

USING THE FREQUENCER® TO TREAT INFANT AND PEDIATRIC PATIENTS

The Frequencer® provides airway clearance therapy and promotes bronchial drainage by inducing vibration through the chest walls. This device is intended to be a component of chest physiotherapy by providing a convenient method of external thorax manipulation. The Frequencer® is indicated for patients who have respiratory ailments that involve defective mucociliary clearance, as typically seen in patients suffering from cystic fibrosis as well as chronic bronchitis, bronchiectasis, ciliary dyskinesia syndromes, asthma, muscular dystrophy, neuromuscular degenerative disorders, post-operative atelectasis and thoracic wall defects.

The Frequencer® technology uses sound waves to facilitate the evacuation of pulmonary secretions. It is gentle, safe, and effective for treating patients with challenges clearing their airways. The acoustic sound wave therapy delivered by the Frequencer® modifies the rheological properties of the mucus in the bronchioles so that it is evacuated more easily to the larger bronchi and eventually making it possible to remove the secretions via suctioning or in a cough.

STEPS FOR USING THE FREQUENCER® INFANT AND PEDIATRIC PATIENTS

STEP 1: Select the correct adapter (i.e., the largest adapter that will form a complete seal when applied to the chest area). Tightly affix the adapter onto the transducer. (*Refer to the Components section of the User Manual, for more info on adapters*).

Adapter Sizes:

No 1 – intended for newborns and infants. This adapter uses a 72" flexible hose tube with a $\frac{3}{4}$ " (2 cm) opening

No 2 – intended for toddlers and children. It has a 2 $\frac{3}{16}$ " (5.6 cm) opening.



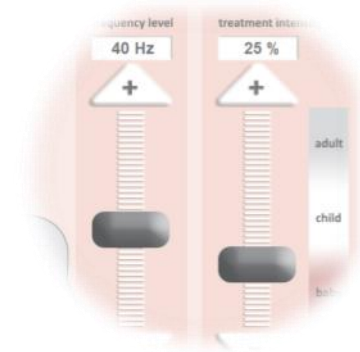
Adapter No 1 on an Infant



Adapter No 2 on a Toddler



An adapter with filter can be reused for treatments on the same patient, but a new adapter with filter must be used on different patients.

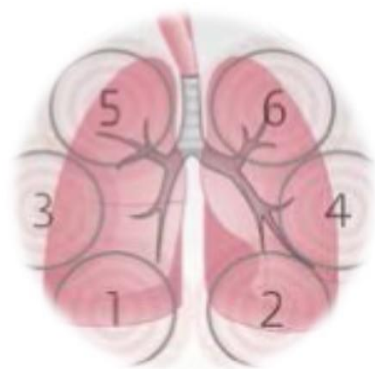


STEP 2: Press the power switch on the back of the Frequencer[®] control unit to turn on the device. A green light will illuminate on the top of the control unit. It may take approximately 35 - 40 seconds for the control unit interface to activate. By default, the frequency level is set at 40 Hz and the treatment intensity is set at 50%.

Adjust the intensity of the treatment for the patient. For babies, it is recommended to begin at an intensity of 25%. (Refer to the Control unit functionalities section of the User Manual, to change default settings).

STEP 3: With your hand holding the top part (cover) of the transducer, place the transducer on chest wall. Alternatively, for infants, place the tube opening on the chest wall. Treatment should be applied over the patient's garment or a thin piece of soft cloth.

STEP 4: Press Start. Apply treatment to chest areas for 2 minutes each, starting in the lower right and left lobe and working upward on each side. If an area seems more affected (according to a CT-SCAN, X-ray/radiological or clinical evidence), it may be advisable to extend the treatment for a few minutes at that location.



Do not apply any unnecessary pressure on the transducer or the tube being placed on the chest. Just apply enough to ensure a complete seal.

The effectiveness of treatment can be monitored by checking the patient's oxygen saturation evolution as well as ventilatory parameters, if the patient is intubated or mechanically ventilated. Because intubated and mechanically ventilated patients are generally unable to cough, it is important to provide adequate equipment and qualified personnel to perform endo-bronchial aspiration according to the quantity of secretions evacuated from the bronchioles to the larger bronchi.

To temporarily stop treatment, press the PAUSE button. The duration of a treatment with the Frequencer[®] is 12 minutes.

STEP 5: After treatment, press the PAUSE button and turn the power switch off before unplugging.

NOTE: The effects of the treatment can sometimes continue for up to 30 minutes, which may require repeated aspiration of secretions. The suggested treatment frequency is every 4 to 6 hours as needed. The frequency of treatments can be increased if necessary.