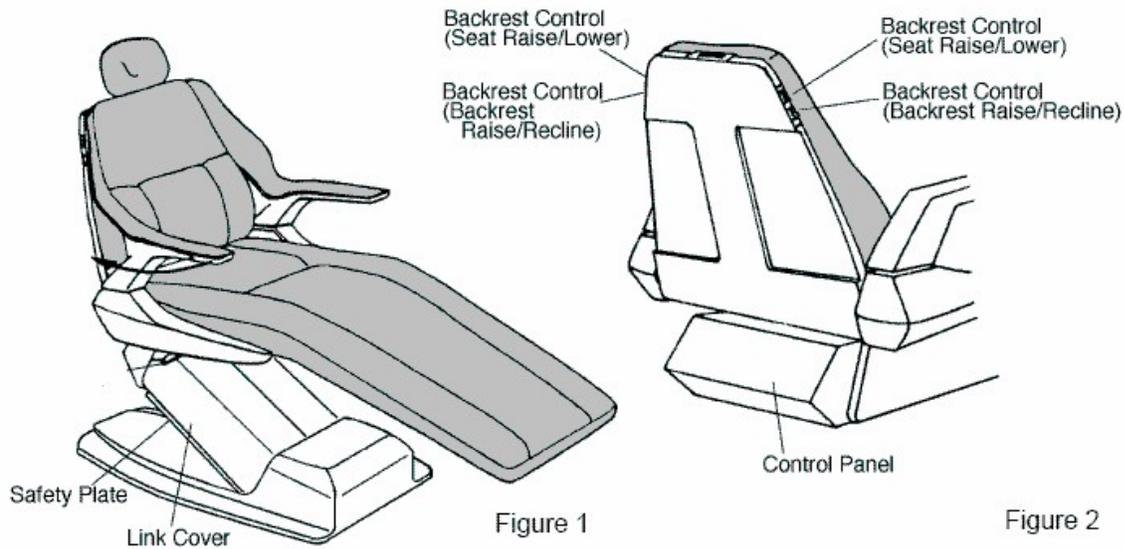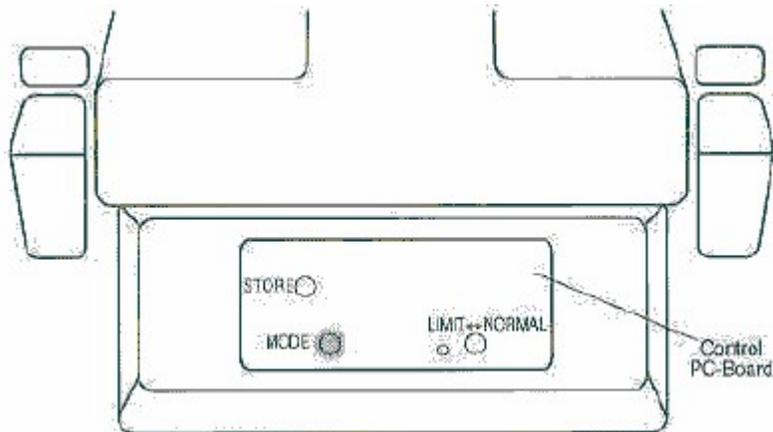## BEL-20 Dental X-Calibur Chair Limit Setting Procedures

The Bel-20 motion limit controls are located in the back of the chair behind the control panel cover (*figure 2*). You must remove the left and right link covers to access the screws that secure the control panel cover (*figure 1*). Remove the control panel cover.

Figure 1

Figure 2

Once the control panel cover is removed you can access the program buttons: **limit<>normal** dip switch, a **store** button, and a **mode** button:

LAYOUT OF PROGRAM BOARD

Description of each switch function:
Limit<>normal: overrides all set limits.
Store: records the position.
Mode: not used for this procedure

SET BASE DOWN HEIGHT LIMIT:

1. Flip the **limit<>normal** switch to the "limit" position.
2. Using the foot control or backrest switch, lower the base.

   Note: *Make sure that the safety plate located under the cantilever arm clears the base cover or any other obstructions (i.e. umbilical).*
3. Raise the base so it is at least one inch between the base plate and the safety plate.

   Note: It is important that there is a clearance between the safety plate and chair base or malfunction may occur during the normal operation of the chair.
4. When satisfied with the position of the base, press the **store** button and release.
5. After releasing the **store** button, immediately press the base down function on the foot control or backrest switch and then release.
6. Return the **limit<>normal** switch back to the "normal" position.
7. Raise the chair base a few inches and then lower it down.
8. Make sure that the chair base stops at the programmed position.

SET THE BASE UP HEIGHT LIMIT:

1. Flip the **limit<>normal** switch to the "limit" position.
2. Using the foot control or backrest switch, raise the base to the highest position.
3. Once the base has reached its mechanical limit, release the base up switch and the chair will settle down by itself.
4. After the chair settles, lower the base one inch.

   Notice: It is important that the chair is not set to the mechanical limit or malfunction may occur during normal operation.
5. When satisfied with the height of the base, press the **store** button and release.
6. After releasing the **store** button, immediately press the base up function on the foot control or backrest switch then release.
7. Return the **limit<>normal** switch back to the "normal" position.
8. Lower the chair base a few inches and then raise it back up.
9. Make sure that the chair base stops at the programmed position.

SET THE BACKREST DOWN LIMIT:

1. Flip the **limit<>normal** switch to the "limit" position.
2. Using the foot control or backrest switch, lower the back to the mechanical limit.
3. Once the backrest has reached its mechanical limit, press the backrest up switch to raise the backrest up by one inch.

   Note: It is important that the chair is not set to the mechanical limit or malfunction may occur during normal operation.
4. When satisfied with the angle of the backrest, press the **store** button and release.
5. After releasing the **store** button, immediately press the backrest down function on the foot control or backrest switch then release.
6. Return the **limit<>normal** switch back to the "normal" position.
7. Raise the chair back up a few inches and then drop it back down.
8. Make sure that the back stops at the programmed position
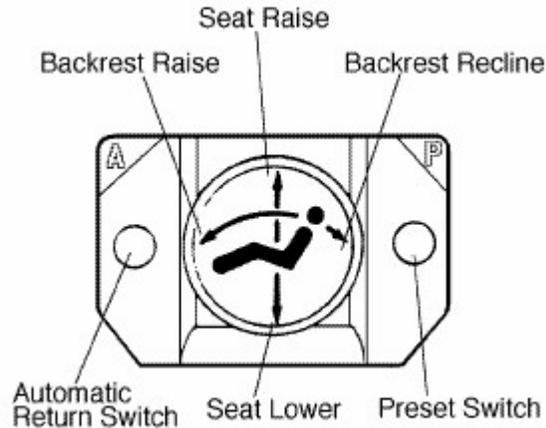
SET THE BACKREST UP LIMIT:

1. Flip the **limit<>normal** switch to the "limit" position.
2. Using the foot control or backrest switch, raise the backrest to the mechanical limit.
3. Once the backrest has reached its mechanical limit, release the back up switch and the chair will settle down by itself.
4. After the chair settles, lower the back down one inch.

   Note: It is important that the chair is not set to the mechanical limit or malfunction may occur during normal operation.
5. When satisfied with the position of the backrest, press the **store** button and release it.
6. After releasing the **store** button, immediately press the backrest down function on the foot control or backrest switch for then release.
7. Return the **limit<>normal** switch back to the "normal" position.
8. Lower the chair back down a few inches and then raise it back up.
9. Make sure that the back stops at the programmed position.

SETTING THE BEL-20 PRESET AND AUTO-RETURN FUNCTIONS

The Bel-20 chair has 1 programmable Preset function (P button) and 1 programmable Auto-Return function (A button) located on the foot control.

BEL-20 FOOT CONTROL

1. To program the **Preset** function set the chair backrest and base to the desired position.
2. Once the back and base are set, press and hold the P button on the foot control until an audible tone sounds.
3. When the audible tone sounds, the chair is now programmed. Test the chair.

1. To program the **Auto-Return** (patient exit position) function set the chair backrest and base down to an acceptable patient exit position.
2. Once the back and base are set, press and hold the A button on the foot control until an audible tone sounds.
3. When the audible tone sounds, the chair is now programmed. Test the chair.

   Note: On older model chairs the audible tone may not sound. In this case hold the applicable button for 5 to 7 seconds. Test the chair.