFICATIONS MULTIFOCAL

Additional Specifications for Multifocal

Examinations

Multifocal	mfERG (FOK / SOK) / mfPERG / mfVEP

Stimulations

M-Sequences	Short (127 to 8191)
Hexagon	Screening (1 to 19)
	Standard (37 to 61)
	High Resolution (103 to 241)
mfERG Screen	Hexagon (1 to 241)
mfVEP Screen	Dartboard (seq. 60)
Distortion	1 to 80 (standard 4)
Hex-Distance	0 to 50 (standard 5)

Diagnostic Tools

Analysis Displays	Curves (for each hexagon possible), Values (for each hexagon possible), 2D, 3D, Quadrants, Table, Rings (for each ring possible), Groups (8 programmable groups)
Values / Hexagon	P50: (nV/deg²), (ms), N95: (µV), (nV/deg²), (ms), Scalar Product: (µV), (µV nV/deg²) Comp Area: (deg²)

Multifocal Monitor

Display	21"
Type	ARASC Dual Focus Gun
Display Mask	0.25 mm dot Pitch
Luminance	300 cd/m² High Contrast
Max. Resolution	1840 x 1440 / 73 Hz
Horizontal Frequency	30 to 110 KHz
Vertical Frequency	50 to 180 KHz

Dimensions & Electric Requirements

Dimensions WDH	493 x 487 x 485 mm
Weight	Approx. 24.0 kg
Power Supply	AC 100 to 240 V
Frequency	50/60 Hz
Power Consumption	Less than 170 VA

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