1 MAINTENANCE VISITS

Contact the Quantel Medical After-Sales Service or your approved local distributor regularly (at least annually) to arrange Easyret preventive maintenance visits. The technician will check the:

- Calibration of the aiming beam;
- Calibration of the delivery systems;
- Cleanliness of the external optics;
- Calibration of the touch screen;

2 CLEANING AND DISINFECTION

2.1 RESPONSIBILITY

The medical department where the instrument is used must:

1) Determine to what extent the patient-contact areas should be cleaned and disinfected between patients;
2) Train appropriately the staff who carry out the cleaning and disinfection;
3) Ensure that the methods of disinfection used in departmental cleaning routines are compatible with those used for the instrument;
4) Ensure that the entire system is routinely cleaned.

2.2 CLEANING AND DISINFECTING THE PATIENT AREAS

It is very important to consider the risk that areas of the system in contact with patients (including the chin rest, head rest and hand grips) may pass on contamination.

Although cleaning, disinfection procedures and standards vary considerably between different medical departments, there are some general guidelines:

1) You are recommended to clean meticulously all areas in contact with patients before each examination or treatment procedure. Sheets of disposable protective paper may also be attached to surfaces in contact with patients and changed each time.
2) You are recommended to clean manually all contact areas using an appropriate non-corrosive, non-toxic and low-residue liquid cleaning agent.
3) You may disinfect areas in contact with patients chemically, if the method and material chosen by the medical department are compatible with the instrument.
4) Steam sterilization and heat disinfection are not recommended. Equally, the chin-rest assembly (or any other component of the system) must not be submerged in liquid.

Type of product recommended for the disinfection of the patient zone :
Tristel Duo
Disinfecting sporicide for Ophtalmology
Manufacturer : Tristel Solution Limited, United Kingdom

2.3 ROUTINE CLEANING OF THE LASER SYSTEM

WARNING

- Ensure that the laser system is switched off, and then disconnect the power supply before cleaning the device.
- Use only a damp cloth for cleaning.
- Do not use solvent or alcohol.
- Dry all surfaces after cleaning.

2.3.1 AIR VENTS

Air vents are located on each side of the table and under the table. Any accumulated dust must be cleaned away as soon as necessary. Use a damp cloth to remove dust from the vents.

2.3.2 LCD SCREEN

Ensure that the LCD screen is switched off before cleaning it: it is anyway easier to see dusty or greasy areas against a black screen. Use a soft, dry cloth (ideally a microfibre cloth of the sort used to clean spectacles) and wipe it gently over the screen. Do not exert a lot of pressure when trying to remove the dirt, as this could destroy the pixels.

2.3.3 EASYRET TABLE

Clean the Easyret table using a cloth moistened with a non-caustic solution such as soap and water, isopropyl alcohol, or with a disinfectant used in hospitals (avoiding the optical surfaces). Do not spray or pour cleaning products directly onto the apparatus. Dry with a clean, dry cloth.

2.3.4 CLEANING THE OPTICS

Periodically inspect and clean the optics.
The different optics in the laser system must remain clean so that the laser beam always transmits optimally and thus its performance is maintained:

- Eyepieces,
- Projection lenses,
- Final mirror (Zeiss model) / final optic for the head of the slit projector (Haag streit model)
  Re-cover the slit lamp after each use to protect all the optical surfaces from dust.
- Optics for the indirect ophthalmoscope (option): doctor-protection filter, final mirror and projection lens.

Equipment required

- Lint-free optical cloths (available from photographic shops)
- Cotton buds
- Pure or AR ethanol or methanol.

Method:

1) Remove dust from the optics with a suitable brush.

2) Moisten the optical cloth or cotton bud in the solvent and gently wipe the optical surfaces in lines (from left to right). Be very careful not to press or the mirror may become misaligned. Do not go over the optics more than once or twice. Repeated wiping will only spread dirt over the surfaces, possibly causing scratches.

3) Use the cloth or cotton bud only for one wipe. Throw it away and use a new one to continue.

PRECAUTION
Never use dry buds or cloths to clean an optical surface: they might damage it.

3 ROUTINE CHECKS

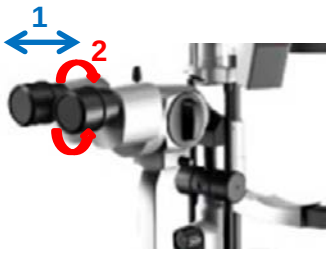
Preliminary conditions:

- ✓ Position the focusing rod on the slit lamp;
- ✓ Centre the slit-lamp generator between the eyepieces;
- ✓ Switch on the slit lamp and adjust the slit height to its longest position, as shown in user manual:
  Chapter III – Using the laser system
  Section 3 – Standard use of the slit lamp
- ✓ Select the SingleSpot treatment screen as described in the user manual:
  Chapter III – Using the laser system's user interface
  Section 4.5.2: Treatment screen / SingleSpot mode

The slit lamp must be at the focal distance from the focusing rod: the red spot from the aiming beam and the light slit must be as sharp as possible:

3.1 ADJUSTING THE EYEPIECES

Pupillary distance and visual acuity vary from one person to another. It is important that the user adjusts the eyepieces to suit his/her sight:



Stage 1 / Adjusting the pupillary distance
This distance may be adjusted manually by narrowing or widening the distance between the eyepieces.

Stage 2 / Adjusting for visual acuity
Adjust the eyepieces as often as necessary to obtain the sharpest possible image

3.2 INTEGRITY OF THE AIMING BEAM

Before starting any procedure involving laser treatment, you must check the integrity of the aiming beam:

WARNING

Do not use the laser system or the indirect ophthalmoscope delivery system if the aiming beam is weak (red point blurred / hardly visible or even invisible): the optical fibre may be damaged. Using the laser without the aiming beam may expose non-targeted tissues to the laser beam and thus cause injury. Damaged optical fibre may accidentally expose the patient and staff in the treatment room to hazardous radiation, and/or cause a fire.
Contact your local distributor or the Quantel Medical After-sales Service.

WARNING

Indirect ophthalmoscope option: always inspect the fibre optic cable before use to check it is not twisted, pierced, split or damaged. It may be damaged if someone walks on it, pulls it, leaves it in the wrong position, or twists or rolls it.

3.3 POSITION OF THE AIMING BEAM

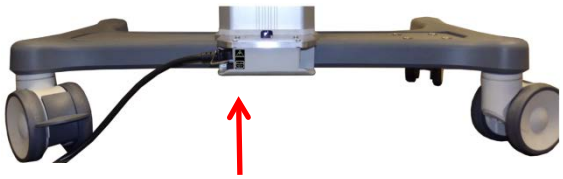
The red aiming spot projected onto the focusing rod must be positioned vertically and horizontally at the centre of the luminous slit, whether the spot diameter is 50 µm or 400 µm.
If this is not the case, please contact your local distributor or the Quantel Medical After-Sales Service.

4 REPLACING THE FUSES

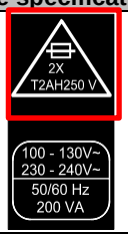
WARNING

Unplug the power supply cable whenever you work on the equipment.

The fuse holder is accessed from the foot of the table, at the rear:



Fuse specification:



To change the fuse voltage, you must take out the holder and set the correct voltage so it appears in the window as shown below: