The Hanau™ Modular Articulator System 194
Fixed 11 cm width, adjustable Radial-Shift Guidances

Illustrated Instruction Manual
A Study Case for Occlusal Analysis

This instruction manual illustrates the preparation and adjustment of the Hanau™ Modular Articulator for complete denture prosthodontics.

The Hanau™ Spring-Bow is used in this text to record and transfer the patient’s condyle/maxillary arch relation to the Modular Articulator.

Master casts of the maxillary and mandibular edentulous arch are required. Stabilized baseplates with occlusal rims have also been prepared previously.

Three interocclusal relation records are preferred. One centric relation; one right and one left lateral are required. If elected, an alternate straight protrusive may be substituted for the laterals.
Illustrated Procedure

1. Heat forks of bitefork and pierce into the upper wax rim.

   - Wax rim.
   - Pierced and rigid.
   - Stem at left.
   - Do not distort occlusal surface.

2. Lower occlusal rim & upper occlusal rim/bitefork assembly seated in patient’s mouth.

3. Spring-bow application.

   - Earpiece.
   - Orbitale.
   - Bow.
   - Bitefork stem.
   - Transfer rod.
4  Remove the Spring-bow from patient.

5  Attach anterior elevator to the Spring-bow transfer rod.

6  Disengage both centric latches and remove upper member.
7. Set both condylar inclinations at 0 degree.

Loosen thumbscrews and rotate both guides to zero degree and re-tighten.

Zero.

8. Set right and left radial-shifts at 3 mm and Bennett angles at 6.

Radial-shift at 3 mm,
Tighten thumbscrew.
Bennett angle at 6,
Tighten thumbscrew.

9. Set incisal pin at mid-line, chisel end down as shown, and attach a mounting plate.

Lock.
Mid-line.
Incisal pin.
Mounting plate.
Chisel end.
10 Replace upper member and lock articulator in centric.

11 Align adjustable incisal guide.

12 Attach accessory cast support.
13 Remove earpieces and suspend Spring-bow from condylar shafts on articulator.

14 Elevate Spring-bow to align orbitale pointer at underside of mounting plate.

15 Additional weight of stone cast is supported by the tee of cast support.
16 Seat and lute upper cast in the baseplate.

17 Attach the upper cast to the mounting plate.

18 Loosen bitefork clamp “3” and remove bow, cast support and carefully – the bitefork.

To prevent distortion of the occlusal surface, bitefork may remain until tooth set-up.

Do not distort occlusal surface.
19 Centric record compensation = thickness at second molar x 3.

20 Turn articulator over and attach a mounting plate.

21 Seat and lute lower cast in baseplate.
   Position and lute upper/lower rims in centric.
22 Mount the lower in centric using stone or plaster.

23 Place articulator upright and remove centric relation record and dual-end pin.

24 Release both latches. Loosen left thumbscrews for inclination and radial-shift.
25  Place the right lateral relation record between the upper and lower rims.

26  Hold rims in right record. Rotate left guidance to contact the superior surface with the condylar element.

27  The left guidance has been rotated to contact the superior surface with the condyle.
28 Slide the radial-shift to contact the medial of condylar element.

Slide the radial-shift to contact.

Tighten thumbscrew last.

Element.

Hold upper in right lateral.

29 The 6 degree left Bennett (radial-shift) has contacted the condylar element.

Slide to contact 6° Bennett with condyle.

In right lateral

6°

Radial-shift.

30 Loosen right thumbscrews for inclination and radial-shift, place left lateral record between bite rims.

Thumbscrew for radial-shift.

Thumbscrew for condylar inclination.

Left lateral record.
31  Hold bite-rims in record. Rotate right guidance to contact the superior surface with the condylar element.

32  Slide the radial-shift to contact the medial of condylar element.

33  Remove left lateral record, lock in centric and replace incisal pin. Check alignment.
34 Six upper and six lower anteriors arranged for esthetics and phonetics.

35 Loosen centric latches and protrude: lingual of upper to incisal of lower...

36 Rotate adjustable incisal guide to contact central table with chisel end pin.

Protrude and lift off.

Chisel end contacting central table...

Then tighten small locknut.
37 Guide the upper cast to a right lateral, cusp-to-cusp relation and...

38 Turn thumbscrew to elevate lateral wing to contact the corner of incisal pin.

39 Thumb guide the upper cast into a left lateral cuspid-to-cuspid relation and...
40  Raise the lateral wing to contact incisal pin, secure both wings with locknuts.

41  Remaining teeth are set into occlusion and checked in working, balancing and protrusive.
**Alternative Straight Protrusive Hanau Formula**

\[ L = \frac{H}{8} + 12 \]  
(substitute for steps 24 through 32)

**42**  
Lock articulator in centric. Set both left and right radial-shift at 0 mm and lock with thumbscrew

![Diagram showing articulator with radial-shift at 0 mm, tightened thumbscrew, and locked in centric.]

**43**  
Set both left and right Bennett angles at 30 degree. Loosen centric latches and thumbscrews for condylar inclination.

![Diagram showing loosening thumbscrew, latches, and setting at 30 degree.]
44 Place the protrusive relation record between the upper and lower rims.

45 Hold upper rim in record. Rotate both guidances to contact superior surface with condylar element.

46 The right and left Bennett has been rotated to contact the superior surface with the condyle. Lock thumbscrews.
Adjust right and left Bennett angles to Hanau formula.

Hanau Formula for Bennett angle:
L = H/8 + 12

H is horizontal condylar inclination (protrusive angle).
L is the calculated Bennett angle.

Example.

The right condylar inclination is 44 degree and is divided by 8 and accepted as 6 to which 12 is added, totaling 18 degree.

44/8 + 12 = 18°

44° condylar inclination.

The right Bennett angle is illustrated and is then adjusted to 18° and locked.

This completes the articulator adjustment. Record all of the settings for future reference.— right and left Bennett angles, right and left radial-shift, right and left condylar inclinations, the articulator serial number, and patient name and date, etc.
Articulator Care and Maintenance

Your Whip Mix articulator is a precision instrument and requires care and maintenance. Periodic cleaning and lubricating as described below will assure prolonged life and dependable service from the instrument. Failure to follow these instructions will void your warranty.

CLEANING
Use a mild soap and water solution with the aid of a brush to dissolve accumulations of wax and to wash away carborundum grit. Then air dry and lubricate. DO NOT use strong detergents, alkalies, gasoline or naphtha as cleaning agents!

LUBRICATION
Lubricate the working and bearing components with a thin film of sewing machine or high speed handpiece type oil. Wipe off excess oil to prevent accumulations of dust or grit. A thin coating of petroleum jelly must be applied to all articulator surfaces that will be contacted by the gypsum mounting material.
Lubrication points.

STORAGE
Store the articulator in a clean, dry atmosphere free of plaster and carborundum dust; away from acids, alkalis or corrosive medicaments. Wait a full day after mounting casts before storing the articulator in a carrying case or corrugated carton. Moisture dissipation from the stone in an enclosed area causes alkalinity of the stone mixture which can damage the articulator surface.

Mounting Plate thumbscrew, clean as necessary.
Pull
Unscrew
Remove
Clean and
Replace
WARRANTY
Whip Mix Corporation warrants the articulator system to be free from defects in material and/or workmanship for a period of one year. In the event of a defect, please notify the factory in writing of the defect prior to returning the instrument. Whip Mix Corporation will, at its option, either repair, replace or issue credit for such defects.

Because Whip Mix Corporation is continually advancing the design of its products and manufacturing methods, it reserves the right to improve, modify or discontinue products at any time, or to change specifications or prices without notice and without incurring obligations.