

# Mild Class II, Div 2 End-On or Mild Class II Deep Bite

## Suggested Treatment Protocol

For full Class II cases, employ functional appliance therapy, which varies greatly, and full Damon System treatment.

Phase	Archwires	Objectives	Duration in Weeks	Interval in Weeks	Notes	Early Light Elastics Begun at Initial Bonding <sup>1</sup>	Guideposts for Next Phase
I. Initial Light-Wire	<b>Damon Optimal-Force Copper Ni-Ti<sup>®</sup></b>  .014 U/L  PRN, .013 U/L if crowding is severe or periodontal support is compromised  .018 U/L	<ul style="list-style-type: none"> <li>• Begin leveling and alignment</li> <li>• Initiate arch development without RPEs or W-arches</li> <li>• Resolve 90% of rotations</li> <li>• Extrude buccal segments</li> <li>• Begin A/P and vertical correction</li> </ul>	10	10	Always place stops anterior to crowding.  Use Bite Turbos (preferably behind U1s) to allow buccal segments to extrude.  Disarticulation is also TMJ favorable.	<b>Quail</b> 3/16", 2 oz – Shorty CL II L6 to U4 – Full time	<p>When 90% of rotations are resolved.</p> <p>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.</p>
	6 – 8		6 – 8	<b>Reverse curve Ni-Ti is not recommended on upper arch.<sup>2</sup></b>			
II. High-Tech Edgewise	<b>Damon Optimal-Force Copper Ni-Ti</b>  .014 x .025 U/L  10 weeks into this stage: Take Panorex & reposition brackets. Follow with .018 Cu Ni-Ti if brackets are drastically repositioned.  .018 x .025 U/L or PRN, .017 x .025 Ni Ti <sup>®</sup> with 20° anterior torque U/L. <sup>3</sup> See Notes. Follow with same wire in .019 x .025 for 6 to 8 weeks if more torque required.	<ul style="list-style-type: none"> <li>• Complete leveling and alignment</li> <li>• Continue arch development</li> <li>• Resolve remaining rotations</li> <li>• Begin torque control</li> <li>• Consolidate minor spacing</li> </ul>	10	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. <sup>4</sup>	<b>Kangaroo</b> 3/16", 4.5 oz – Shorty CL II – L6 to U4 – Full time	<p>When all brackets and teeth are aligned.</p> <p>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.</p>
	6 – 8		6 – 8	Pretorqued wires counter effects of CL II elastics to keep upper incisors from retroclining; lowers from proclining.			
	8 - 10		8 - 10				

<sup>1</sup>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. <sup>2</sup>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. <sup>3</sup>Allowing staff to engage pretorqued wires is not recommended; wire orientation is critical and it is easy to reverse it inadvertently. <sup>4</sup>If consolidating space behind canines, keep power chain one tooth forward of end of wire to help prevent rotation.

# Mild Class II, Div 2 End-On or Mild Class II Deep Bite (continued)

## Suggested Treatment Protocol

Phase	Archwires	Objectives	Duration in Weeks	Interval in Weeks	Notes	Early Light Elastics Begun at Initial Bonding	Guideposts for Next Phase
<b>III. Major Mechanics</b>	<p><b>Posted Stainless Steel</b> .019 x .025 U .016 x .025 L (PRN, .019 x .025 L)</p> <p>The diligent use of early light elastics may shorten this phase. Once CL II 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.</p>	<ul style="list-style-type: none"> <li>• Take wax bite; coordinate patient-specific arch form</li> <li>• Consolidate any remaining minor spacing</li> <li>• Express majority of remaining torque</li> <li>• Overcorrect A/P</li> </ul>	20 – 30	8 To preclude too much over-correction, do not allow intervals to extend beyond 8 weeks.	<p>Once all spaces close, transition from power chain to .008 or .010 wire to lace anteriors together; tie back to 6s to avoid reopening space.</p> <p>When engaging elastics, use the wire posts to distribute forces over the archwire.</p>	<p><b>Kangaroo</b> 3/16", 4.5 oz – Full CL II L6 to U Post – Full time</p> <p>After 3 weeks, have patient advance to <b>Impala</b> 3/16", 6 oz Full CL II – L6 to U Post – Full time until overcorrected (edge to edge)</p> <p>Once overcorrected, have patient switch back to: <b>Quail</b> or <b>Kangaroo</b> – Shorty CL II L5 to U Hook – Wear often enough to keep edge to edge and hold for 8 weeks</p> <p><b>Never stop CL II elastics. Just shorten them or cut to half time.</b></p>	When the case is CL I and has been in an overcorrected position for 8 weeks.
<b>IV. Finishing</b>	<p><b>TMA</b><sup>®</sup> .019 x .025 U .017 x .025 L</p>	<ul style="list-style-type: none"> <li>• Make final buccolingual, torque, A/P and occlusal adjustments</li> </ul>	15 – 20	4 – 6 until sectioning wire, then 2	<p>To engage elastics, crimp surgical posts on TMA wire to distribute forces over the archwire.</p> <p>PRN to perfect occlusion, cut upper wire mesial to the teeth that still require better articulation.</p> <p>Adjust posterior interferences with a high-speed handpiece and diamond bur, then polish, PRN.</p>	<p><b>Quail</b> 3/16", 2 oz – or <b>Kangaroo</b> 3/16", 4.5 oz – Shorty CL II L5 to U Post – Full time for 8 weeks to prevent relapse</p> <p>Overlay <b>Zebra</b> 5/16", 4.5 oz Posterior V – U6 to L5 to U Post – Full time until socked in, then 12 hours daily (after school &amp; nights)</p> <p>PRN when sectioning wire, maintain Shorty CL II but switch from Posterior V to: <b>Ostrich</b> 3/4", 2 oz – Spaghetti U to L 7 to 3 – Twisted in between. In the anteriors, end on U Post mesial to 3s – Full time</p>	

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.