

# TECHNIQUE CLINIC

## Simplified Multistranded Retainers

**B**onding multistranded retainers can be both time-consuming and technique-sensitive; in fact, some clinicians avoid using them in view of their bond failure rates. This article presents a simple and effective method for directly bonding multistranded retainers using an index and flowable light-cured resin.

The procedure is described for a right-handed operator:

1. Take a sectional alginate impression at the visit before retainer placement. If fixed appliances are present, block out the brackets with soft carding wax, and load the tray on the lingual side only to minimize flow toward the brackets. The impression should include all the teeth to be incorporated in the retainer, plus two teeth distal to these—the “index teeth” on the left side.
2. Form the retainer on the cast with a multistranded wire—an .0215" five-stranded type works best. Extend a wire tag distolingually, keeping it 1-2mm away from the index teeth. Fabricate the index from self-curing acrylic so that it covers these two teeth, incorporating the tag and extending 2-3mm gingivally (A).
3. Prepare the lingual tooth surfaces as usual for bonding. Position the dental chair to allow access to and direct vision of the bonding site (45° incline for the lower arch, horizontal or slightly inverted for the upper). Remove

any calculus deposits from the lingual enamel surfaces using a No. 8 round tungsten carbide finishing bur, then pumice, rinse, and dry the teeth. Isolate the labial segment with labial and lingual cotton rolls. Acid-etch the lingual enamel surfaces, then thoroughly rinse and dry them. Replace the cotton rolls, and recheck the enamel for the appropriate dry, frosted appearance. Apply and cure the unfilled, light-activated resin.

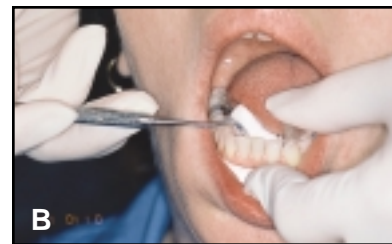
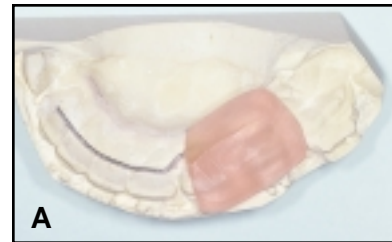
4. Place the retainer in the mouth, supporting the index with the left thumb (B). This ensures that the retainer wire is held in the correct position. The right hand is then free to flow the filled resin around the retainer wire and to cure it. The resin should be thin enough to allow contouring to a low profile; Transbond LR\* is ideal.

5. Remove the index by cutting through the tag with a green abrasive stone, and smooth the end of the retainer wire.

This method has the following advantages:

- Ensures accurate placement.
- Reduces chairtime.
- Minimizes the risk of losing the retainer wire during transfer to the mouth.
- Allows direct vision of the bonding site, decreasing the likelihood of bond failures.

\*3M Unitek, 2724 S. Peck Road, Monrovia, CA 91016.



- Avoids contamination because etching and priming are performed without the wire in place.

For best results, particular attention should be paid to chair position, enamel surface preparation, and meticulous moisture control at the critical stage of unfilled resin application. The filled resin should be contoured to minimize the shearing effect of masticatory forces. With proper attention to detail, this technique should reduce bond failures and enable retainers to remain in place for many years with minimal maintenance.

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