



Thermoformed implant guides

By Peter Herring, Adv Dip Dent Tech, ACCDP

Guides (stents) to assist in the planning and positioning of implant sub- and supra-structures are an essential tool for effective treatment planning of these cases. Here we will

describe the construction of a simple implant guide which can be used “as is” or modified to allow for a more precise angulation and placement of the implant bodies.



Step 1. Set up teeth into the gap. Duplicate the model and thermoform over the duplicate. Use a 1.5-2.0mm clear copolyester. If the teeth are set up in a high-fusing wax they can be thermoformed directly obviating the need for duplication.



Step 2. Thermoform and cut out to the required shape - similar to figure.



Step 3. Open windows for drilling tubes or as a simple guide.



Step 4. In this case, the incisal and palatal part of the anterior teeth is removed.



Step 5. If it is planned to modify the splint further with the addition of drilling tubes, cover the areas where the auto acrylic material will be with little monomer.



Step 6. The planned free space between the splint and the tissue is filled with the Erkogum silicone material.



Step 7. Replace the splint and fix the tubes into the Erkogum.



Step 8. Fill up the splint with self curing acrylic. If necessary, seal the splint with the Erkogum towards the model to contain the acrylic.



Step 9. The completed drilling template allows for very precise positioning of the implant.



Mesial view of the completed drilling template.

About the author

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Thermoformed Implant Guides - Part 2

By Peter Herring, Adv Dip Dent Tech, ACCDP

In this article, we will describe the construction of a more complex implant orientation guide which can be transformed into a drilling guide for implant placement after use as a diagnostic tool. There

are of course many different designs of implant guides. This method gives the dentist a guide for parallelism, shows the projected tooth boundaries as well as maximum freedom for implant positioning.

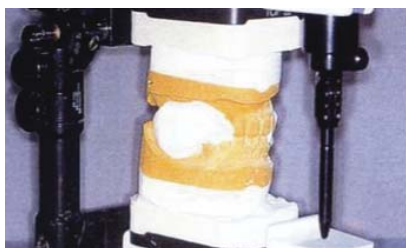


Figure 1. Articulator with the models in centric position.



Figure 2. View of the model to help with regards to bone supply.

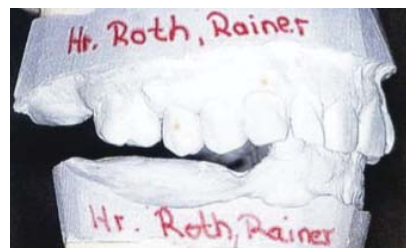


Figure 3. Insufficient space constricts the choice of the implant system.



Figure 4. Good occlusal space for an uncomplicated implantation.



Figure 5. Trial wax up to determine aesthetic and functional requirements.



Figure 6. Duplication of the wax-up.

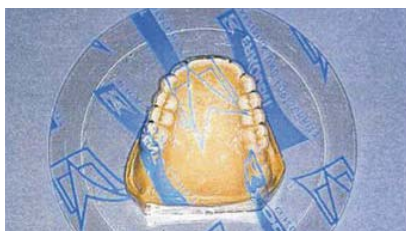


Figure 7. Thermoform over the duplicate.



Figure 8. The trimmed splint.



Figure 9. Mark the intended position.



Figure 10. Attach the x-ray markers with methyl methacrylate.

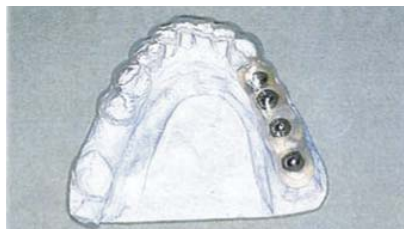


Figure 11. Markers attached to the stent.



Figure 12. Treatment planning model complete.



Figure 13. Markers removed allowing freedom to position the implants.



Figure 14. First step towards the drilling stencil.

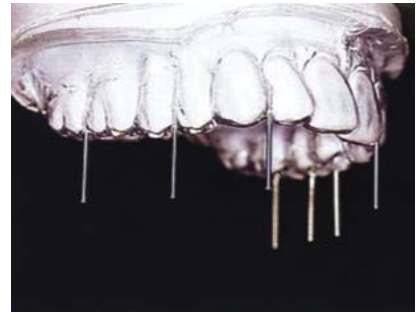


Figure 15. Position the removable drill guide pins with methyl methacrylate.

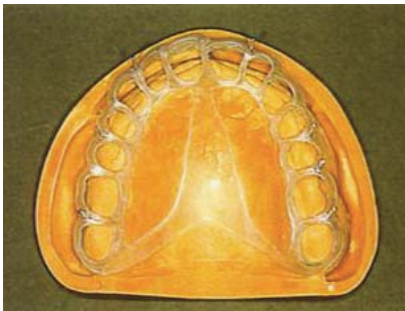


Figure 16. Guide pins showing parallelism.

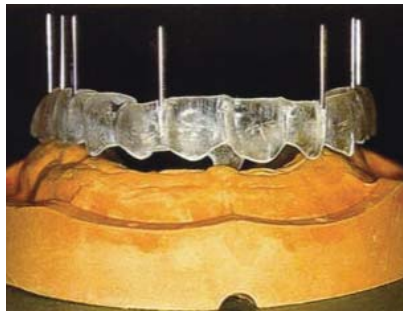


Figure 17. Side view of guiding pins.

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