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ACTEON

## INNOVATIVE IMAGING

Digital medical imaging has significantly contributed to the improvement of diagnoses and the widespread use of less invasive procedures. Over the past 15 years, ACTEON® has committed to channeling its efforts into contributing to improve the accuracy of surgical procedures, and to reduce the radiation doses emitted. Through the development of ever more sophisticated yet intuitive 2.0 software packages, our R&D teams are able to innovate on a daily basis. In our permanent pursuit of excellence, we are proud today to present our latest innovations in this brochure.

## DOCKING STATIONS



### Dock M-Video

- Storage of one or four images
- Power supply: 115 V~60 Hz and 230 V ~ 50 Hz
- Power consumption: 9 VA
- One PAL or NTSC video output
- One PAL or NTSC S-video output
- Dimensions (mm): L. 145 x W. 130 x H. 35
- Weight: 245 g



### Dock MU-Video

- Storage of one or four images
- Power supply: 24 V~; 50 Hz - 60 Hz
- Power consumption: 10 VA
- One PAL or NTSC video output
- One PAL or NTSC S-video output
- Dimensions (mm): L. 100 x W. 72 x H. 36
- Weight: 190 g



### Dock M-USB2

- Storage of one or four images
- Power supply: 115 V~60 Hz and 230 V ~ 50 Hz
- Power consumption: 9 VA
- One PAL or NTSC video output
- One PAL or NTSC S-video output
- One digital USB 2.0 output
- Dimensions (mm): L. 145 x W. 130 x H. 35
- Weight: 245 g



### Dock MU-USB2

- Storage of one or four images
- Power supply: 24 V~; 50 Hz - 60 Hz
- Power consumption: 10 VA
- One PAL or NTSC video output
- One PAL or NTSC S-video output
- One digital USB 2.0 output
- Dimensions (mm): L. 100 x W. 72 x H. 36
- Weight: 190 g



### Dock USB2

- One digital USB 2.0 output
- Dimensions (mm): L. 100 x W. 46 x H. 20
- Weight: 165 g.



### Dock U-USB2

- Power supply: 24 V~; 50 Hz - 60 Hz
- Power consumption: 15 VA
- One digital USB 2.0 output
- Dimensions (mm): L. 50 x W. 75 x H. 36
- Weight: 76 g



### Mini Dock U-USB2

- Power Supply: 5 VDC (from USB port)
- Power consumption: 2.5 VA
- One digital USB 2.0 output
- Dimensions (mm): L 48 x W 48 x H 30
- Weight: 22g



## INTRAORAL CAMERAS

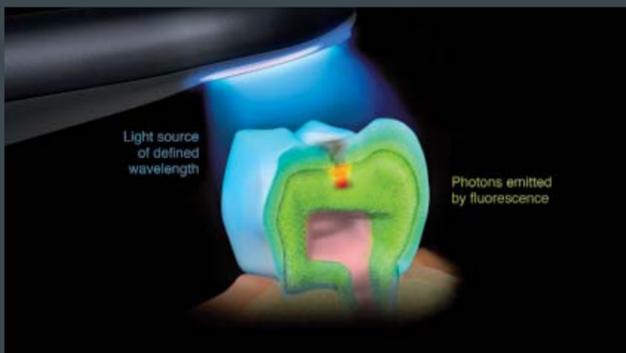
Enhance your vision



I AM  
EMPOWERED

### THE PRINCIPLE OF AUTOFLUORESCENCE

- 1) The photons provided by an external light source illuminate the tooth tissues (enamel and dentine).
- 2) The energy applied by the excitation source (Blue LED) to the tooth tissues causes an energy surge in the material's elementary particles, which then become very unstable.
- 3) To be able to return to a situation of stability, the excess energy is released by emitting photons lower in energy than the excitation source and those with higher wavelength (Stokes' Law).



PATENT BASED  
ON THE COMBINATION  
OF ANATOMICAL TOOTH IMAGE  
AND FLUORESCENCE SIGNAL

# CREATOR OF IMAGING INNOVATIONS

## MORE INVENTIVE

### PATENTED AUTOFLUORESCENCE TECHNOLOGY

The ACTEON® imaging team has patented a technology based on the **principle of autofluorescence**.

ACTEON® intraoral cameras provide a real-time fluorescence signal of the tooth superimposed on its anatomical image, revealing invisible tissues.

### SELECTIVE CHROMATIC AMPLIFICATION

Due to the combination of blue light absorption by soft tissue and selective chromatic amplification, SOPROCARE® improves visibility of all areas of tissue inflammation.



▶▶▶ *"Our scientific and clinical research\* in collaboration with universities and key opinion leaders all around the world, help us develop relevant innovations that meet the perpetually evolving clinical needs. In the autofluorescence field, this synergy of knowledge resulted in the creation of an international scientific congress. This approach of innovation applies to all products that we are developing within ACTEON®."*



## LESS INVASIVE

### HIGHLIGHT PATHOLOGIES AND MOTIVATE PATIENTS

The autofluorescence makes it possible to **detect decay even at its earliest stages**, without subjecting the patient to any unnecessary radiation. SOPROCARE® also **reveals dental plaque** without using plaque disclosing solutions, and **highlights gingival inflammation** painlessly.

**Improve clinical performance** and easily communicate the treatment plan to your patient. The patient is involved in making decisions and accept the treatment.

Images can be captured and **stored into any imaging software** giving you all of the necessary tools to practice minimally invasive dentistry.

\* Some examples of sponsored studies:  
**Performance of a light fluorescence device for the detection of microbial plaque and gingival inflammation.** Peter Rechmann, Shasan W. Liou, Beate M. T. Rechmann, John D. B. Featherstone, in *Clin Oral Invest*, 2016.  
**Use of new minimum intervention dentistry technologies in caries management.** H Tassery, B Levallois, E Terrer, DJ Manton, M Otsuki, S Koubi, N Gughani, I Panayotov, B Jacquot, F Cuisinier, P Rechmann, in *Australian Dental Journal*, 2013.  
**Functional mapping of human sound and carious enamel and dentine with Raman spectroscopy.** H. Salehi, E. Terrer, I. Panayotov, B. Levallois, B. Jacquot, H. Tassery, F. J. G. Cuisinier, in *Journal of BioPhotonics*, 20 September, 2012.

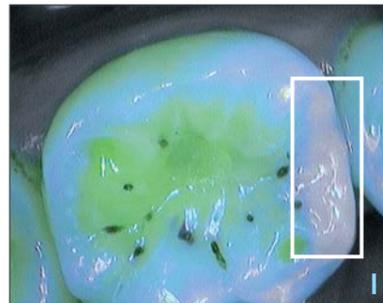
# DIAGNOSE AND TREAT CARIES

## ENHANCE CLINICAL EXAMINATION CAPABILITIES

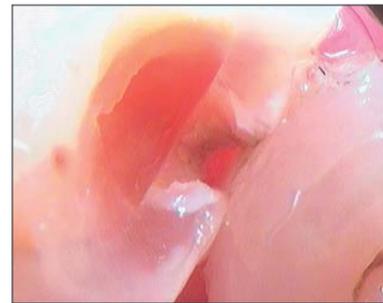
SOPROLIFE



DAYLIGHT mode  
▶ Initial situation



DIAGNOSTIC aid mode  
▶ Demineralization over the mesial marginal crest revealed



DAYLIGHT mode  
▶ Opened cavity



TREATMENT aid mode  
▶ Demineralized enamel and infected tissue



TREATMENT aid mode  
▶ All the infected tissue has been removed

SOPROCARE



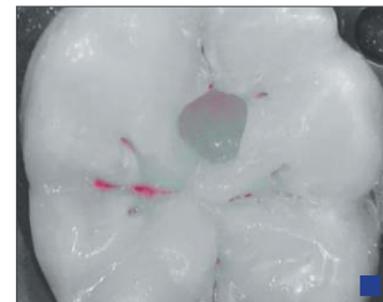
DAYLIGHT mode  
▶ Initial situation



CARIO mode  
▶ Cariou lesion revealed



CARIO mode  
▶ Infected tissue



CARIO mode  
▶ all the infected dentine has been removed

## PERFORM LESS INVASIVE TREATMENT

SOPROCARE  
SOPROLIFE

### Take the guesswork out of caries detection

Autofluorescence improves your vision during clinical examination and expands your diagnostic capabilities. Highlight caries and provide the most appropriate treatment for your patients.

### Diagnose early carious lesions for less invasive treatment

Manage your clinical decisions depending on the individual's caries risk and preserve tooth structure.

### Protect your patient from unnecessary radiation

The fluorescence concept surpasses the limitations of digital radiology in the detection of caries. Promote better patient care by reducing the number of necessary X-rays.

### Save time

Speed up the decision-making process by improving your diagnostic capabilities and optimising your clinical examination.

### Eliminate uncertainty

Easily distinguish between healthy and infected tissue to determine the limits of excavation, and consequently preserve the pulp. Fluorescence makes treatment easier, improving efficiency and productivity.

### Improve the quality of your treatment

Preserve healthy teeth whilst removing all infected tissue.

EXPASYL™

Effective and atraumatic sulcular opening.

Especially indicated for the treatment of class II & V caries.



excavus

Ultrasonic tips for minimally invasive excavation



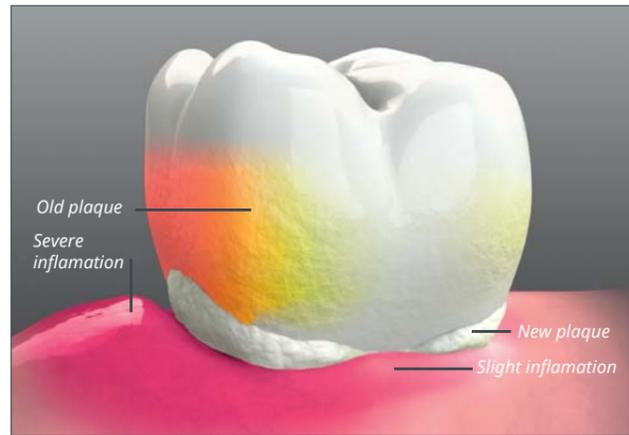
# REVEAL DENTAL PLAQUE AND GINGIVAL INFLAMMATION

## INSTANTANEOUSLY HIGHLIGHT

## PLAQUE AND GINGIVAL INFLAMMATION

Perform a complete and rapid assessment of the patient's oral health, without adding plaque disclosing solution.

- **Gingival inflammation:** from hues of pink to deep magenta depending on the severity
- **New plaque:** grainy white
- **Old plaque:** shades of yellow and orange



Chromatic mapping representing the characterization of tissues in PERIO mode

## PREVENT HYGIENE PATHOLOGIES



DAYLIGHT mode

PERIO mode

Early identification of hygiene pathologies will result in early intervention and minimally invasive treatment.

Maintain the patient's health and the longevity of their natural dentition.

## IMPROVE CASE ACCEPTANCE

Ensure your patient realises the importance of oral hygiene, and enable them to better understand the information provided during the appointment.

Study:  
**Psychological, behavioral, and clinical effects of intra-oral camera:** a randomized control trial on adults with gingivitis. M-R Araújo, M-J Alvarez, C A Godinho, C Pereira, in *Community Dentistry and Oral Epidemiology*, 2016.

## CONTROL HYGIENE EVOLUTION

Encourage your patient by showing them their progress over time, for long term quality treatment.

## UNIQUE PROPHYLAXIS PROTOCOL

Fluorescence brings better vision for a faster and more efficient treatment.

WITH FLUORESCENCE

SOPROCARE

1



Diagnosis and Communication with patients

SOPROCARE

2



Guided treatment in real time

FL.A.G.  
FOR BLED

3



Treatment finishing by Polishing

AIR N GO  
EASY

4



Control and follow-up

SOPROCARE

BEFORE



DAYLIGHT mode  
▶ Initial situation



PERIO mode  
▶ Initial situation

AFTER



DAYLIGHT mode  
▶ One week after treatment



PERIO mode  
▶ One week after treatment

# SEE THE INFINITELY SMALL

# COMMUNICATE AND MOTIVATE WITH AN IMAGE



Dental cavity preparation



Cracked tooth



Infiltrated occlusal groove



Cervical lesion

SOPROCARE  
SOPROLIFE  
SOPRO 717 FIRST

ACTEON® intraoral cameras exceed the limitations of the naked eye and offer **high quality images with magnification of up to 115\* times.** With MACROVISION, the infinitely small appears before your eyes.

## THIS IS MACROVISION

**Enhance your vision during examination**  
See details otherwise not visible to the naked eye. Closely monitor micro fractures and the development of small lesions.

**Improve your clinical performance**  
Take a more detailed look into dental cavity preparation and be more accurate during treatment.



SOPROCARE  
SOPROLIFE  
SOPRO 717 FIRST  
SOPRO 617

**Improve patient communication**  
Highlight pathologies in an image and easily explain clinical procedures. Facilitate dialogue to address objections and patient concerns.

**Increase treatment acceptance**  
Patients become more involved, meaning they soon understand the importance of their planned treatment. Improve efficiency and productivity!

**Educate your patient**  
Use real images to make the patient more attentive and confident about your advice.

**Follow up**  
Provide effective and efficient treatment planning by saving the images directly into the patient chart. Easily compare images from past patient visits and monitor progress.

THE SPEAK  
SAME LANGUAGE  
AS YOUR  
PATIENT

\* On a 17" screen

## AUTOFLUORESCENCE

HIGHLIGHTS DECAY AND PROMOTES MINIMALLY INVASIVE TREATMENT



DIAGNOSTIC aid mode



TREATMENT aid mode



DAYLIGHT mode

### The power of autofluorescence

- **DIAGNOSTIC aid mode:** identify the development of occlusal and proximal carious lesions.
- **TREATMENT aid mode:** perform minimally invasive treatment by preserving healthy tissue.
- **DAYLIGHT mode:** from portrait to macrovision, obtain sharp images with the large depth of field.

SOPROLIFE® offers two different visions: white light (daylight) and blue light (fluorescence).

SOPROLIFE® is a revolutionary camera that differentiates between healthy and infected tissue facilitating less invasive treatments.



## SELECTIVE CHROMATIC AMPLIFICATION

DIFFERENTIATES THE COLOUR OF TISSUE AND REVEALS ORAL HYGIENE PATHOLOGIES



CARIO mode



PERIO mode



DAYLIGHT mode

### 3 needs, 3 modes

- **CARIO mode:** caries are detected as red, surrounding tissue is displayed in black and white.
- **PERIO mode:** highlight plaque, calculus, and gingival inflammation.
- **DAYLIGHT mode:** communicate more effectively with your patient and see details that are not visible with the naked eye.

SOPROCARE® is an unparalleled communication tool in the dental practice!

With the push of a button, SOPROCARE® instantly and easily highlights caries, plaque, calculus and gingival inflammation.

# MACROVISION

REVEALS WHAT WAS ONCE INVISIBLE



State of the seal of the amalgam



Infiltration of the metallic ions



Infiltrated occlusal groove

## Magnification of the image up to 115 times\*

- Large depth of field from extraoral to macrovision
- Exceptional image quality provided by a highly sophisticated optical system
- Extremely small camera head for easier access
- Successfully capture images with a simple glide over the SOPRO® touch

SOPRO® 717 reveals micro fissures, infiltrations, lesions, everything that is not visible with the naked eye.

\* On a 17" screen



# COMMUNICATE

WITH YOUR PATIENTS:

USE AN IMAGE, THE KEY TO EDUCATION AND CASE ACCEPTANCE



Intraoral



Intraoral



One tooth

## Simplicity in the palm of your hand

- Rounded shape and thin distal part for maximum accessibility and unrivaled patient comfort
- 105° angle of view for better exploration of distal areas
- Fixed focus with large depth of field, providing high quality images
- Ease of use: point and shoot

SOPRO® 617 is easy to use for patient communication, and a great asset for case acceptance.

# TECHNICAL SPECIFICATIONS

SOPRO CARE   SOPRO LIFE   SOPRO 717   SOPRO 617

Highlight dental plaque	✓			
Highlight gingival inflammation	✓			
Reveal caries	✓	✓		
Macrovision	✓	✓	✓	
Intraoral image	✓	✓	✓	✓



## SOPRO CARE

- High sensitivity..... 1/4" CCD
- Resolution..... (752x582) PAL ; (768x494) NTSC
- Lighting..... 7 LED (4 white; 3 blue)
- Adjustment..... 4 pre-set positions (Extraoral, Intraoral, One tooth, Macro)

## SOPRO LIFE

- High sensitivity..... 1/4" CCD
- Resolution..... (752x582) PAL ; (768x494) NTSC
- Lighting..... White Mode: 4 LED; Blue Mode: 4 LED
- Adjustment..... 4 pre-set positions (Extraoral, Intraoral, One tooth, Macro)

## SOPRO 717

- High sensitivity..... 1/4" CCD
- Resolution..... (752x582) PAL ; (768x494) NTSC
- Definition..... 470 lines
- Sensitivity..... 2 lux
- Lighting..... 8 LED
- Adjustment..... 3 pre-set positions (Extraoral, Intraoral, Macro)

## SOPRO 617

- High sensitivity..... 1/4" CCD
- Resolution..... (752x582) PAL ; (768x494) NTSC
- Definition..... 470 lines
- Sensitivity..... 2 lux
- Lighting..... 8 LED
- Adjustment..... fixed focus

- Freeze Frame with SOPRO Touch or pedal..... (option)
- Angle of view..... 70°
- Cable length..... 2,5 m
- Dimensions (mm)..... L. 200 x W. 30 x H. 24
- Weight..... 78 g

- Freeze Frame with SOPRO Touch or pedal..... (option)
- Angle of view..... 70°
- Cable length..... 2,5 m
- Dimensions (mm)..... L. 200 x W. 30 x H. 24
- Weight..... 78 g

- Freeze Frame with SOPRO Touch or pedal..... (option)
- Angle of view..... 70°
- Cable length..... 2,5 m
- Dimensions (mm)..... L. 200 x W. 28 x H. 24
- Weight..... 75 g

- Freeze Frame with SOPRO Touch or pedal..... (option)
- Angle of view..... 80°
- Cable length..... 2.5 m
- Dimensions (mm)..... L. 205 x W. 28 x H. 24
- Weight..... 55 g

## WORKSTATION CONFIGURATION

### WINDOWS® MINIMUM CONFIGURATION REQUIRED

- Operating system..... Windows® 7 SP1
- Processor..... Intel® Core 2 duo - 3GHz
- RAM..... 2 GB
- Hard disk..... 250 GB
- USB ports..... 4 USB2 Hi-Speed ports
- Graphic card..... 512 MB RAM unshared memory compatible DirectX 9
- USB Chipset..... Intel® or NEC® / RENESAS®
- Screen resolution..... 1280 x 1024

### WINDOWS® RECOMMENDED CONFIGURATION

- Operating system..... Windows® 10
- Processor..... Intel® Core i5
- RAM..... 4 GB
- Hard disk..... 1 TB
- USB ports..... 4 USB2 Hi-Speed ports
- Graphic card..... Chipset Nvidia® or ATI® 2 GB unshared memory compatible DirectX 9 or more
- USB Chipset..... Intel® or NEC® / RENESAS®
- Screen resolution..... 1280 x 1024 or more

### MAC® MINIMUM CONFIGURATION REQUIRED

- Computer..... MacBook® Pro 13.3" or iMac® 21.5"
- Operating system..... OS X Mavericks
- Processor..... Intel® Core 2 Duo
- RAM..... 2 GB

### MAC® RECOMMENDED CONFIGURATION

- Computer..... iMac® 27"
- Operating system..... OS X El Capitan
- Processor..... Intel® Core i7
- RAM..... 4 GB

The medical devices for dental care SOPROCARE®, SOPROLIFE®, SOPRO® 617, SOPRO® 717 First are of class IIa and manufactured by SOPRO®, notified body LNE/GMED, NEWTRON® and EXCAVUS® are of class IIa and manufactured by SATELEC®, notified body LNE/GMED, EXPASYL is of class I and manufactured by PIERRE ROLAND®, notified body LNE/GMED. These medical devices are not refunded by health insurance organizations. Read carefully the instructions on the labelling before use.

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For Yosemite and El Capitan operating systems, a Mac® from 2013 or later is required.