Treatment of dental and skeletal Class II remains a major concern for orthodontists. Hubert Droy, a dental prosthodontics technician specializing in orthodontics for the past 15 years, has thought long and had about the conventional systems. Attentive to orthodontists’ needs and drawing on his own ideas, he fist devised in 2007 an innovative mandibular propulsion system, the Optimax laboratoire, equipped with non-dismountable vertical ball and socket joint which is both compact and perfectly adapted to the physiology of mandibular movements. This system has been tried and tested on numerous prototypes and has proven its efficacy in the propulsion correction of Class II malocclusions while enhancing patient comfort, the quality of sagittal discrepancy corrections and occlusal stability. The combination of a multi-attachment appliance and Optimax Lab has also been possible thanks to the adoption of an original retention system by means of molar hooks as well as the use of slide tracks. Optimax Lab is CE certified by the LNE (the French national test laboratory), a sure guarantee of quality. Since 2009 and Hubert Droy’s encounter with the orthodontist, Dr Benoit THEBAULT, Optimax Lab has been improved still further to provide a system which is now totally reliable, meeting the needs and demands of both patients and practitioners. Pooling their creativity, they have now developed Optimax Lab into Optimax Fix. The guiding principle underlying Optimax Fix has been to preserve the innovative solutions provided by Optimax Lab (comfort, functionality, reliability) and to combine them with a global multi-attachment technique while eliminating as far as possible the defects of existing systems (unwanted parasite movements, detaching, etc). Thus, Optimax Fix still boasts the efficacy and functionality of the original appliance, ensuring comfort, esthetics and the integrity of the multi-attachment appliance while reducing to a minimum any undesirable dental effects, notably at the mandibular incisors.

Class II, however, are not all of mandibular origin. Maxillary dental retraction, combined or not with mandibular dental advancement, is another possible cause. In order to achieve immediate distalization of the lateral segments without prior leveling, Optimax Distaler was devised. The distalizing force is provided by inter-maxillary traction supported by mandibular anchorage or by elastic modules secured to temporary anchorage devices (TADs). The Optimax Distaler can also be used on the mandible.

In summary, Optimax Laboratoire, Optimax Fix and Optimax Distaler, gathered under the “Optimax Global Class II treatment” concept, offer a broad range of therapies capable of resolving the majority of non-surgical Class II treatment indications.
Optimax Fix (O.Fix) is not just another fixed mandibular propulsion system.
• Anchored to the maxillary and mandibular 6s, it ensures stability and efficacy without calling on the multibracket appliance.
• Its dismountable design allows in situ adjustments at all times during treatment.
• Its vertical ball and socket hinges limit appliance volume and ensure excellent function, patient compliance and predictable results.

Fix, using a lingual archwire and/or a transpalatal arch provides optimum control over arch form and eliminates unwanted induced movements.

Optimax Fix can be adapted to the lingual technique:
• Specific molar bands are used (buccal tubes).
• Specific support is also created at 33 and 43.
• Optimax Fix dispenses with the need for heavy steel archwires and can be used during leveling using flexible NiTi-type archwires.

Step 1: Multiband appliance
1. Band the mandibular 6s fitted with EOT tubes or a rectangular twin tube to which the Optimax Fix mandibular auxiliary is secured.
2. Band the mandibular 6s fitted with EOT tubes to which the Optimax Fix lingual auxiliary is fixed.
3. Classic multibracket appliance bracket information and sizes at the practitioner’s discretion.
4. Leveling to the correct dental alignment and compensation of the natural curve.

Nota bene: Thanks to the action of the Optimax Fix, using a lingual archwire and/or a mandibular arch, specific support is also created at 33 and 43.

Optimax Fix comprises two components:
• A maxillary clip supporting the maxillary hinge and inserted into the EOT tube on the maxillary band. No adjustment of the maxillary clip is required. Only the length of the rod tube needs adjustment.
• A dual support mandibular auxiliary to be adjusted in situ according to mandibular morphology.

Time required for placement and adjustments: ½ hour
1. Try-out and adjustment of the mandibular auxiliary.
   - Insertion of the posterior segment into the molar buccal tube as far as the stop.
   - Adjustment of the auxiliary length and shape. The mandibular multibracket archwire is inserted in the anterior lock but not fixed, thus existing possible deformation.

Nota bene: The posterior segment can be rectangular in order to allow insertion into a Ricketts-type twin tube.
2. In situ propulsion of the mandible at the discretion of the practitioner.
3. A gauge is used to measure the distance between the anterior aspect of the EOT tube and the middle of the mandibular lock (middle of the tightening screw).

Nota bene: Measurements must be taken on both sides.
4. Placement of maxillary clip for verification.
   - The clip is inserted in the EOT tube up to the stop.
5. Removal of the mandibular auxiliary and the maxillary clip.
6. The two components are assembled back to front. The length and cross-section of the tube and rod are cut in one step. Polishing.
7. Final placement in the mouth:
   - Placement of the mandibular auxiliary. The posterior segment is ligated to the band.
   - Insertion of the maxillary tube in the mandibular rod. Rotation of the entire tube and rod appliance with mouth open and inser-
   - Positioning of mini 1 or 2 mm propulsion rings according to needs.
8. Verification of function (complete mouth opening, lateral movements) and of patient comfort.

Step 2: Try-out and placement of Optimax Fix

Step 3: adjustments during propulsion.

1. Removal of the maxillary clip. The mandibular clip is not removed. The ligatures are checked. The therapeutic impact is observed.
2. Adjustments during propulsion.
   - Positioning of mini 1 or 2 mm propulsion rings according to needs.
3. The maxillary clip is put back in place and ligated. Verification of function (complete mouth opening, lateral movements) and patient comfort.
4. Removal of the Optimax Fix. Stabilization of the Class II until occlusal interdigitation is obtained using Class II traction elastics.

Step 4: Following achievement of a Class I
On average, in the absence of any treatment complication, the Class II is corrected within 6 months.

Conventional flexible or rigid splint-type retainers... In extreme cases involving a risk of relapse, Optimax Lab retainers can be requested.

Step 5: Debonding

Finishing