



# **AD2 ARTICULATOR CONTROL (TEST COLUMN) MANUAL**

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## Test Column

As its name indicates, it is a cylindrical structure, 56 mm. in diameter and weighs about 1 kg. (2.2 pounds) (Fig.1). It is placed in the articulator periodically to check the calibration of the articulator. Its size and weight represent the mounted casts.

To make the test column, a dental stone key of the test column must be made in the lab and it must fit perfectly to the column. It is very important that this key is made with extra-hard stone to avoid any changes or deterioration of the key.

This procedure is done only once for each articulator, so the key must be placed in a safe area and only taken out the day the calibration will be made (once every 3 months). If the articulator is still calibrated correctly, both devices are stored, but if not, the articulator must be sent to the manufacturer to be re-calibrated.

The test column in itself is useless since it must be “individualized” for each articulator, which can only be achieved through the dental stone key. Each articulator must have a test column and its dental stone key.



Figure 1. Test Column.

## Materials to calibrate the articulator

1. Articulator
2. Test Column
3. Metallic or plastic mouting plate for the upper frame
4. Extra-hard dental stone (plaster)
5. Plastic ring to control the dental stone (plaster) with its black elastic band
6. Separating medium



Figure 2. Materials to make the test column

## Steps to make the test column dental stone (plaster) key

### Step 1

Attach the test column to the lower frame of the articulator, as you would a mounting plate.



### Step 2

Screw on the metal plate to the upper frame. Picture shows plastic mounting plate. Use the black metal mounting plate that comes on the articulator.



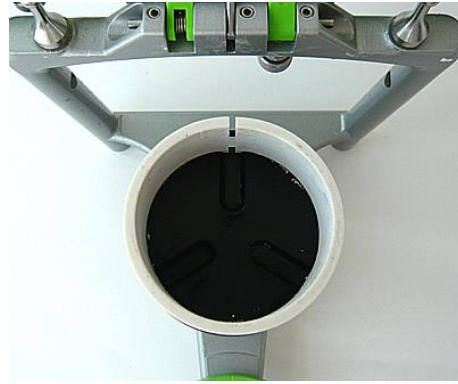
### Step 3

Apply a thin layer of separating medium over the top part of the test column.



**Step 4**

Perfectly adapt the white plastic ring around the perimeter of the test column to contain the plaster.

**Step 5**

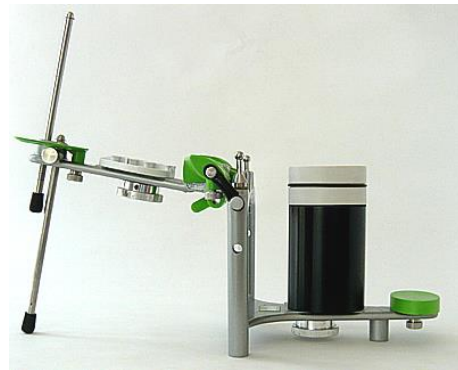
Place the pin of the articulator at zero.

**Step 6**

Close the articulator and observe the space between the mounting plate and column is small so not much plaster has to be prepared in order to join both parts.

**Step 7**

Open the articulator 180° towards the back and set the posterior pin so that the upper frame is parallel to the floor.



### Step 8

Prepare extra hard plaster until creamy and pour it over the upper surface of the test column, reaching  $\frac{3}{4}$  the height of the plastic ring. Add the plaster slowly at first so that it adapts exactly in the grooves in the test column. Vibrate it properly.



### Step 9

Place some extra hard plaster when creamy in the center of the upper plate.



### Step 10

Close the articulator until the anterior pin contacts the incisal table.

Check that it is maintained at the zero mark and that both parts are in contact.

Hold this position until the plaster starts to set. Hold the frames together with a strong rubber band or place some pressure on the top of the articulator.



### Step 11

Once the plaster has set, carefully remove the plastic ring and then open the articulator to separate the plaster from the test column. This block of plaster united to the mounting plate is the key to check the accuracy of the articulator.

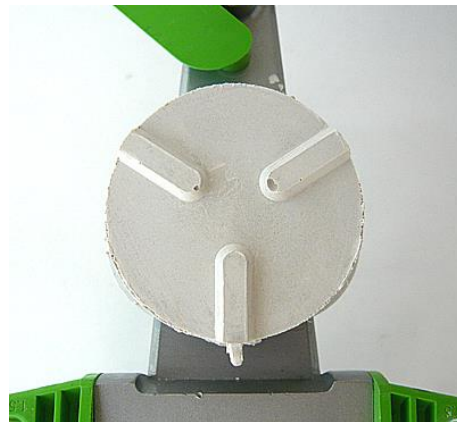


**Step 12**

Gently open the plastic ring and remove the plaster key.

**Step 13**

With a soft brush, remove any particles and separating medium.

**Step 14**

Carefully open and close the upper frame several times and observe the fit between the plaster key and the test column. The fit must be perfect around the entire perimeter of the column.



This procedure, repeated periodically, will check if the articulator's calibration is still the same as when it was new.

**Step 15**

Clean the test column and remove it and the key from the articulator. Store it somewhere safe.

On the side of the plaster key use permanent marker and write the serial number of the articulator.

