Eighteeth

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Eighteeth

Quick Operation Guidelines for Eighteeth Dental Microscope

Eighteeth is a brand under Changzhou Sifary Medical, a leading manufacturer of dental equipment and consumables in China. As a top player in the domestic dental medical device industry, the company is committed to building the first global platform for Chinese dental instruments. Its products are distributed in 154 countries and regions worldwide. Eighteeth has formed partnerships with over 340 renowned universities and institutions globally and has worked with thousands of top dental experts, reaching nearly a million dentists around the world.

The company currently holds 143 national patents and has a professional and experienced team of nearly 500 people. Its R&D and operations directors are senior professionals from major industry players such as Dentsply Sirona, Mindray, and other global giants. Eighteeth has introduced a mature and efficient R&D management system, which has led to significant advantages in product quality. The company has completed multiple rounds of financing, totaling hundreds of millions of yuan, with the goal of providing higher-quality products and services to dentists and patients worldwide.

Basic Adjustment for Eighteeth Dental Microscope

1

Adjusting the Arm System

Adjust the star fixation knobs for the swivel arm, suspension arm and suspnesion friction, as well the banlance and its lock knobs, to the appropriate tension. This ensures that the microscope can be suspended and fixed at any accessible position.

2

Extend the microscope arms and prepare the proper operating position.

3

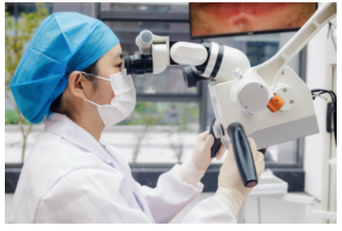
Adjust the PD knob to your personal pupillary distance.

4

Adjust the eye cup height of the eyepieces to ensure the full field of view: about 3-4 rings should be visible for naked eyes, or approximately 1 ring for those wearing glasses.

5

Adjusting Focus: Change to the maximum magnification, adjust the focus knob to achieve a clear vision to the object plane, and then adjust to the desired lower magnification as needed.



Basic Operation for Eighteeth Dental Microscope

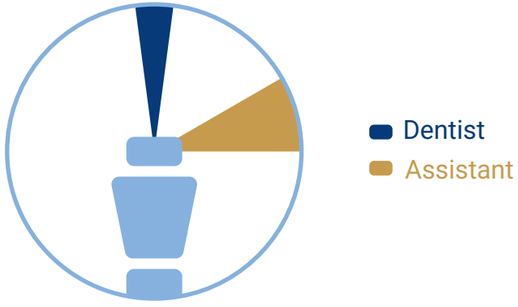
When using the dental microscope, the dentist should adopt the correct sitting posture and operating position. For treatments on different teeth, it is also necessary to adjust the angle of the dental chair backrest, the patient's head position and tilt angle, as well as the angle of the reflective mirror, in order to ensure the dentist has a clear and optimal field of view through the microscope.

To obtain the biggest scale of image by making the surface of the mirror with 45° angle to the Incident light axis

The angle between the surface of the mirror and the Incident light axis exceeds 45° will reduce the scale of the image and produces elliptical image

Operation for Maxillary Anterior Teeth

Operating Position for the Maxillary Anterior Region



- Dental Unit Adjustment

Raise dental unit to an appropriate height, set the backrest to an angle of approximately 45° relative to the ground, ensuring that the treatment area is positioned under the microscope's objective lens

- Dentist's Position

The dentist should be positioned behind the patient's head, at the 12 o'clock position

- Assistant's Position

Assistant's Position: On the patient's left side, at the 2-3 o'clock position, with the left hand holding the high suction device, positioned at the right corner of the patient's mouth

- Microscope

Adjust the angle between the microscope's optical axis and the long axis of the tooth as needed, reducing the angle for better alignment

- Patient's Position

Patient's Position: Supine, with the eyes level, the maxillary plane perpendicular to the floor or at a 45° angle

Operation for Left Upper Molar

Operating Position for the Left Upper Molar Region

- Dental Unit Adjustment

Slightly raise dental unit and adjust the backrest height so that the patient's mandibular plane is parallel to the floor, and the maxillary plane is at a 45° angle to the floor, ensuring the treatment area is positioned under the objective lens

- Dentist's Position

The dentist should be positioned behind the patient's head, between the 11 o'clock and 12:30 positions

- Assistant's Position

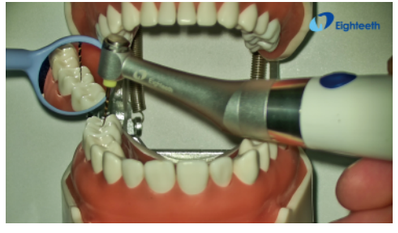
Position: On the patient's left side, at the 3 o'clock position, with the left hand holding the high suction inside the patient's mouth

- Microscope

Adjust the angle between the microscope's optical axis and the long axis of the tooth as needed, reducing the angle for optimal alignment

- Patient's Position

Supine. When treating the left maxillary premolars, the patient's head should be slightly turned to the right. When treating the left maxillary molars, the patient's head should be turned to the right, allowing the dentist to operate more comfortably in the left upper molar region



Operation for Right Upper Molar

Operating Position for the Right Upper Molar Region

Dentist

Assistant

- Dental Unit Adjustment

Slightly raise dental unit and adjust it so that the patient's mandibular plane is parallel to the floor, while the maxillary plane forms a 45° angle with the floor. Ensure that the surgical area is positioned under the microscope's objective lens

- Dentist's Position

The dentist should be positioned behind the patient's head, at the 9-11 o'clock position. The dentist's hands and elbows should be level and roughly aligned with the patient's oral cavity

- Assistant's Position

The assistant should stand on the patient's left side, at the 2-3 o'clock position

- Microscope

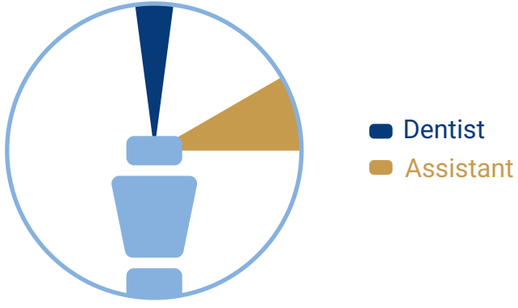
Adjust the microscope as needed to reduce the angle between the optical axis of the objective lens and the long axis of the tooth

- Patient's Position

The patient should be supine, with the head slightly tilted backward and the eyes looking straight ahead. When treating the upper right premolar, the patient's head should be slightly turned to the left. When treating the upper right molar, the patient's head should be turned to the left to facilitate the dentist's operation in the right upper molar region

Operation for Lower Anterior Teeth

Operating Position for the Mandibular Anterior Region



- Dental Unit Adjustment

Slightly raise dental unit so that the backrest forms a 30° angle with the floor, ensuring the surgical area is positioned under the microscope's objective lens

- Dentist's Position

The dentist should be positioned directly behind the patient's head, at the 12 o'clock position

- Assistant's Position

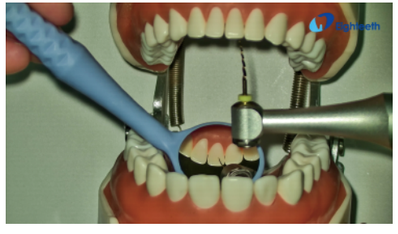
The assistant should stand on the patient's left side, at the 2-3 o'clock position

- Microscope

Adjust the microscope as needed to increase the angle between the optical axis of the objective lens and the long axis of the tooth

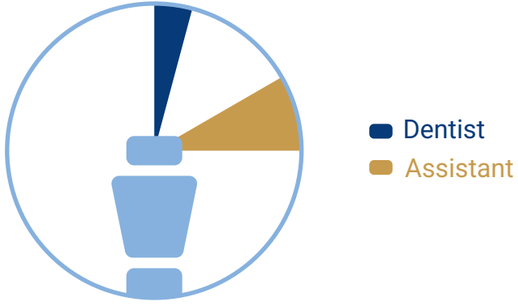
- Patient's Position

The patient should be supine, with eyes looking straight ahead



Operation for Left Lower Molar

Operating Position for the Left Lower Molar Region



- Dental Unit Adjustment

Adjust the backrest to form a 30° angle with the floor, ensuring the surgical area is positioned under the microscope's objective lens

- Dentist's Position

The dentist should be positioned behind the patient's head, between the 12 o'clock and 12:30 position

- Assistant's Position

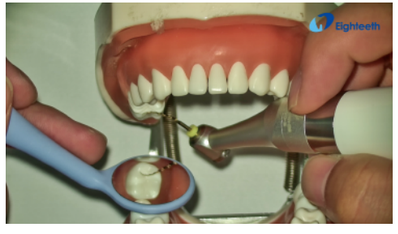
The assistant should stand on the patient's left side, at the 2-3 o'clock position

- Microscope

Adjust the microscope as needed to increase the angle between the optical axis of the objective lens and the long axis of the tooth

- Patient's Position

The patient should be supine, with eyes looking straight ahead. If necessary, the patient's head can be slightly turned to the right



Operation for Right Lower Molar

Operating Position for the Right Lower Molar Region

Dentist

Assistant

- Dental Unit Adjustment

Slightly raise dental unit so that the dentist's elbows and hands are at the same level as the patient's oral cavity. The backrest should form a 40° angle with the floor, and the patient's mandibular plane should be parallel to the floor

- Dentist's Position

The dentist should be positioned on the patient's right side, at the 8-10 o'clock position

- Assistant's Position

The assistant should stand on the patient's left side, at the 3 o'clock position

- Microscope

Adjust the microscope as needed to increase the angle between the optical axis of the objective lens and the long axis of the tooth

- Patient's Position

The patient should be supine, with the head slightly turned to the left

Precautions for Microscope Operation

Using a rubber dam can make microsurgical procedures easier. The benefits of using a rubber dam are obvious:

1

Avoids instruments or medications falling into the patient’s mouth and thire consequent medical accidents

2

It prevents bacterial contamination from the patient's saliva during root canal treatment, improving the success rate of the procedure

3

It prevents the tongue and cheek tissues from interfering with the operative field

4

It provides a clearer view of the exposed tooth for better precision during the procedure

When operating with instruments in a narrow oral space, try to keep the reflective mirror as far from the instrument as possible, and the reflective mirror should be in the center of the field of view.