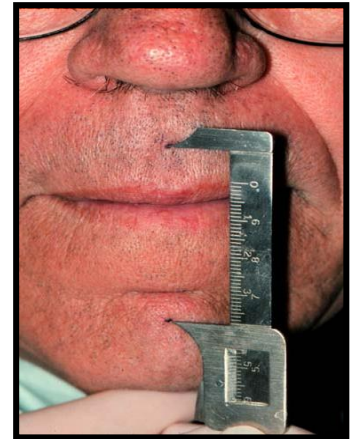
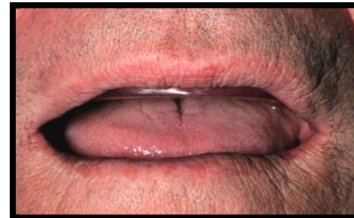


Clinical Procedure of maxillomandibular relation recording:

1. It represents third clinical step in complete denture construction. Establish the V.D.R and record the distance between two points marked on nose and chin by indelible pencil.

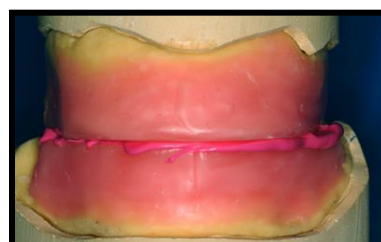
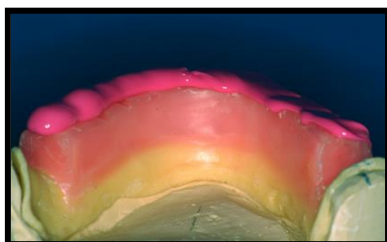
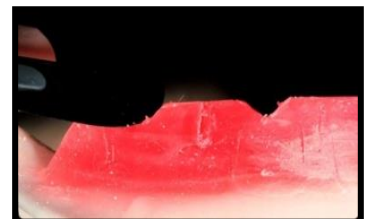
2. The maxillary occlusion rim contoured and the level of occlusal plane should be determined by fox bite and 2mm below the upper lip.



3. Upper and lower bite rims height should be adjusted until getting V.D.O approximately (2-4mm) less than the V.D.R.



4. Prepare (3-4mm depth) V-shaped grooves bilaterally in premolar area of upper and lower bite rim. Recording material (soft wax, ZOE and plaster) should be placed over the lower bite rim to record the relation.



Or Prepare (3-4mm depth) V-shaped grooves in the upper bite and remove part of the lower bite rim wax (2-3mm) from premolar area to its end posteriorly from both sides and replace it by making a role of soft base plate wax (4-5mm length).



Or you can use a thin role of soft wax without removing from the bite rim.



5. We can record the relation between upper and lower bite rime by one of the following:

A. place the index fingers bilaterally on the buccal flanges of lower record base in the second premolar areas.



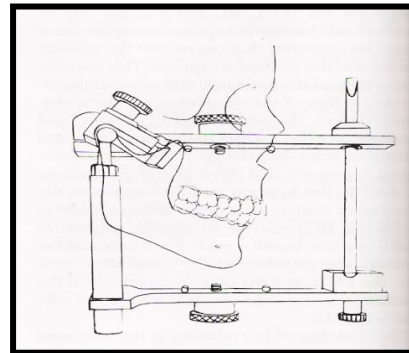
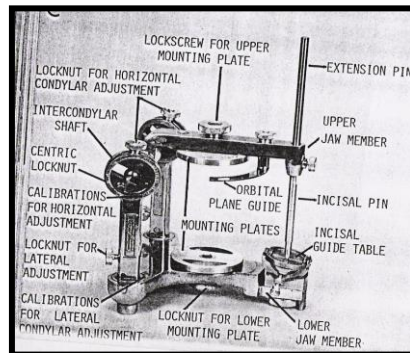
B. Stabilize the upper denture base by forefinger and thumb of one hand the thumb of other hand used to guide the mandible.

C. Request the patient to retrude the mandible and close slowly until reaching the V.D.O.

6. Allow the recording material to set, then remove the assembled occlusion rims together (upper and lower) from the mouth as one unite.

7. Place and fix the upper and lower bite rims on their casts. Then finally mounting the casts on the articulator.

The Articulator: It is a mechanical device which represents the T.M.J and jaw members to which maxillary and mandibular casts may be attached to simulate some or all mandibular movements to aid in the study of occlusion existing in natural dentition.



Requirements of articulators:

1. It should hold the casts in the correct horizontal relationship.
2. It should hold the casts in the correct vertical relationship.
3. It should provide a positive anterior vertical stop by the use of its incisal pin.
4. The moving parts should function freely.
5. The non moving parts should be of rigid construction.
6. It should open and close in a hinge-like movement.

Purpose of an articulator:

1. Transfers the relation from the patient to the articulators.
2. Hold the upper and lower casts in predetermined relation.
3. Stimulate jaw movements like opening and closing.
4. Produce border movement (lateral and protrusive).

Classification of articulators:

(A) Plain line or simple hinge or non-adjustable or class I:

1. It permits only vertical motion (opened and closed to record centric relation).
2. It orients opposing casts to each other without relation to anatomical landmarks.
3. It doesn't allow adjustment.
4. Like slab articulator.

(B) Mean value type with fixed condylar path and incisal incline or class II articulator:

1. It permits horizontal and vertical motion.
2. It doesn't orient the motion in relation to T.M.J with a face bow.
3. It doesn't allow adjustment.
4. like hall articulator.

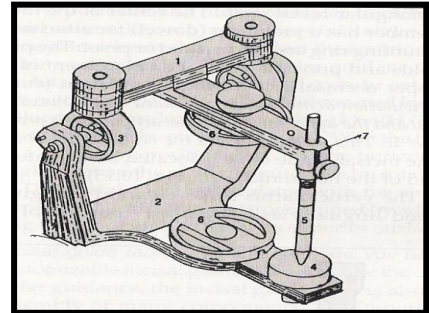
(C) Semi-adjustable articulator or class III:

1. It simulates condylar pathways and permits horizontal and vertical motion (accept centric and protrusive maxillomandibular relation records).
2. It orients the casts relative to the joints so they accept face bow transfer.
3. It allows adjustment of condylar paths and incisal table to replicate average mandibular movements.
4. like dentatus and hanau models.

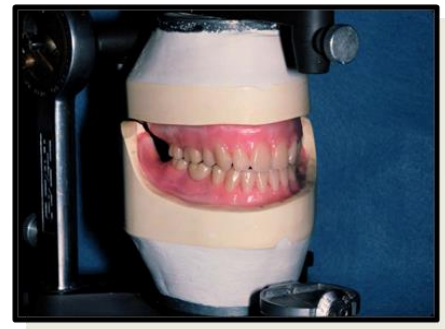
➤ Semi-adjustable articulator has two types of instrument:

- Arcon
- Non arcon

***Arcon** is a contraction of the beginning of the words articulator and condyle, is used to describe an articulator containing the condylar path or guidance (fossa assemblies) within its upper member.



***Non arcon** has the condylar path attached to lower member.



(D) Fully adjustable or class IV:

1. It can accept three dimensional registrations centric, protrusive and lateral maxillomandibular relation records.
2. It orients the casts relative to the joints.
3. It allows adjustment to replicate of all mandibular movements.
4. like denar model.



Face-bow: is a caliper-like instrument used to record the spatial relationship of the maxillary arch to the condyles or TMJ, and then transfer this relationship to the articulator.

**** There are arbitrary (used in CD construction) and kinematic face-bow.***

Components of the face-bow:

1. *U-shaped frame*: extend from the region of T.M.J to position (5- 7.5cm) in front of the face and wide enough to avoid contact with the side of the face.



2. *Condyle rods*: they contact the skin over T.M.J.

3. *Fork*: It is attached to the face bow by means of a locking device which also serves to support the face bow, the occlusion rims and the casts while the casts are being attached to the articulator.

