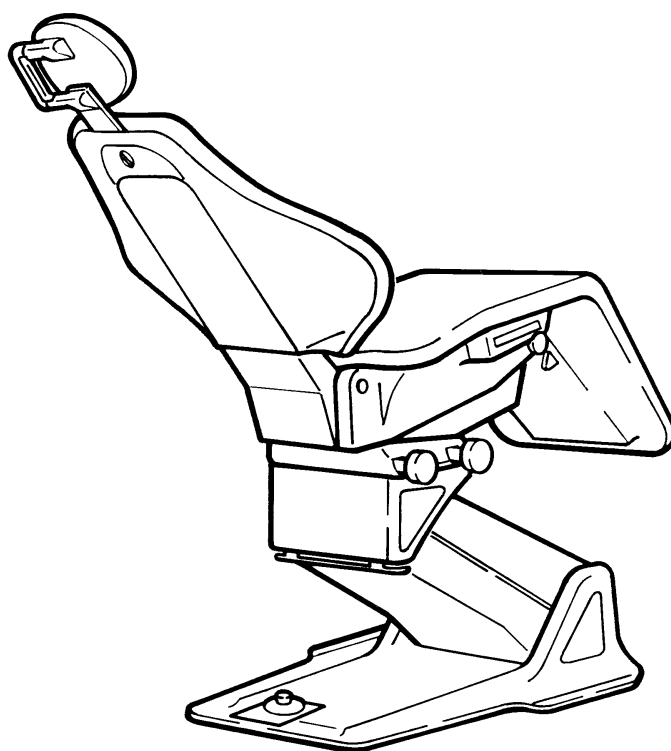


PLANMECA

PM 2002 PROLINE DENTAL CHAIR



USER'S MANUAL

| | | |
|----------|---|-----------|
| 1 | INTRODUCTION | 1 |
| 2 | WARNINGS | 2 |
| 3 | SYMBOLS | 2 |
| 4 | PROLINE CHAIR | 3 |
| | Main parts | 3 |
| | Keyboard | 3 |
| 5 | USING THE CHAIR | 4 |
| 5.1 | Switching the chair on | 4 |
| 5.2 | Adjusting the headrest | 4 |
| 5.3 | Leg rest | 5 |
| 5.4 | Arm rests | 5 |
| 5.5 | Driving the chair to the required position | 6 |
| | Manual operation | 6 |
| | Automatic operation | 7 |
| 5.6 | Trendelenbourg position | 8 |
| 5.7 | Chair swivel | 8 |
| 6 | PROGRAMMING THE CHAIR POSITIONS | 9 |
| 6.1 | Security position | 9 |
| 6.2 | Chair positions | 10 |
| 7 | KEYBOARD - KEYS AND INDICATOR LIGHTS | 11 |
| | User selection keys | 11 |
| | Programming key | 11 |
| | Leg rest indicator light | 11 |
| | Security position indicator light | 12 |
| | Chair overload indicator light | 12 |
| | Emergency stop indicator light | 12 |
| 8 | MAINTENANCE | 13 |
| 8.1 | Cleaning the Ultra upholstery | 13 |
| 8.2 | Cleaning the base | 13 |
| 8.3 | Replacing the fuses | 13 |
| 9 | TECHNICAL SPECIFICATIONS | 14 |
| | Range of movements | 14 |
| | Technical data | 14 |
| | Power requirements | 14 |

1 INTRODUCTION

This manual describes how to use the PLANMECA PRO-LINE dental chair. Please read this manual carefully before using the chair.



PM 2002 Proline dental chair fulfills the requirements of Directive 93/42/EEC.



All key illustrations indicate that the key should be pressed or, where indicated, pressed and held down.

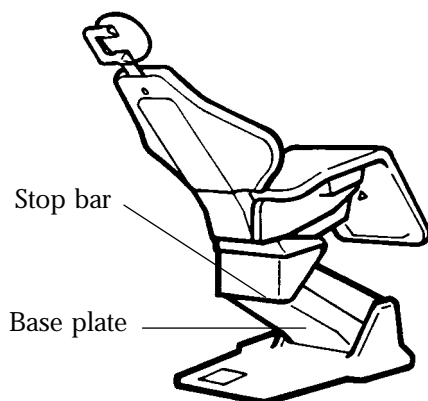
The manufacturer, assembler, and importer are responsible for the safety, reliability and performance of the unit only if:

- installation, calibration, modification and repairs are carried out by qualified authorized personnel
- electrical installations are carried out according to the appropriate requirements such as IEC364
- equipment is used according to the operating instructions

Planmeca pursues a policy of continual product development. Although every effort is made to produce up-to-date product documentation this publication should not be regarded as an infallible guide to current specifications. We reserve the right to make changes without prior notice.

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PUBLICATION PART NUMBER 188000 VERSION 10

2 WARNINGS



When driving the chair from position to an other care should be taken. In case of emergency the chair will stop when the base plate or the stop bar on the underside of the lifting mechanism is pressed upwards.



The stop bar is marked with the attention mark and the STOP text.

3 SYMBOLS



Type B equipment.



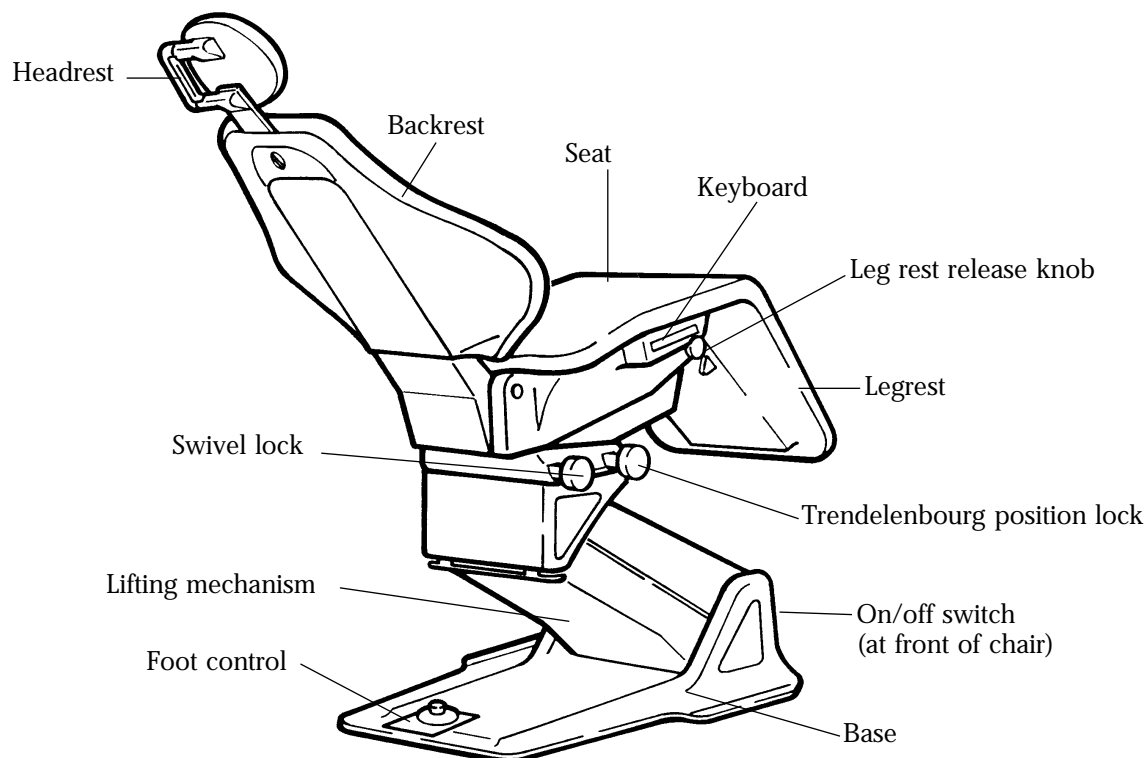
Alternating current.



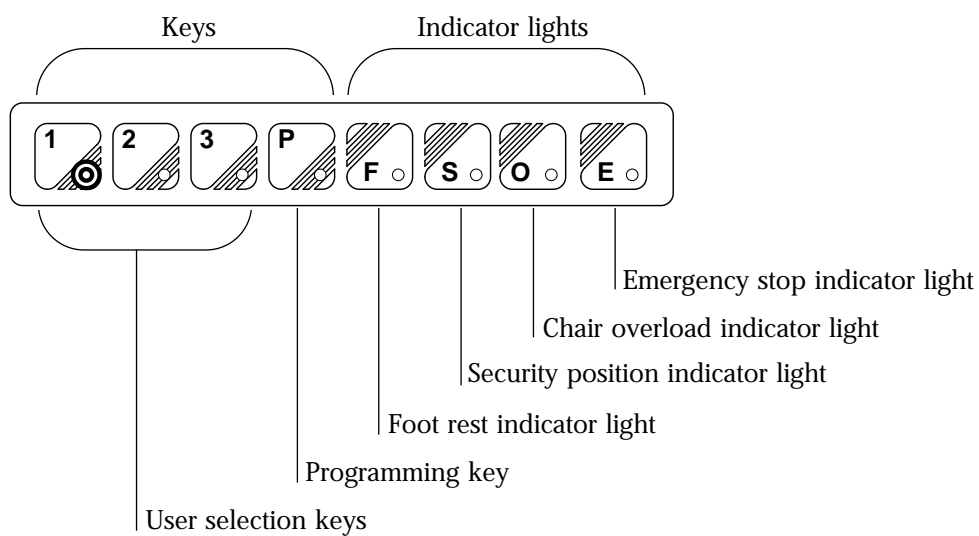
Attention, consult accompanying documents.

4 PROLINE CHAIR

Main parts



Keyboard

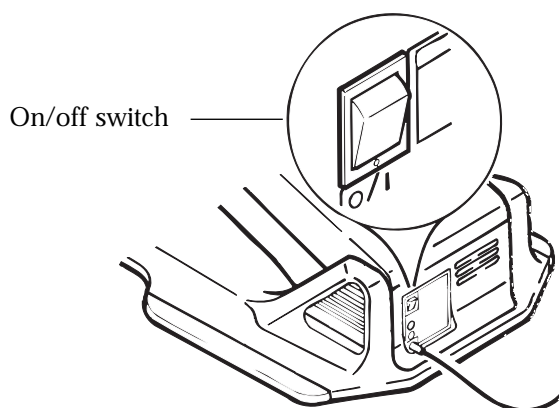


5 USING THE CHAIR

The chair can be operated manually or automatically. When the chair is used non-automatically the foot control must be pushed and held to drive the chair to the position required.

In automatic use the foot control only needs to be pushed once and the chair will move automatically to the preprogrammed chair position. Before the chair can be used in the automatic mode you must program the chair positions into the memory, see section "6 PROGRAMMING THE CHAIR POSITIONS" on page 9.

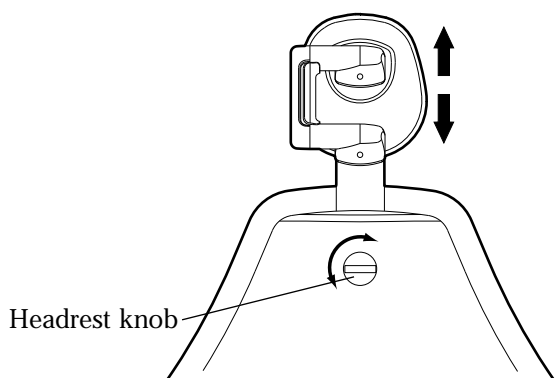
5.1 Switching the chair on



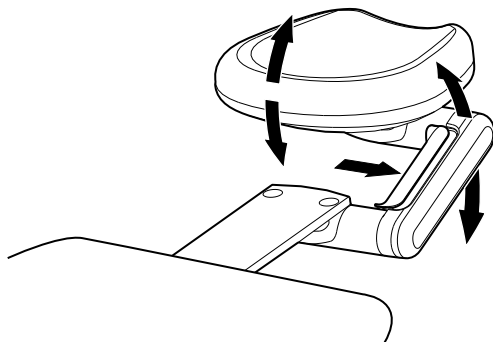
The on/off switch is located on the base of the chair below the leg rest. When the chair is switched on it will carry out a self test during which the indicator lights on the keyboard will come on. When the self test is complete all the lights except for the indicator light on key number one will go out. The chair is now ready for use.

The same switch is used to switch the chair off.

5.2 Adjusting the headrest

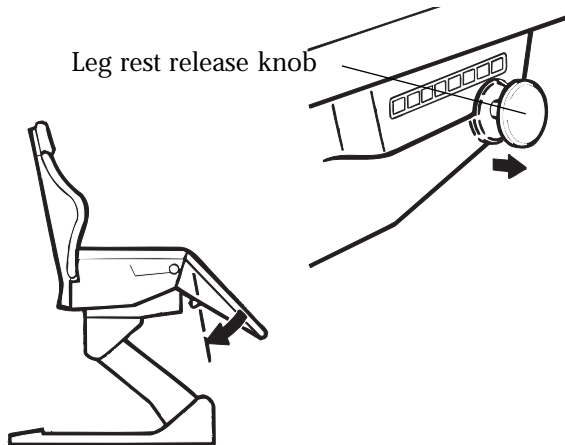


To adjust the height of the headrest turn the knob on the rear of the chair counterclockwise to release the headrest. Manually set the headrest to the height required and then retighten the headrest knob.



To adjust the angle of the headrest press the bar on the side of the headrest support to release the locking mechanism. Manually set the headrest to the angle required and then release the bar. When adjusting, the head rest should be supported by hand.

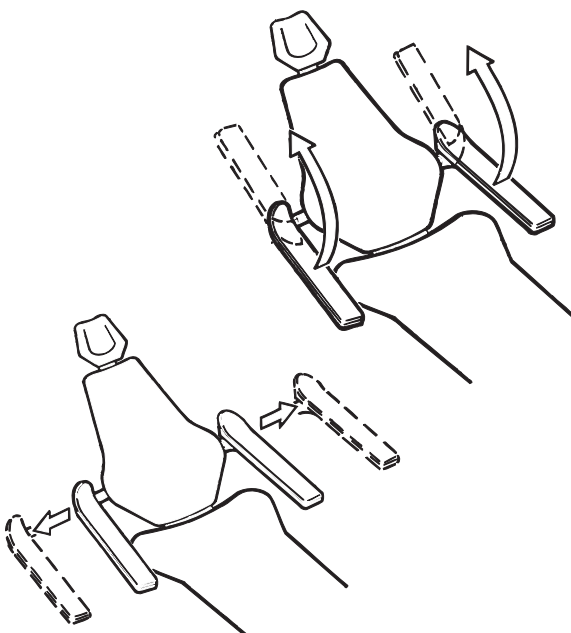
5.3 Leg rest



If required the leg rest can be lowered to the vertical position to make it easier for the patient to sit in the chair. Note that it can only be lowered when the back of the chair is in the vertical position, see section "5.5 Driving the chair to the required position" on page 6. To lower the leg rest support it with one hand and then pull the knob on the side of the chair out to release the leg rest.

To return the leg rest to its normal position either manually lift it up until the release knob clicks in or use the foot control to drive the back rest down and the leg rest will automatically return to the normal position.

5.4 Arm rests



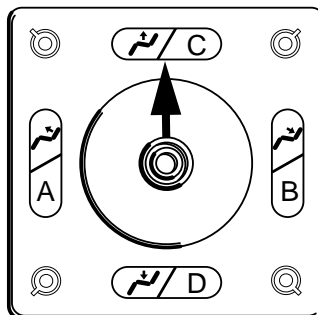
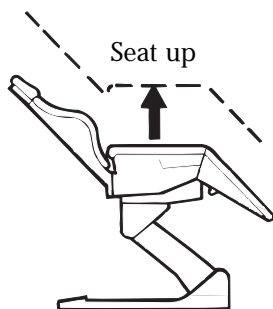
If your chair is fitted with arm rests they can be swung back to make it easier for the patient to sit in the chair.

The arm rests can be removed if required. Pull them outwards until the locking catches release.

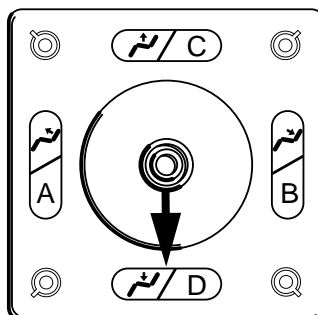
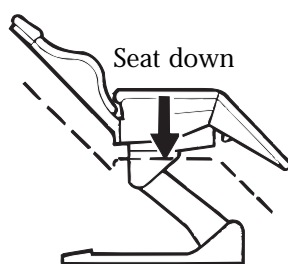
5.5 Driving the chair to the required position

Manual operation

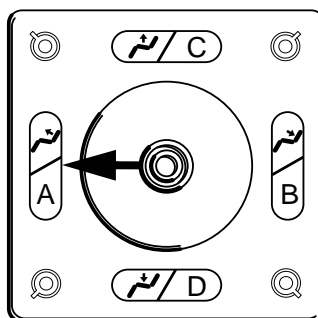
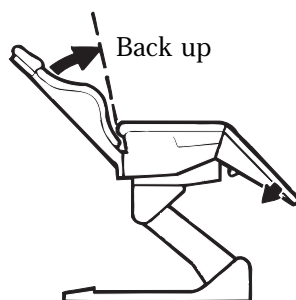
To adjust the position of the chair push and **hold** the foot control in the direction indicated on the foot control to drive the chair in the direction required. When the chair reaches the right position release the foot control. The foot control will only operate one movement at a time.



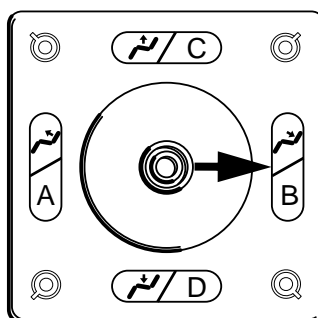
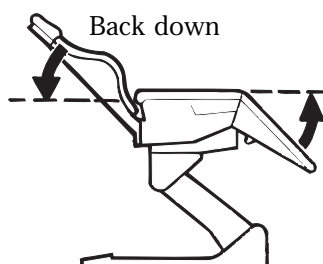
Push the foot control towards the chair to drive the seat up.



Push the foot control away from the chair to drive the seat down.



Push the foot control to the left to drive the back rest up.



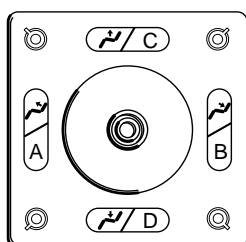
Push the foot control to the right to drive the back rest down.

Automatic operation

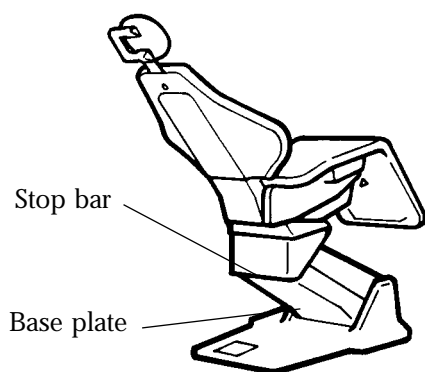
Before using the chair in the automatic mode you must first program the chair positions into the memory. See section "6 PROGRAMMING THE CHAIR POSITIONS" on page 9.



Select your user number or the user number where the preprogrammed chair position or positions you require are stored.



Push the foot control **briefly** to the position (A, B, C, or D) where the preprogrammed chair position is stored. The chair will move automatically to the preprogrammed position.

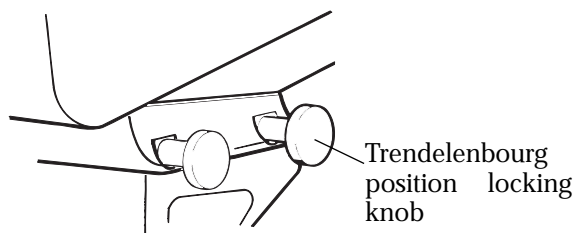


To stop the chair from moving before it reaches the preprogrammed position push the foot control in any direction or press the base plate or the stop bar on the underside of the lifting mechanism upwards.

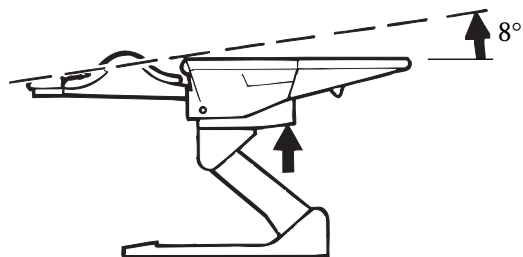
If you stop the chair by lifting the base plate or stop bar before it reaches its preprogrammed position the E indicator light will briefly come on and you will hear a signal tone. To operate the chair again use the foot control.

If you wish to adjust the position of the chair when it has reached its preprogrammed position simply use the foot control in non-automatic mode to drive the chair to the position you require.

5.6 Trendelenbourg position



If required the chair can be inclined from the horizontal position to the Trendelenbourg position. Release the locking mechanism by turning the right-hand knob, located under the seat, counter clockwise. The chair can now be manually tilted into the Trendelenbourg position. Retighten the knob.

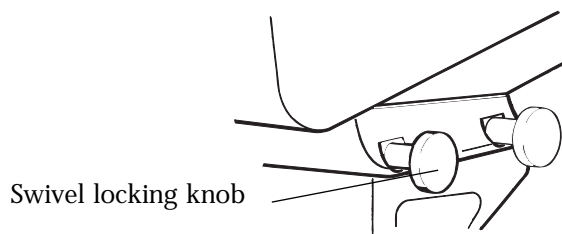
**WARNING**

When moving the chair to the Trendelenbourg position hold the back of the chair with you hand before loosening the locking knob to prevent the back to drop suddenly.

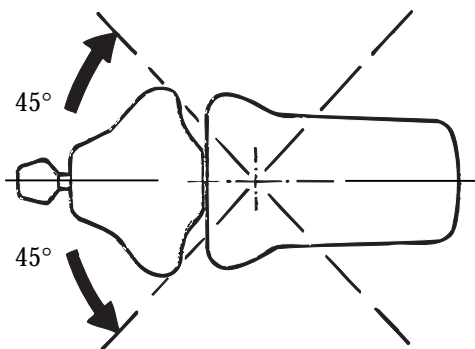
**WARNING**

Retighten the locking knob after the chair has returned back to the normal position.

5.7 Chair swivel



If required chair can be swivelled 45° to the right or left. Release the locking mechanism by turning the left-hand knob, located under the seat, counterclockwise. The chair can now be manually swivelled in either direction. Retighten the knob.

**NOTE**

Do not attempt swivel the chair when the leg rest is down or it may hit the base.

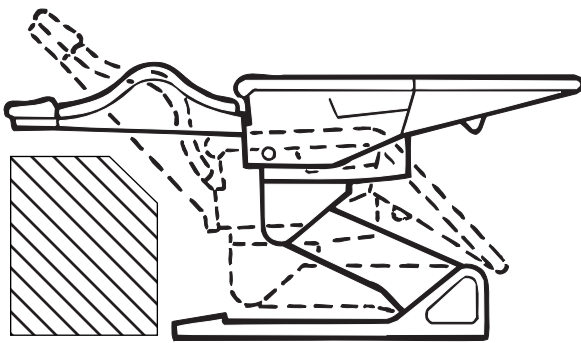
6 PROGRAMMING THE CHAIR POSITIONS

The chair incorporates a memory in which you can store the chair positions that you wish the chair to move to in the automatic mode. Up to three users can each select four chair positions and one security position. The security position is an optional position which controls the sequential movement of the chair so that the back rest can never go below its lowest programmed position when the chair is moving to an automatic position. It prevents the back of the chair from ever hitting your knees when the chair is moving to a preprogrammed chair position. If you wish to program a security position into the memory do it before programming the chair positions. See section "6.1 Security position" on page 9.

6.1 Security position



Select your user number. The indicator light will come on. Note that user number one is automatically selected whenever the chair is switched on.



With the foot control drive the chair to the horizontal position.

With the foot control adjust the height of the chair until you can place your knees under the chair without the back of the chair touching them.



Press and hold the program key and then your user key until the program key indicator light goes out (about one second). The security position is now programmed into the memory.

NOTE

The user number must be the same one you selected at the beginning of programming security position.

If the security position is already programmed into the memory and you wish to remove it simply drive the back rest to the horizontal position and then drive the chair to the lowest position possible and program this position into the memory (as described above).

6.2 Chair positions

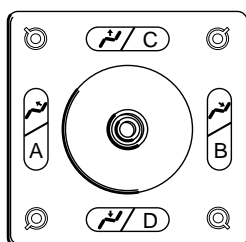


Select your user number or the user number where you wish to store the chair position. The indicator light will come on. Note that user number one (1) is automatically selected whenever the chair is switched on.

With the foot control set the height of the chair and the inclination of the back rest to the positions you require.



Press this key to enter the programming mode. The indicator light will come on.



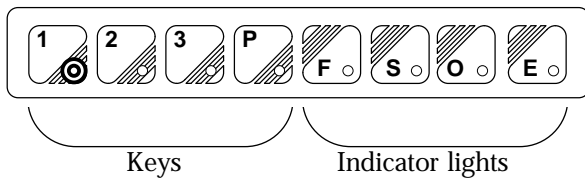
Push the foot control to the position (A, B, C, or D) where you wish to store the chair position. The indicator light on the programming key (P) will go out which indicates that the chair position has been programmed into the memory.



NOTE

If you hear a warning signal and the security position indicator light comes on it indicates that you have selected a chair position that is lower than the security position. Reposition the chair above the security position or program in a new security position.

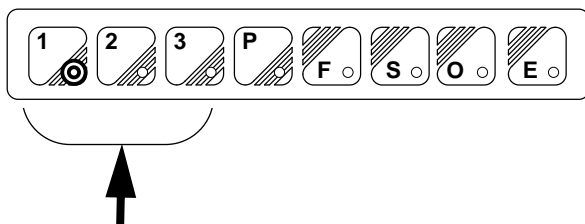
7 KEYBOARD - KEYS AND INDICATOR LIGHTS



The keyboard is located on the right-hand side of the chair below the seat. The control panel is divided into two sections:

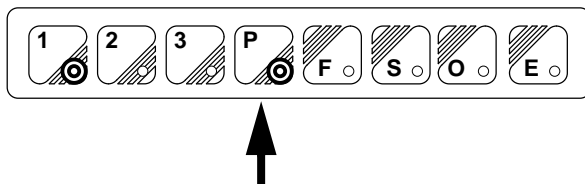
- keys
- indicator lights

User selection keys



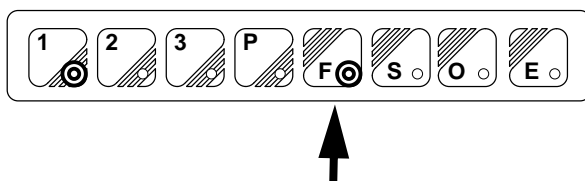
These keys allow different users to select their preprogrammed memory positions when using the chair in the automatic mode. Note that whenever the chair is switched on user number 1 is automatically selected.

Programming key



This key is used to program into the memory the security level and positions that the chair will move to in the automatic mode.

Leg rest indicator light



If you drive the chair down when the leg rest is lowered this indicator light will come on and the chair will stop moving to prevent the leg rest hitting the floor or base. To operate the chair again drive it upwards or lift the leg rest to its normal position.

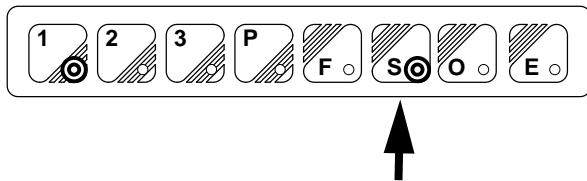
NOTE

If you lower the leg rest after the chair has been driven below the leg rest security level this indicator light will come on and you will find that you can only drive the chair upwards.

NOTE

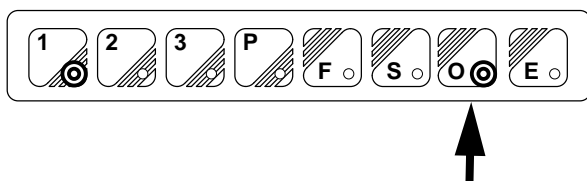
The leg rest security level is lower when the chair is swivelled 45°, because the leg rest can hit the floor only.

Security position indicator light



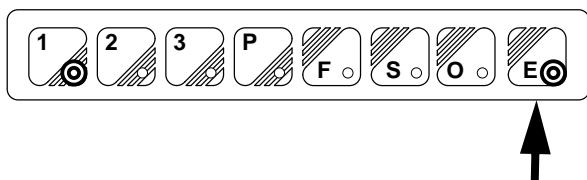
This indicator light will come on if you try to store in the memory a chair position that is lower than the security position. When the indicator light comes on you will hear a signal and programming is not performed. The programming indicator light goes off. Drive the chair upwards above the security level and repeat the programming sequence.

Chair overload indicator light



This indicator light will come on if the seat motor is not rotating, and the light will start flashing if the back rest motor is not rotating. These can occur either if something prevents the chair from moving or if the motors overheat. If you cannot drive the chair wait approximately 15 minutes to allow the motor or motors to cool before using the chair.

Emergency stop indicator light



This indicator light will come on if there is an obstruction under the chair lifting mechanism. You will also hear an audible signal and the chair will stop moving. When the obstruction is removed the light will go out and the chair can be operated.

8 MAINTENANCE

8.1 Cleaning the Ultra upholstery

The upholstery should be periodically wiped clean with (preferably warm) water and non-abrasive cleaning agents used for normal household purposes. Stronger agents can be used for disinfecting the surfaces.

Agents that should never be used on Ultra upholstery

Using following products on Ultra upholstery could cause permanent damage:

- Wax polishes
- Alcohol
- Acetone
- Perchloroethylene
- Trichloroethylene
- Powdered abrasives

8.2 Cleaning the base

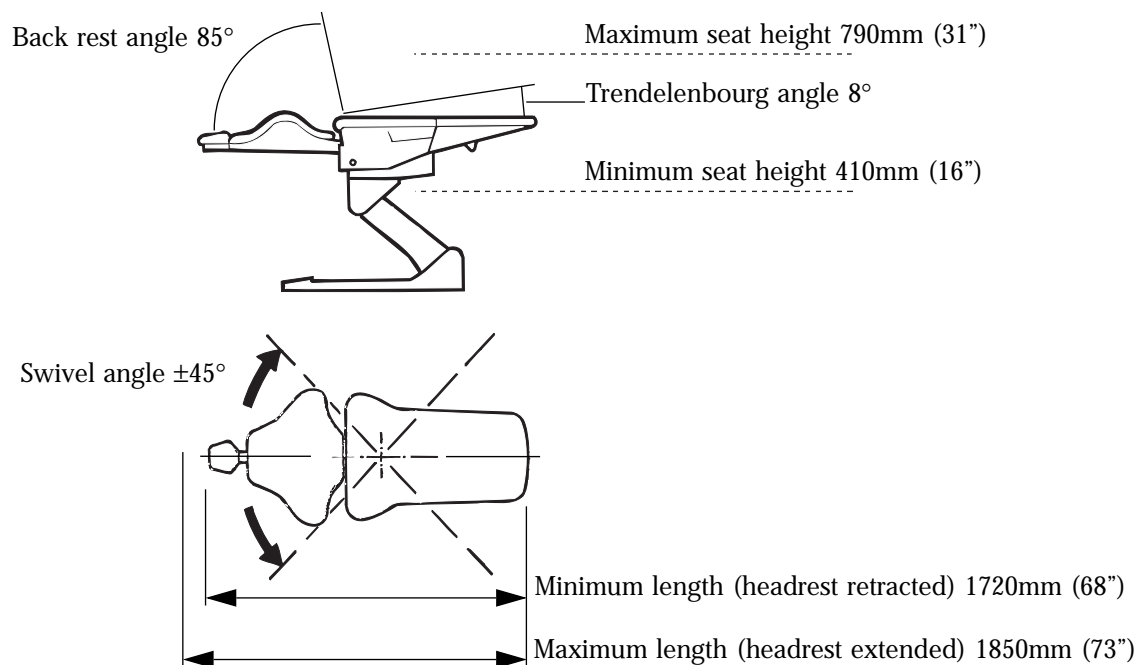
The base can be cleaned with a soft cloth moistened with a mild cleaning or disinfecting solution. Do not use abrasive cleaning agents.

8.3 Replacing the fuses

The fuses are located on the base of the chair below the on/off switch. Switch the chair off before replacing a fuse. Turn the fuse holder counterclockwise to remove it from the chair. Replace the old fuse with a new one of the same type and rating. Replace the fuse holder and switch the chair on.

9 TECHNICAL SPECIFICATIONS

Range of movements



Technical data

| | |
|---------------------|---|
| Construction | Cast alloy (all metal) |
| Upholstery | IMS moulded plastic foam |
| Weight | 100kg |
| Operation | Electromechanical (2 motors) |
| Control | Microprocessor |
| Ambient temperature | Operating 0°C - 35°C Storage -5°C - 60°C |

Power requirements

| | |
|-------------------------|------|
| 3A/240V~ $\pm 10\%$ | 50Hz |
| 3A/220-230V~ $\pm 10\%$ | 50Hz |
| 6A/110V~ $\pm 10\%$ | 60Hz |
| 6A/100V~ $\pm 10\%$ | 60Hz |

ED 12%

Electrical classification Class I, type B

| FUSES | 240V | 220-230V | 110V | 100V |
|---------|--------|----------|--------|--------|
| 2pieces | 4AT | 4AT | 8AT | 8AT |
| 1 piece | 100mAT | 100mAT | 200mAT | 200mAT |