

BIONATOR

JOHNS DENTAL LABORATORIES

800/457-0504

ORTHOPEDIC CORRECTOR

Currently the most popular modification of the old activator, the Bionator, has long enjoyed popularity in Europe. Today, in the United States and Canada, both the Bionator and a modification of its design, the Orthopedic Corrector, continue to gain acceptance as effective appliances for use in both mixed and permanent dentition.

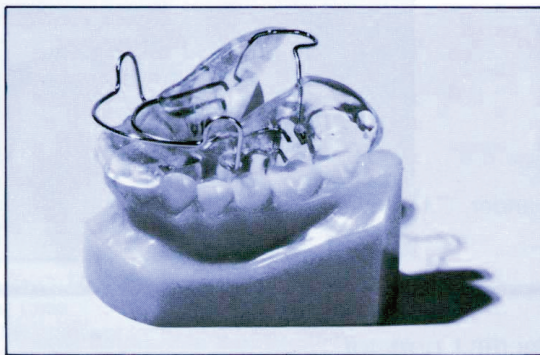
A monoblock appliance, the Bionator usually incorporates a lateral adjustment screw lingual to the lower incisors. The Orthopedic Corrector, essentially identical in design to the Bionator, features the addition of two side screws; one is placed in each of the lower lingual posterior quadrants.

Both the Bionator and the Corrector can be constructed to open, close, or maintain the bite. Since the appliances work to retrain the muscles of mastication, they are very helpful in preventing relapse, and are particularly effective in the treatment of Class II cases.

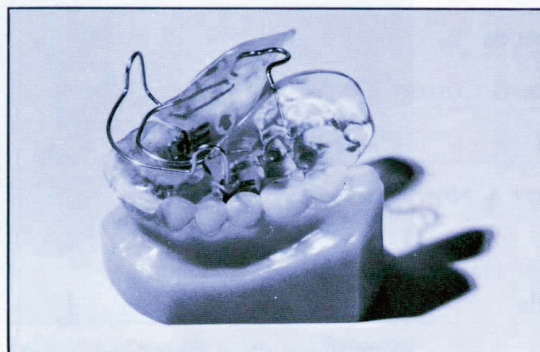
For cases in which sufficient repositioning of the mandible would normally require treatment with two Bionators, the Orthopedic Corrector offers two advantages:

1) With the Bionator, the repositioning with the first appliance is actually accomplished in about three months; however, since the vertical development takes another six to nine months, the mandible must be held stationary until the entire case is ready for the second Bionator. With the Corrector, the side screws can be utilized immediately upon completion of the initial repositioning, without an intermediate waiting period.

2) Since the second Bionator is usually used primarily to further reposition the mandible, the utilization of the Corrector's side screws often eliminates the need for a second appliance.



Bionator I



Orthopedic Corrector I

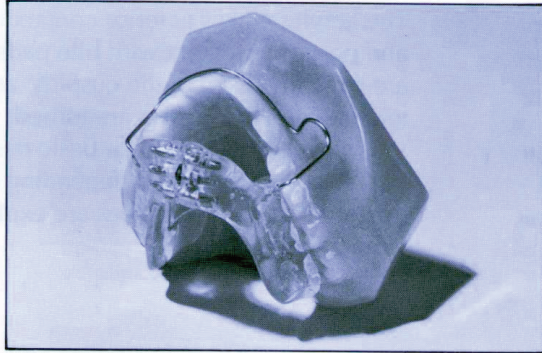
TO OPEN BITE:

FUNCTIONAL CAPABILITIES:

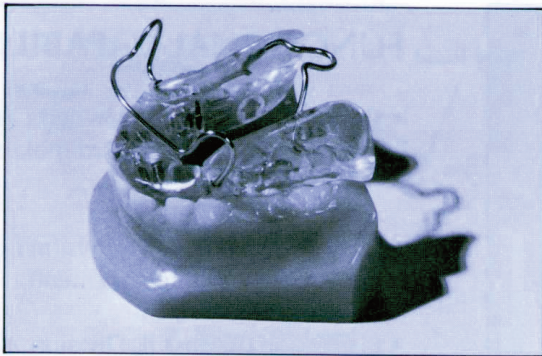
- Class II correction (growth and forward movement of mandible)
- Vertical development in mixed or permanent dentition
- Development of upper and lower arch width in mixed dentition
- Minor tooth movement (with modifications)

WAX BITE CONSTRUCTION:

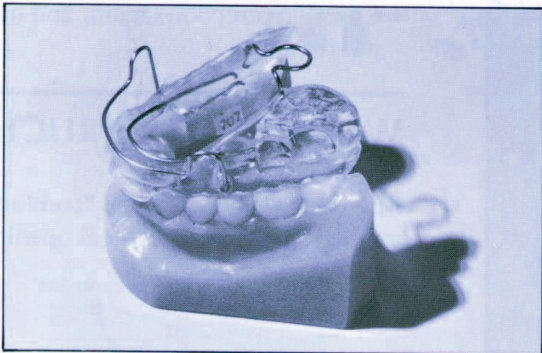
Bite is usually taken forward, in an end-to-end position (if patient is comfortable in that position) with 2-3 mm vertical opening between the **anterior**s. If patient cannot tolerate the end-to-end position, bite can be taken in a less protruded position.



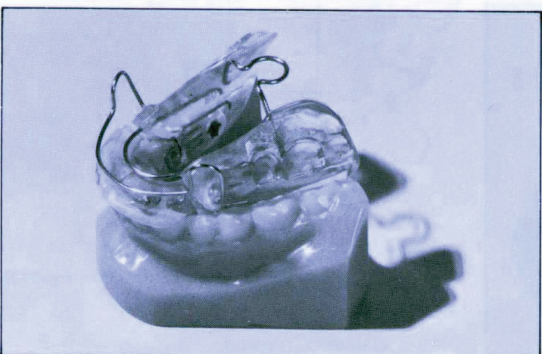
Bionator II



Orthopedic Corrector II



Bionator to Maintain



Orthopedic Corrector to Maintain

TO CLOSE BITE:

FUNCTIONAL CAPABILITIES:

- Class II correction (growth and forward movement of mandible)
- Closure of anterior open bite (most effective in mixed dentition)
- Development of upper and lower arch width in mixed dentition
- Decrease of vertical in mixed dentition

WAX BITE CONSTRUCTION:

Bite is usually taken forward, in a Class I position (if comfortable for patient) with 2-3mm vertical opening between the **posterior** teeth.



TO MAINTAIN BITE:

For the very difficult cases involving a deep dental bite with a long lower face and a steep mandibular bite plane, the Bionator to maintain or the Corrector to maintain may be especially useful.

Initially, the appliance is used to encourage forward growth or advancement of the mandible. Later, the appliance can be further utilized to open the bite by removing the posterior bite pads or by removing the anterior cap; it can close the bite.

FUNCTIONAL CAPABILITIES:

- Class II correction (growth and forward movement of mandible)
- Vertical development (with removal of posterior pads)
- Vertical closure (with removal of anterior overhang)
- Development of upper and lower arch width in mixed dentition

WAX BITE CONSTRUCTION:

Bite is usually taken forward, in an end-to-end position, with 2-3mm vertical opening between the **anterior**s.

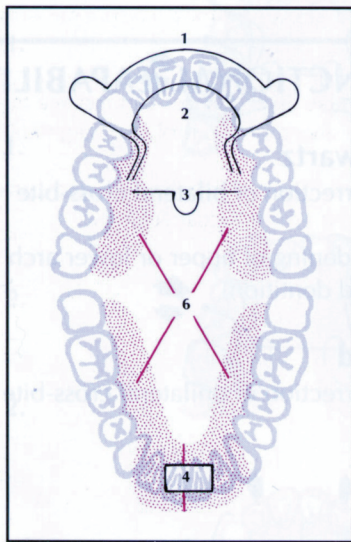
In detail... **BIONATOR**

JOHNS DENTAL LABORATORIES

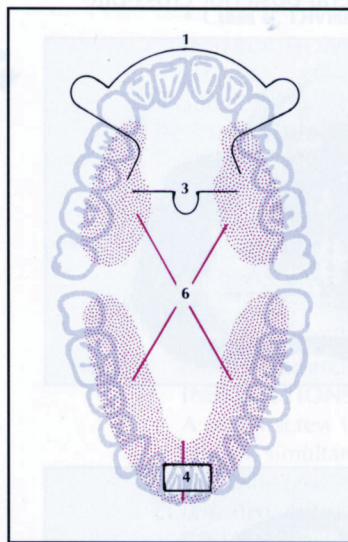
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ORTHOPEDIC CORRECTOR

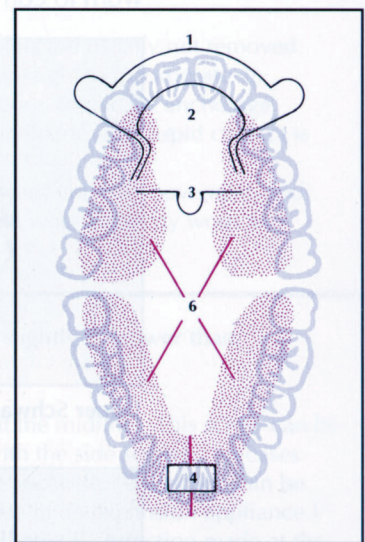
NOTE: At each appointment, be sure to verify that the **DESIRED RESULTS** are being achieved. Make adjustments accordingly. **JOHNS DENTAL** will be happy to discuss any questions you may have on a particular appliance.



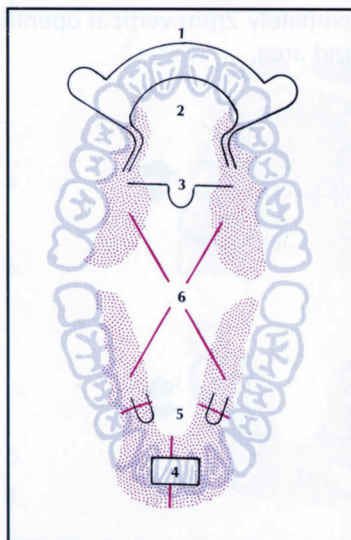
Bionator I (to open)



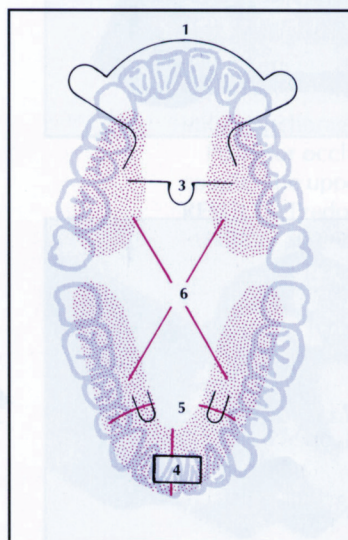
Bionator II (to close)



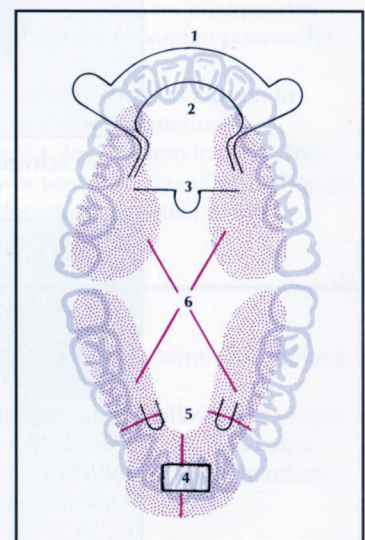
Bionator III (to maintain)



Orthopedic Corrector I
(to open)



Orthopedic Corrector II
(to close)



Orthopedic Corrector III
(to maintain)

WEAR:

For effective treatment, both the Bionator and the Corrector should be worn constantly, except when the patient is eating, brushing teeth or engaging in contact sports.

PARTS OF THE APPLIANCES:

1. **Labial Arch Wire**—Basically functions to contain anteriors and to help appliance maintain correct position in the mouth. For the first three months, wire is kept at least 1/2mm away from anteriors; later it can be used to consolidate anteriors.
If an adjustment screw is used in the appliance, the arch wire will usually need to be loosened, and should be checked at each appointment.
2. **Solid Lingual Arch Wire**—Most often used on appliances constructed to open the bite, this wire is primarily utilized to stabilize the appliance, helping the patient become accustomed to wearing it. In some cases, it can also be used for tooth movement.
If the adjustment screw is used, cut the wire at midline about two months after expansion begins, in order to prevent distortion of appliance.
Modifications of this wire can be made to change midlines, close diastemas or tip incisors labially.
3. **Coffin Wire**—Primarily works to stabilize the appliance; also used to help restrain the tongue. When an adjustment screw is used, this wire will probably require some adjustment (with flat-nosed pliers) at each appointment.
4. **Midline Screw**—Used to gain arch width in mixed dentition cases.
In permanent dentition with 2nd molar removal, any rebound from expansion tends to be distal, moving posterior teeth to a wider part of the arch and eliminating anterior crowding. (Six or eight quarter-turns of this screw are usually used to loosen interproximal contacts.)
5. **Side Screws**—Incorporated in the Orthopedic Corrector to allow additional forward repositioning of the mandible. These screws are utilized after the initial repositioning has been achieved.

NOTE: The lower interproximal acrylic MUST be removed before side screws are adjusted.

6. **Acrylic**—In appliances to open bite, an acrylic cap in the anterior region covers the lower incisors, restricting their forward movement. Usually, the upper centrals will contact the top of the cap.
A minimum amount of acrylic is used in the upper bicuspid area of the appliance to allow room for the tongue.

MODIFICATIONS:

- **Upper lingual springs** can be incorporated for labial development of the anteriors.
- **Crossover wires** can replace the solid lingual arch wire to close a diastema.
- **Crossover wires** can be used on **one side only** for correction of an imbalance between the dental and skeletal midline.
- **Double-lapped lingual springs** can replace the solid lingual arch-wire of the anteriors for cases needing minor rotation correction or advancement. **This does NOT substitute for a Sagittal for Class II, Division 2 cases.**
- **Reverse Sweep Wires** can replace the solid lingual arch and give more control for straightening rotated anteriors.
- **Buccal Springs** may be added to correct individual teeth which are in buccal version.

