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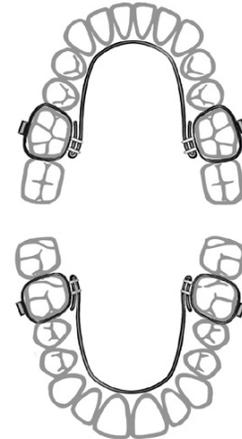
Fixed-Removable Lingual Arch

**REF 032-060, 032-061, 032-062,
032-063 and 032-064**

INSTRUCTIONS FOR USE

The Fixed-Removable Lingual Arch (FRLA) is one of the most versatile lingual arch appliances ever fabricated. The FRLA is an integral part of the Controlled Arch System® of fixed orthodontic therapy, however the FRLA may be readily used with any system of orthodontic treatment. The FRLA utilizes an upper and/or lower prefabricated Controlled Arch .036 lingual arch, which inserts into the horizontal lingual sheaths designed to accommodate the doubled ends of the Controlled Arch .036 lingual arch.

Fixed-Removable Lingual Arches (FRLAs)



- SUMMARY OF FRLA APPLICATIONS**
1. Stabilize the Max and Min teeth in their new relationships following transverse and/or sagittal expansion therapy.
 2. Delivers molar torque and/or rotation, as well as expansion or constriction of arch width in the molar area.
 3. Provides mesial or distal molar crown tip and positive cross-arch anchorage.
 4. Serve as anchorage units for light-force Nickel-Titanium super elastic and thermally activated archwires while they act to align the permanent incisors (and lower canines).
 5. Protect the E-spaces in both arches from being erased during the exfoliation of primary 2nd molars and the eruption of the bicuspids.
 6. Serve as space and arch maintainers during a portion or all of the growth period between the end of Mixed Dentition treatment and the beginning of adolescent comprehensive orthodontic treatment.
 7. Serve as "insurance" appliances that act to stabilize the bone, teeth and soft tissues in their new relation. They are worn in an unobtrusive and clean fashion that is very acceptable to most patients.

SUMMARY OF FRLA APPLICATIONS (continued)

The FRLA is prefabricated in four sizes (1, 2, 3, and 4) which fit the majority of patients seen in practice.

1. Size 1 Indications:

- A. Excessive loss of arch length in the mandibular arch.
- B. Collapsed mandibular arch.
- C. Mandibular arches with very small teeth.

2. Size 2 Indications:

- A. Most mandibular arches.
- B. Excessive loss of arch length in the maxillary arch.
- C. Collapsed maxillary arch.
- D. Maxillary arches with very small teeth.

3. Size 3 Indications:

- A. Most maxillary arches.
- B. Excessive arch length in the mandibular arch.
- C. Mandibular arches with very large teeth.

4. Size 4 Indications:

- A. Excessive arch length in the maxillary arch.
- B. Maxillary arches with very large teeth.

SELECTING THE CONTROLLED ARCH FRLA

Size selection is simple. Fit the molar bands with pre-welded horizontal lingual sheaths. Grasping the anterior portion of the FRLA with a Weingardt or other suitable pliers, place the distal ends (doubled-over portion) of the FRLA so that they cover the lingual sheaths. Each FRLA is selected so there is an allowance of at least 2mm of clearance between the anterior margin of the FRLA and the cingulums of the anterior teeth. It is important that the FRLA does not touch the cingulums of the anterior teeth.

The most common size for the mandible is Size 2. The most common size for the maxilla is Size 3.

After selecting the proper size, insert the FRLA into the horizontal sheaths with the angled end of the FRLA towards the occlusal (Figure 1).



Figure 1

Using a curved Weingardt, place one tip of the pliers on the distal segment of the sheath and the other tip on the angled end of the FRLA in an oblique manner and firmly seat the FRLA past the locking indent. There should be approximately 1.5mm (of the doubled-over portion of the FRLA) extending from the distal portion of the sheath. Slight movement of the FRLA within the sheath is normal.

ADJUSTING THE CONTROLLED ARCH FRLA

When used appropriately the removable (by the dentist only), and the adjustable (by the dentist only) FRLA serve as an "insurance" appliance, which serves to aid in the development of the optimal arch form. Adjustments are made by several simple steps.

1. Fit the FRLA to a passive position when seated in the mouth or on a model.
2. Adjust the molar torque by removing the bands with the attached FRLA from the teeth.
 - A. Hold the anterior segment of the FRLA horizontally.
 - B. Use a Weingardt or other suitable pliers and grasp the lingual sheath vertically.
 - C. Adjust the torque of the molars by rotating the lingual sheaths (while maintaining the horizontal position of the FRLA) until the occlusal portion of the molar bands are horizontal.
3. Other adjustments are as follows (Figure 2):

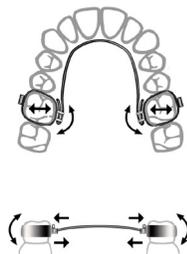


Figure 2

Expansion, constriction, rotation and torque control

- D. Control of mesial or distal crown tip is accomplished by placing gable type bends mesial to the lingual sheaths in a vertical plane with three prong pliers.
4. Before cementing the molar bands with the FRLA attached a re-evaluation of the adjustments is recommended.
 5. Additional adjustments may be made during treatment by removing the FRLA with the use of curved Weingardts. One tip is placed on the distal portion of the FRLA and the other tip is placed on the mesial of the lingual sheath and pressure is applied to unlock the FRLA.

SUMMARY OF BENEFITS USING CONTROLLED ARCH FRLA

- Stabilization of molar positions with the Fixed-Removable Lingual Arch (FRLA) relieves the practitioner of many of the problems associated with loss of molar anchorage.
- Permits the use of less complex fixed appliance mechanics to achieve optimal results.
- FRLA's are left in place in the maxillary and mandibular arches to serve as anchorage appliances during most of the period of fixed appliance treatment.
- Essentially, the FRLA's operate as "insurance" appliances to make certain that the stabilized arches do not relapse during or following fixed appliance therapy.



Alignment of teeth on Broad Arch form.