

STUDY MODEL TRIMMING

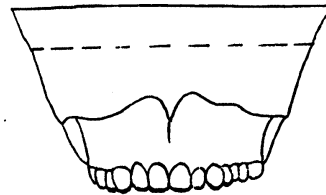
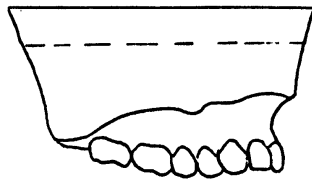
Rational: Accurate trimming of orthodontic study models facilitates proper diagnosis and treatment planning. Well-trimmed, esthetically pleasing models reflect the practitioner's attention to detail and are a part of the patient's legal treatment record.

Technique

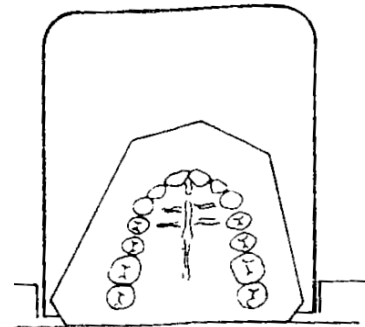
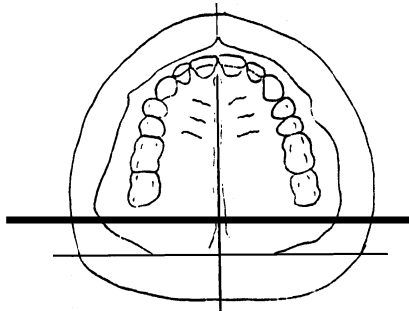
1. Pour impressions
 - Blow excess water from impressions, but do not desiccate
 - Mix **white** stone and plaster in a 50:50 ratio
 - Vacuum mix stone mix for 10-20 seconds to remove air
 - Carefully vibrate stone into impressions and bases
 - Place filled impressions onto filled bases, centering midlines
 - Allow stone to set completely before separation (30-60 minutes)

2. Pre-trim check
 - Check occlusal surfaces for obvious bubbles, remove as needed
 - Trim gross excess and plaster extensions (distal of mandibular molars) which interfere with proper occlusion in wax bite
 - Soak models in water to facilitate trimming
 - **Set table at 90° to wheel** (check with jig)

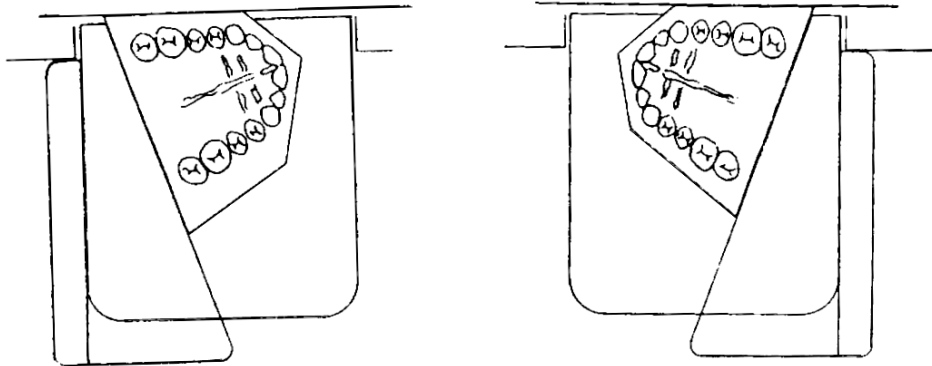
3. Trim Maxillary Cast
 - Grind the base of maxillary cast parallel with occlusal plane



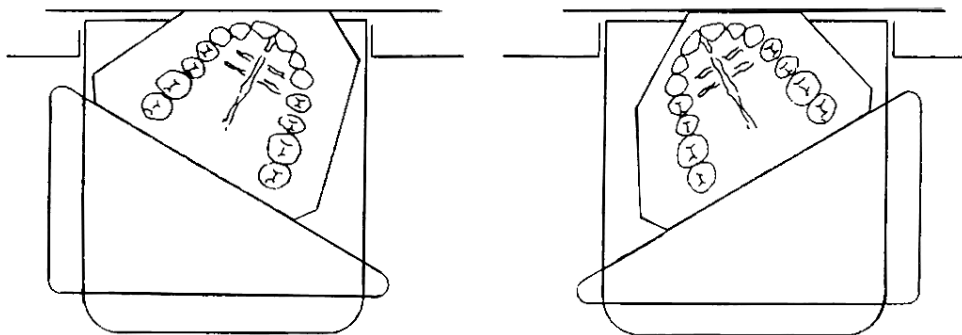
- Grind the heel of maxillary cast perpendicular with mid-palatal raphé



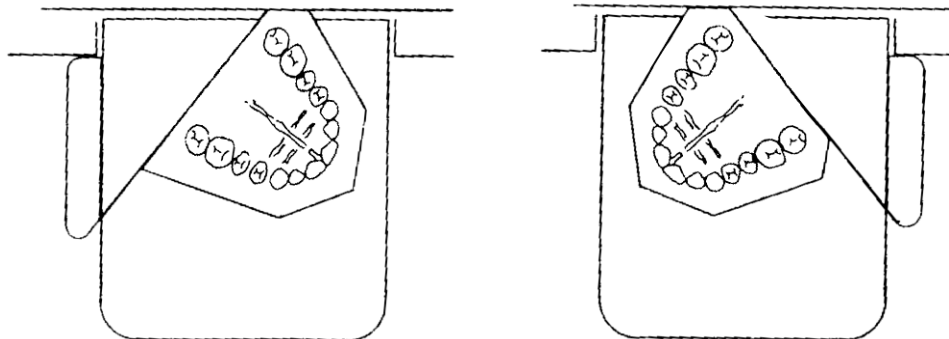
- Using the 30° jig, cut the sides of the maxillary cast 60° to the base—**do not overcut!!** The center of the cut should be to depth of the vestibule



- Using the large 60° jig, cut the anterior of the maxillary cast at 30° to the base. These cuts should start at the canine and end at the midline and should be equal in length.

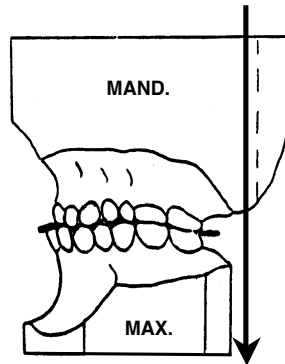


- Using the small 60° jig, cut the posterior angles of the maxillary cast at 120° to the base. These cuts should start be equal in length.

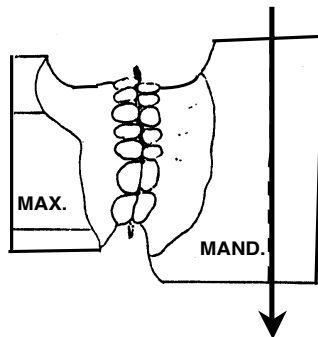


4. Trimming the mandibular cast

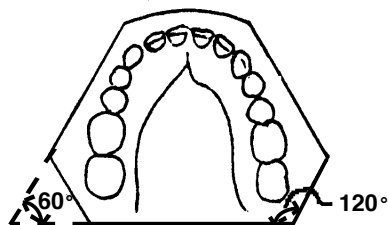
- Using the wax bite, place the casts together in occlusion
- With the base of the maxillary case on the table, grind the heel of the mandibular cast parallel with that of the maxillary cast



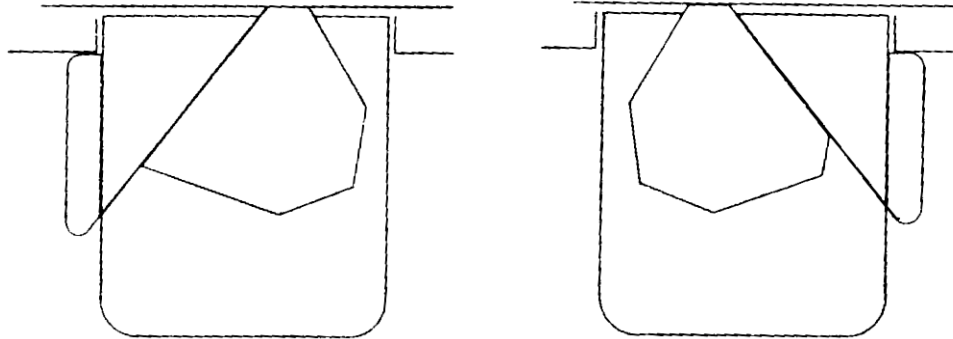
- place the mandibular heel on the table and grind the base of the cast parallel with the maxillary base



- with the models articulated, trim the sides of the mandibular cast at 60° to heel with the jig, as described above
- keeping the models articulated in the wax bite, trim the heels flush and then trim the sides (at 60°) flush
- round the anterior portion of the mandibular cast smoothly from canine to canine



- lastly, articulate the models and trim upper and lower distal corners flush at 120°



5. Check Bases

- The maxillary and mandibular models should sit in occlusion when placed on the heels, distal corners and sides
- Lightly freshen up all parallel sides with casts in occlusion as needed
- Bases should be symmetric and 1/2" to 5/8" thick

6. Finishing

- Smooth scratched bases with wet/dry sandpaper
- Fill any voids with a 50/50 mix of plaster & stone, re-sand smooth
- Remove fins of plaster on vestibules or bases
- Label models with last name, first name, age in years-months (e.g. 30-8), date the records were taken, and chart #
- Allow to completely dry and soak in model gloss, if available