

This guide will help clinicians solve speech complications from full arch prosthetics. Due of changes made to esthetics, vertical dimension and arch form to the original tooth position, solutions are not always fully resolvable, yet improvements should be realized through this guide.



Sound Groups

D-N-T Sounds - tongue to hard palate

1. Adjust the lingual area behind the teeth to be thinner while keeping enough bulk of material for strength (3-4mm of acrylic thickness lingual to the access hole in the provisional). The goal is to have as little acrylic over the incisive papilla as possible and still maintain strength.
2. If needed to maintain material thickness, change abutment angles to move the screw access hole(s) closer to the teeth allowing for less bulk of acrylic lingual to the screw access hole. If possible, rotate an existing abutment to achieve the same goal as above.

Adjustment Test Phrase

Detention

L Sounds – tongue to lingual of anterior teeth

1. Anterior teeth are placed too far facially or too far lingually.
2. When teeth are too far forward, acrylic can be added to the lingual of the teeth. The facial and lingual acrylic is then adjusted until the correct speaking position for “L” is found.
3. When teeth are too far to the lingual, acrylic can be added to the facials of the teeth. The lingual and facial acrylic is then adjusted until the correct speaking position for “L” is found.

Adjustment Test Phrase

Lolly

TH Sounds – tongue between upper and lower anterior teeth

1. Check the freeway space. There should be a minimum of 2–3mm between maximum intercuspation and the rest position.
2. If there is not enough freeway space (too much VDO) grind the occlusals of the posterior teeth on either upper or lower arch, or both, to provide more freeway space and reduce VDO. Anterior teeth may need to be adjusted also.
3. If anterior teeth (upper or lower) are not long enough (tooth display) add composite to incisal edges to correct the discrepancy.

Adjustment Test Phrase

Thirty-Three

S-Z Sounds – teeth to teeth

1. If space exists between the appliance and tissue and the appliance cannot be removed, flowable composite, VOCO or acrylic can be injected into the open spaces between the tissue and the intaglio surface of the appliance which creates a tissue seal around the bridge to prevent whistling and air flow under the bridge.
2. If the maxillary anteriors are in the correct esthetic position, shorten the mandibular teeth until the “S” sound is corrected.
3. If maxillary teeth are too short, lengthen them with flowable composite until the “S” sound is corrected.
4. If the upper and lower come into heavy contact when making the “S” sound, and the patient cannot pronounce “S” correctly, there may be a lisp. Adjust the incisal length of the upper or lower anterior teeth.

Adjustment Test Phrase

Mississippi

SH Sounds – tongue to posterior teeth

1. Posterior arch form is too narrow or there is too much VDO. Grind the lingual flange areas to make room for the tongue. If necessary, grind the linguals of the posterior teeth also to make more room for the tongue.
2. Consider creating a slight overjet or cross-bite on the mandible to make more room for the tongue. In many cases the patient will just have to adapt.

Adjustment Test Phrase

Shimbashi

F-V Sounds – upper incisors to lower lip

1. Maxillary anterior teeth that are set too high, or too low, will impact this sound. Reduce the incisal length with a bur or lengthen by adding composite to the incisal edges of the teeth.
2. Reaching with the lower lip to find contact with the upper incisal edges is a telltale sign of a problem. The jaw will move forward to allow the lower lip to find the incisal edges of the upper. Add length to the upper incisal edges until the “F_V” sounds are distinct.

Adjustment Test Phrase

Fifty-Five

B-M-P Sounds – lip to lip

1. Female patients may complain that they cannot roll their lips together when applying lipstick.
2. Close the patient’s vertical dimension of occlusion, which will increase freeway space.
3. If anterior teeth too far forward, bring teeth lingually to allow space for normal lip function.

Adjustment Test Phrase

Bump