# Class III Deep Bite
## Suggested Treatment Protocol

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| Phase | Archwires | Objectives | Duration in Weeks | Interval in Weeks | Notes | Early Light Elastics Begun at Initial Bonding[1] | Guideposts for Next Phase |
|---|---|---|---|---|---|---|---|
| **I. Initial Light-Wire** | **Damon Optimal-Force Copper Ni-Ti®**<br><br>.014 U/L<br><br>PRN, .013 U/L if crowding is severe or periodontal support is compromised<br><br>.018 U/L | •Begin leveling and alignment<br>•Initiate arch development without RPEs or W-arches<br>•Resolve 90% of rotations<br>•Extrude buccal segments<br>•Begin A/P correction and vertical correction | 10<br><br>6 – 8 | 10<br><br>6 – 8 | Always place stops anterior to crowding.<br><br>Use bite turbos (preferably behind L1s) to allow buccal segments to extrude. Disarticulation is also TMJ favorable.<br><br>**Reverse curve Ni-Ti is not recommended on upper arch.[2]** | **Quail** 3/16", 2 oz – Shorty CL III U5 to L3 or U6 to L4 – Full time | When 90% of rotations are resolved.<br><br>Do not rush this Phase. It must be possible to insert the first edgewise wires with minimal active engagement. If not, let the current wire work longer. Avoid the use of any wire "icing" product that would apply too high a force when the wire warms. |
| **II. High-Tech Edgewise** | **Damon Optimal-Force Copper Ni-Ti**<br><br>.014 x .025 U/L<br><br>10 weeks into this stage: Take Panorex & reposition brackets. Follow with .018 Cu Ni-Ti if brackets are drastically repositioned.<br><br>.018 x .025 U/L<br>or<br>PRN, Reverse a 017 x .025 Ni Ti® with 20° anterior torque U/L.[3] See Notes. Follow with same wire in .019 x .025 for 6 to 8 weeks if more torque required. | •Complete leveling and alignment<br>•Continue arch development<br>•Resolve remaining rotations<br>•Begin torque control<br>•Consolidate minor spacing | 10<br><br>6 – 8<br><br>8 - 10 | 10<br><br>6 – 8<br><br>8 - 10 | Typically use power chain under wire to consolidate minor spaces U/L 3 to 3. If consolidating minor spaces 6 to 6, run wire 7 to 7. If 7s are not erupted, consolidate 5 to 5. Run wire 6 to 6.[4]<br><br>Pretorqued wires counter effects of CL III elastics to keep upper incisors from proclining; lowers from retroclining. | **Parrot** 5/16", 2 oz – Sling U6 to L4 to U4 – Full time<br><br>PRN, **Dolphin** 5/16", 3 oz – Sling U6 to L4 to U4 – Full time<br><br>As soon as anterior bite has jumped, remove Bite Turbos. | When all brackets and teeth are aligned.<br><br>It should be possible to insert the working wires with minimal active engagement. If not, the case is not ready for Phase III. Avoid "icing" products. |

[1]In patients with very thin attached tissue, severe crowding or periodontal issues, waiting to start elastics until the second appointment may help prevent labial gingival recession. [2]Preserving a satisfactory smile arc in a deep-bite case usually precludes using a reverse curve archwire on the upper arch that would flatten it – even in cases with excessive gingival display. 90% of the correction should come from extruding the buccal segments and bringing the molars up and forward. It may also be advisable to intrude lower incisors and extrude upper incisors to enhance the smile arc. [3]Allowing staff to engage pretorqued wires is not recommended; wire orientation is critical and it is easy to reverse it inadvertently. [4]If consolidating space behind canines, keep power chain one tooth forward of end of wire to help prevent rotation.

# Class III Deep Bite (continued)
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| **III. Major Mechanics** | **Posted Stainless Steel**<br>.019 x .025 U<br>.016 x .025 L<br><br>The diligent use of early light elastics may shorten this phase. Once CL III is corrected or if no major mechanics are required, proceed to Phase IV. If additional posterior transverse width is desired, undertake this phase with elastics and expand wires slightly in the posterior. | •Take wax bite; coordinate patient-specific arch form<br>• Consolidate any remaining minor spacing<br>• Express majority of remaining torque<br>• Overcorrect A/P | 20 – 30 | 8<br>To preclude too much over-correction, do not allow intervals to extend beyond 8 weeks. | Once all spaces close, transition fro power chain to .008 or .010 wire to lace anteriors together; tie back to 6s to avoid reopening space.<br><br>When engaging elastics, use the wire posts to distribute forces over the archwire. | **Zebra** 5/16", 4.5 oz – Sling U6 to L4 to U4 – Full time<br><br>Alternative:<br>**Kangaroo** 3/16", 4.5 oz or **Impala** 3/16", 6 oz – CL III U6 to L Post – Full time<br><br>Watch upper anterior roots in relation to the labial alveolar plate as upper anteriors are detorquing | When the case is CL I and has been in an overcorrected position for 8 weeks. |
| **IV. Finishing** | **TMA®**<br>.019 x .025 U<br>.017 x .025 L | •Make final buccolingual, torque, A/P and occlusal adjustments | 15 – 20 | 4 – 6 until sectioning wire, then 2 | To engage elastics, crimp surgical posts on TMA wire to distribute forces over the archwire.<br><br>PRN to perfect occlusion, cut lower wire mesial to the teeth that still require better articulation.<br><br>Adjust posterior interferences with a high-speed handpiece and diamond bur, then polish, PRN. | **Quail** 3/16", 2 oz – Shorty CL III U5 to L Post – Full time<br><br>Overlay **Zebra** 5/16", 4.5 oz Posterior V – U6 to L4 to U Post Full time until socked in, then 12 hours daily (after school and nights)<br><br>PRN when sectioning wire, maintain Shorty CL III but switch from Posterior V to **Ostrich** 3/4", 2 oz – Spaghetti U to L 7 to 3 – Twisted in between. In the anteriors, end on lower Post – Full time | |

**These wire/elastics sequence recommendations have been shown to be effective when treating with Damon System mechanics. They are not a replacement for professional expertise.**

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