

1 CLEANING AND DISINFECTION

1.1 GENERAL

Although the use of the laser involves no skin contact with the patient, attention should be given to the possibility of cross-contamination between patients via the patient contact areas of the system which are the chinrest, headrest and steadying handles.

1.2 RESPONSIBILITIES FOR CLEANING AND DISINFECTION

The health care facility where the instrument is to be used is responsible for:

- 1) Determining the level of cleaning and disinfection of patient contact areas required between patients;
 - 2) Appropriate education and training for staff required to carry out cleaning and disinfection;
 - 3) Ensuring that routine cleaning and disinfection methods used in the facility are compatible with the instrument;
 - 4) Routine cleaning of the entire system.
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1.3 CLEANING AND DISINFECTION OF PATIENT AREAS

Although cleaning and disinfection procedures and standards within different health care facilities may vary considerably, the following points are provided as general guidelines:

- 1) Thorough cleaning of all patient contact areas is recommended for each procedure. Disposable chinrest papers can also be attached to the chinrest area and changed between patients;
 - 2) Manual cleaning can be carried out by wiping all contact areas using a suitable liquid cleaning agent which is non-corrosive, non-toxic and low in residue;
 - 3) Chemical disinfection of patient contact areas may be carried out provided that the method and materials chosen by the health care facility have been shown to be compatible with the instrument;
 - 4) Steam sterilization and heat disinfection is not recommended and the chinrest assembly (or any other system components) should not be immersed in liquid.
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2 SERVICE VISITS

At least once every 12 months you should contact your Quantel Medical trained service representative to undertake a preventive maintenance visit, at which time:

- ☞ the correct function of your system will be confirmed;
- ☞ the optics are cleaned;
- ☞ general performance and alignment are checked.

At each six-monthly visit, your authorized Quantel Medical distributor will:

- ☞ clean the optics;
- ☞ check general performance;
- ☞ check alignment;
- ☞ check calibration.

At least once every 12 months, the Quantel Medical distributor will fully recalibrate the system.

Contact your local distributor for a service representative to perform a preventive maintenance visit.

3 ROUTINE MAINTENANCE

The laser has been designed to provide trouble-free operation with a minimum of down time. As a result, very little user maintenance is required.

- 1- Turn off the laser system;
- 2- If necessary, allow the laser system several minutes to cool.



WARNING

Disconnect AC power before cleaning the case.

Use only a damp cloth for cleaning. Do not use any solvent, or alcohol.

All surfaces should be thoroughly dried after cleaning.

There are 3 routine maintenance tasks:

- 1- Cleaning the laser system (see section [3.1 Cleaning the laser system](#));
- 2- Cleaning the external optics (see section [3.2 Cleaning the optics](#));
- 3- Checking aiming accuracy (see section [3.3 Checking aiming beam accuracy](#))

3.1 CLEANING THE LASER SYSTEM

To clean the system at any time, wipe over with a cloth dampened with a non-caustic cleaning solution such as soap and water, isopropyl alcohol, or a "hospital-grade" disinfectant avoiding any optical surface. Do not spray or pour cleaning agents directly on the system. Dry with a clean, dry cloth or you are allowed to air dry. The display panel may be cleaned with a damp cloth, but avoid pressing too hard on it.

3.2 CLEANING THE OPTICS

Periodically inspect and clean the Optimis II system optics:

Slit lamp optics

The slit lamp lens must be kept clean otherwise performance can be compromised.

Adaptor optics

The reflecting mirror must be kept clean to optimize laser transmission. Output lens and doctor filter must also be cleaned.

After each use, place the dust cover over the slit lamp to keep all optical surfaces clean.

Required equipment:

- Lint free optical tissues (available from a photographic store);
- Cotton swabs;
- Pure or AR grade ethanol or methanol.

Method:

- 1) Remove dust from the optics with an appropriate lens brush.
 - 2) Moisten the optical tissue or Q-tip in the solvent and gently wipe it across the optical surfaces in linear strokes. Use a very light pressure to avoid misaligning the mirrors. Do not wipe the mirrors more than one or two times because excess wiping will only redistribute the dirt over the optical surface and cause scratches.
 - 3) Use one tissue or one Q-tip per wipe, then discard and use a fresh one for the next wipe.
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CAUTION

Never use dry swabs or tissues to clean an optical surface, as this may damage the surface.

3.3 CHECKING AIMING BEAM ACCURACY

Correct optical alignment is critical for accurate aiming of the equipment. This procedure should be carried out at least every 3 months or as considered necessary by the user.

Required equipment:

Photographic paper (Kodak linagraph direct printer).

Method:

- 1- Attach a piece of photographic paper to the headrest;
- 2- Turn on the slit lamp illumination to illuminate the paper;
- 3- Adjust the eyepieces to the correct accommodations;
- 4- Adjust slit width to full circle illumination and low intensity;
- 5- Turn on the laser into standby mode to activate the aiming beam. Swing the illumination tower to one side such that it does not obstruct the aiming beam;
- 6- Position the slit lamp so that the aiming beams converge to form one spot on the paper attached to the target. Lock the slit lamp in this position;



WARNING

If the aiming beam spots cannot be made to coincide, do not use the system on patients. Contact your service center for realignment. As the aiming beam passes down the same delivery system as the treatment beam provides a good method of checking the integrity of the delivery system. If the aiming beam spot size is not present at the distal end of the delivery system, its integrity is reduced or it looks diffused. This is possible indication of a damaged or not properly working delivery system.

- 7- Select laser ready mode. Select minimum power and check that the aiming beams are still converged to one spot;
- 8- Fire the laser once onto the burn paper;
- 9- Inspect the burn mark through the binoculars to check that the burn mark on the paper is concentric with the aiming beam spot;
- 10- The test can be repeated if necessary on another area of the burn paper.

If the aiming beam is not centered in the burn mark, do not use the system on patients. Contact your service center for calibration/alignment.