



Invacare® Modulite

Supplement to power wheelchair user manual

en **Seating System
User Manual**

This manual **MUST** be given to the user of the product.
BEFORE using this product, this manual **MUST** be read and saved for future reference.



Yes, you can.®

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1 General

1.1 About This Manual

This document is a supplement to the product's user documentation.

This component itself does not bear a CE and a UKCA mark but is part of a product that complies with the Medical Device Regulation 2017/745, Class I and Part II UK MDR 2002 (as amended) Class I concerning medical devices. It is therefore covered by the product's CE and UKCA marking. See the product's user documentation for more information.

Only use this component if you have read and understood this manual. Seek additional advice from a healthcare professional who is familiar with your medical condition and clarify any questions regarding the correct use and necessary adjustment with the healthcare professional.

Note that there may be sections in this document, which are not relevant to your component, since this document applies to all available models (on the date of printing). If not otherwise stated, each section in this document refers to all models of the component.

Invacare reserves the right to alter component specifications without further notice.

Before reading this document, make sure you have the latest version. You find the latest version as a PDF on the Invacare website. Previous product versions may not be described in this Manual's current revision. If you require assistance, please contact Invacare.

If you find that the font size in the printed document is difficult to read, you can download the PDF version from the website. The PDF can then be scaled on screen to a font size that is more comfortable for you.

For more information about the component, for example safety notices and recalls, contact your Invacare representative. See addresses at the end of this document.

In case of a serious incident with the component, you should inform the manufacturer and the competent authority in your country.

1.2 Symbols in This Manual

Symbols and signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.



DANGER!

Indicates a hazardous situation that will result in serious injury or death if it is not avoided.



WARNING!

Indicates a hazardous situation that could result in serious injury or death if it is not avoided.



CAUTION!

Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.



NOTICE!

Indicates a hazardous situation that could result in damage to property if it is not avoided.



Tips and Recommendations

Gives useful tips, recommendations, and information for efficient, trouble-free use.



Tools

Identifies required tools, components and items which are needed to carry out certain work.

Other Symbols

(Not applicable for all manuals)



UK Responsible Person

Indicates if a product is not manufactured in the UK.



Triman

Indicates recycling and sorting rules (only relevant for France).

1.3 Warranty Information

We provide a manufacturer's warranty for the product in accordance with our General Terms and Conditions of Business in the respective countries.

Warranty claims can only be made through the provider from whom the product was obtained.

1.4 Safety Information on Using the Seating System

Your seating system has been specially configured and assembled to the wheelchair base prior to delivery. Note that the final configuration and purchasing decision regarding the complete wheelchair system is the responsibility of the power wheelchair user, who is capable of making such a decision, and his/her healthcare professional. The contents of this manual are based on the expectation that a power wheelchair expert has fitted the power wheelchair to the user and has assisted the prescribing healthcare professional in the instruction and use of this device.

The user manual of the power wheelchair contains all relevant safety information about the use of the power wheelchair including the seating system. Be certain to read and follow these safety information.



WARNING! **Risk of Tipping**

The power wheelchair may tip over when you change its stability characteristics by changing your seating position.

- Determine and establish your personal safety limits by practicing bending, reaching and transferring activities in the presence of a qualified healthcare professional before attempting active use of the wheelchair.
- Your seating system can be mounted onto the base in various forward and aft positions. Make certain that the position selected provides you with maximum stability over the full range of seating positions.
- Consider all personal gear and accessories (backpacks, vent systems, extra batteries, etc.) that will be carried on the wheelchair. For example, a loaded backpack, attached to the back of the seating system, can significantly reduce the rearward stability of your wheelchair.
- Consider the backrest being used. For example, a recessed back can shift your centre of gravity backward and significantly reduce the rearward stability of the wheelchair. Conversely, a thick back cushion will shift you forward and reduce the wheelchairs forward stability.



- Always shift your weight in the direction you are turning. Shifting weight in the opposite direction of the turn may compromise stability of the wheelchair base, causing it to tip over.
- Consider the seat cushion being used. A thick seat cushion will raise your centre of gravity and reduce the wheelchairs stability in all directions.
- All seating systems are equipped with drive lockouts. Make certain this is set so as not to compromise your stability while driving (refer to *2.4 Driving and Seating Limitations (LiNX System), page 8*).
- The wheelchair has a programmable controller which allows adjustment of the maximum acceleration and deceleration of the wheelchair. Make sure that these are set to an appropriate level for the system and for you, the user.
- When operating in reduced speed drive or anti-tipper lockout, always travel on a smooth level surface to ensure the wheelchair's stability is not compromised.
- Ensure all medical conditions are considered when setting up your wheelchair. Involuntary muscle movement such as spasms may affect the stability of the wheelchair, especially when the seating system is in a tilted or reclined position.
- When a system is fully tilted or reclined, the front wheels of the wheelchair should never come off the ground. If this occurs, please contact your authorised Invacare dealer immediately to resolve the issue.




WARNING!

Risk of Death, Serious Injury or Damage

- Risk of entrapment and strangulation when loose personal belongings (e.g. jewellery, scarfs) get caught by moving or protruding parts.
- Make sure that any loose items are clear of moving parts of the power wheelchair, e.g. wheels or powered seating components.
 - Keep your hands, clothing and all other objects away from wheels or powered seating components when they are in operation.
 - Power off power wheelchair immediately to stop any movement.

2 Components

2.1 Product Description

 The following configurations may vary depending on country.

The Modulite seating system is offered with different seat types.

One Piece Seat Plate

The one piece seat plate is offered in different seat widths (380 mm or 430 mm). Individual width adjustment can be influenced by the choice of the armrests.

The one piece seat plate is offered in different seat depths (410 mm, 460 mm or 510 mm). The seat depth of the one piece seat plate can be adjusted manually. Refer to *3.11.2 Adjusting Seat Depth, page 29*.

The one piece seat plate is offered in different pre-assembled seat heights (435 mm, 460 mm or 485 mm). A manually height adjustment must be made by a qualified technician. For more information about height adjustment, refer to the service manual of the wheelchair.

Telescopic Seat Frame

The telescopic seat frame is offered with different options: a seat plate, a sling seat or an universal adapter.

The seat width of the telescopic seat frame can be adjusted manually. Refer to *3.11.1 Adjusting Seat Width, page 28*.

The telescopic seat frame is offered in different seat depths (410 mm, 460 mm, 510 mm or 580 mm). The seat depth of the telescopic seat frame can be adjusted manually. Refer to *3.11.2 Adjusting Seat Depth, page 29*.

The telescopic seat frame is offered in different pre-assembled seat heights (435 mm, 460 mm or 485 mm). Individual height adjustment can be made by the lifter, if the lifter is part of the configuration. A manually height adjustment must be made by a qualified technician. For more information about height adjustment, refer to the service manual of the wheelchair.

2.2 Power Positioning Functions

The seating system offers the following functions:

FIXED PIVOT TILT

At the fixed pivot tilt function the centre of gravity is shifted backward by the fixed pivot axis as the seat tilts back. Typical tilt range is 0° up to 20°.

CoG-TILT

The CoG (centre of gravity) tilt function compensates for weight shift by sliding the pivot axis and entire seat assembly forward as the seat tilts back. Typical tilt range is 0° up to 50°. For more information about your specific configuration, refer to *8.1 Technical Specifications, page 59*.

RECLINE

The recline function enables users to infinitely change the seat to back angle of their system within a set range. Typical recline angle range is 90° up to 120°.

LIFTER MODULE

The lifter module allows users to raise their power positioning system up to 300 mm above the lowest seat-to-floor height of their system. The lifter is combined with a tilt function.

LEGRESTS

Our wide range of power and manual legrests are available in an array of sizes and styles including individual legrests and central foot platforms to help secure and position clients' legs. In addition, we offer a multitude of legrest hangers to accommodate your legrest choice. Power legrests may be programmed to operate in one of the two following configurations:

- Individual (legrests operate independently),
- Combined (legrests operate in unison)

2.3 Manual Positioning Function

The seating system offers the following functions:

FIXED PIVOT TILT

At the fixed pivot tilt function the centre of gravity is shifted backward by the fixed pivot axis as the seat tilts back. Typical tilt range is 0° up to 15°.

RECLINE

The recline function enables users to infinitely change the seat to back angle of their system within a set range. Typical recline angle range is 90° up to 120°.

LEGRESTS

Our wide range of power and manual legrests are available in an array of sizes and styles including individual legrests and central foot platforms to help secure and position clients' legs. In addition, we offer a multitude of legrest hangers to accommodate your legrest choice.

2.4 Driving and Seating Limitations (LiNX System)



DANGER!

Risk of Severe Injury or Death

The angle at which the limit switches/lockouts are set is critical to the safe operation of the system.

- Invacare will not be liable for any injuries or damage sustained when adjustments are made beyond the factory recommended settings.
- To ensure proper set-up, adjustments to lockouts and limits should only be performed by a qualified technician.
- Never exceed the maximum recommended limits. Lockouts and limit switches should be set up to best meet the needs of the user without compromising the overall stability of the wheelchair.
- Following any limit or lockout adjustments, always test the seating system over the full range of motion (i.e. tilt, recline, lifter) to verify the revised set-up is functioning properly and ensure that there are no resulting stability or interference issues.



Additional limits and lockout switches may be required for more complicated/specialised seating systems. For information on limits/lockouts that are not identified in this manual, contact your provider.

For TDX SP2, drive and seating restrictions are only updated while stationary.

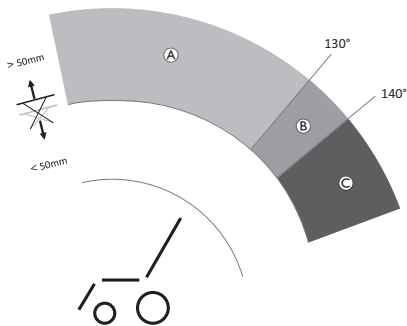
For AVIVA RX and AVIVA FX, drive and seating restrictions are updated both while driving and while stationary.

2.4.1 Driving Limitations

Seating systems are configured / programmed with a drive slowdown. The drive slowdown utilises microswitches to trigger the system into reduced drive speed.

All tilt and recline seating systems are equipped with a drive lockout (DLO) limit to prevent the wheelchair from being driven when the seating system is tilted or reclined beyond a pre-determined safe total angle and / or a pre-determined height. The total angle can be any combination of seat angle, backrest angle and / or surface angle.

AVIVA RX with Lifter

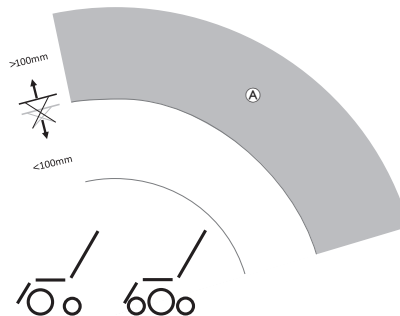


	Limitation	Cause for Limitation
(A)	Drive Slowdown	If lifter is raised <ul style="list-style-type: none"> >50 mm

	Limitation	Cause for Limitation
(B)	Drive Slowdown / Lockout adjustable by provider	If lifter is raised <ul style="list-style-type: none"> >50 mm and if backrest angle is <ul style="list-style-type: none"> >130° – <140°¹
(C)	Drive Lockout	If lifter is raised <ul style="list-style-type: none"> >50 mm and if backrest angle is <ul style="list-style-type: none"> >140°

¹ The provider can determine the angle when the drive slowdown should turn into a drive lockout.

AVIVA FX and TDX SP2 with Lifter



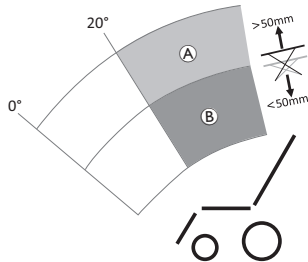
	Limitation	Cause for Limitation
(A)	Drive Slowdown	If lifter is raised <ul style="list-style-type: none"> >100 mm

AVIVA RX, AVIVA FX and TDX SP2 without Lifter

There are no driving limitations for AVIVA RX, AVIVA FX and TDX SP2 without a lifter.

2.4.2 Seating Limitations

AVIVA RX with Lifter



	Limitation	Cause for Limitation
Ⓐ	Tilting >20° inhibited	If lifter is raised <ul style="list-style-type: none"> • >50 mm
Ⓑ	Lifting inhibited	If tilt angle is <ul style="list-style-type: none"> • >20°

AVIVA FX and TDX SP2 with Lifter

There are no seating limitations for AVIVA FX and TDX SP2 equipped with a lifter.

AVIVA RX, AVIVA FX and TDX SP2 without Lifter

There are no seating limitations for AVIVA RX, AVIVA FX and TDX SP2 without a lifter.

3 Setup

3.1 General Setup Information



WARNING!

Risk of Death, Serious Injury or Damage

Continued use of the power wheelchair that is not set to the correct specifications may cause erratic behaviour of the power wheelchair resulting in death, serious injury, or damage.

- Performance adjustments should only be made by healthcare professionals or persons fully conversant with this process and the driver's capabilities.
- After the power wheelchair has been set-up / adjusted, check to make sure that the power wheelchair performs to the specifications entered during the set-up procedure. If the power wheelchair does not perform to specifications, IMMEDIATELY turn the power wheelchair Off and re-enter set-up specifications. Contact Invacare, if power wheelchair still does not perform to correct specifications.



WARNING!

Risk of Death, Serious Injury or Damage

Attaching hardware that is loosely secured or missing could cause instability resulting in death, serious personal injury, or property damage.

- After ANY adjustments, repair or service and before use,



make sure that all attaching hardware is present and tightened securely.



WARNING!

Risk of Injury or Damage

Incorrect set up of this power wheelchair performed by users / caregivers or unqualified technicians can result in injury or damage.

- DO NOT attempt to set up this power wheelchair. Initial set up of this power wheelchair MUST be performed by a qualified technician.
- Adjustment by the user is only recommended after they have been given appropriate guidance by the healthcare professional.
- DO NOT attempt to carry out the work if you do not have the listed tools available.



CAUTION!

Risk of Injury or Damage

The power wheelchair is fitted with an individual, multiply adjustable seating system including adjustable legrests, armrests, a headrest or other options which are used to adapt the seat to the physical requirements and the condition of the user. It is possible that collisions or pinch points can occur between power wheelchair components due to various combinations of adjustment options and their individual settings.



When adapting the seating system and the seat functions to the user:

- Beware of pinch points when adjusting the power wheelchair components and
- ensure that no power wheelchair components collide.



NOTICE!

The power wheelchair is manufactured and configured individually to the specifications of the order. The assessment must be performed by a healthcare professional according to the user's requirements and health conditions.

- Consult a healthcare professional if you intend to adapt the power wheelchair configuration.
- Any adaptation should be performed by a qualified technician.



Initial setup should always be done by a healthcare professional. Adjustment by the user is only recommended after they have been given appropriate guidance by the healthcare professional.

Electrical Adjustment Options



Refer to the user manual for your remote for more information on operating electrical adjustment options.

Footplates

All footplates offered by Invacare can be folded upwards.

3.2 Adjusting Remote



CAUTION!

Risk of the remote being pushed backwards during an accidental collision with an obstacle, such as a doorframe or table, and the joystick being jammed against the armpad if the position of the remote is adjusted and all screws are not completely tightened

This will cause the power wheelchair to drive forward uncontrollably and potentially injure the power wheelchair user and any person standing in the way.

- When adjusting the position of the remote, always make sure to tighten all screws securely.
- If this should accidentally happen, immediately switch the power wheelchair electronics OFF at the remote.



CAUTION!

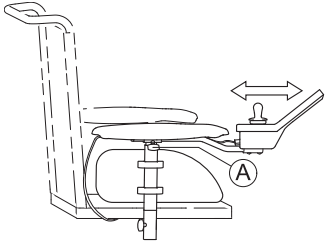
Risk of Injury

When leaning on the remote, for example, when transferring into or out of the wheelchair, the remote holder may break and the user may fall out of the chair.

- Never lean on the remote as a support for, for example, transfer.

3.2.1 Adjusting Standard Remote Holder

Adjusting Remote for Length of User's Arm

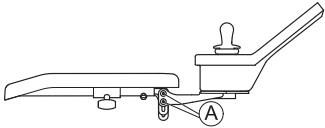


1. Loosen wing screw (A).
2. Adjust component to desired position.
3. Tighten wing screw.

Adjusting Remote Height



- 3 mm Allen key



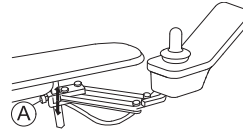
1. Loosen screws (A).
2. Adjust component to desired position.
3. Tighten screws.

3.2.2 Adjusting Swing Away Remote Holder

Adjusting Remote Height



- 6 mm Allen key



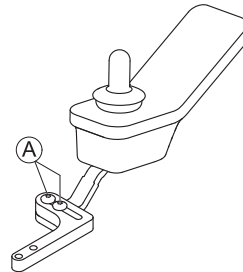
1. Loosen screw (A).
2. Adjust component to desired position.
3. Tighten screw.

Adjusting Remote Offset

The remote can be adjusted by 20 mm sidewise.



- 3 mm Allen key

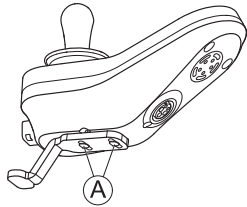


1. Loosen screws (A).
2. Adjust component to desired position.
3. Tighten screws.

Adjusting Remote Position



- 3 mm Allen key



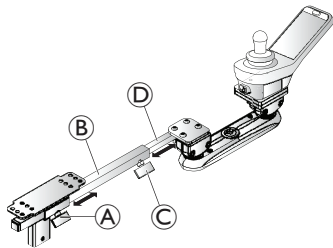
1. Loosen screws **A**.
2. Adjust component to desired position.
3. Tighten screws.

3.2.3 Adjusting Maxx Resolve Swing-Away Remote Holder

Adjusting Remote Depth



- 5 mm Allen key



1. Loosen wing screw **A** to adjust depth of tube **B**. Tighten screws when desired position is reached.
- and / or
2. Loosen wing screw **C** to adjust depth of tube **D**. Tighten lever when desired position is reached.

Height and Angle Adjustment

The height / angle of the Maxx Resolve Remote Holder is adjusted via two ball clamp assemblies on the swing away mechanism. The rear ball clamp assembly is attached to the remote tube, on the front ball clamp assembly the remote is mounted. Both ball clamp assemblies can be independently adjusted to position the remote at the height and / or angle that fits the user's needs.



Ball clamp assemblies mounted upwards



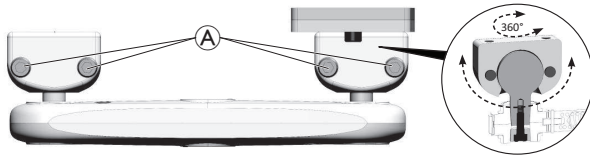
Ball clamp assemblies mounted downwards



When adjusting the angle of the ball clamp assemblies upwards, the body of the swing away mechanism becomes angled upward. This upward angle means that when the remote swings outward (when mounted on the right armrest) or inward (when mounted on the left armrest), it will swing-away to a lower position. The opposite effect applies when the angle of the ball clamp assemblies is adjusted downwards.



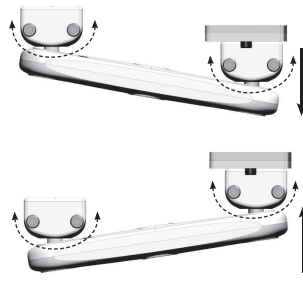
- 5mm Allen key



Angle Adjustment



Height Adjustment



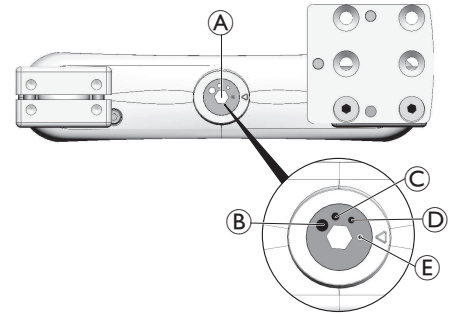
1. Loosen screws Ⓐ in each ball clamp assembly.
2. Pivot / Rotate the ball clamp assemblies to desired angle / height.
3. Tighten screws, when desired position is reached.

Break-Away Tension Setting Adjustment

The Maxx Resolve Swing-Away Remote Holder uses a tension adjustable belt-drive to control the “break-away” force required to reposition the remote. The tension can be adjusted via the cam wheel at the centre of the swing-away mechanism. There are four tension setting options available to accommodate the user’s strength and mobility. The break-away tension should be set to fit the user’s needs.



- 6 mm Allen key



1. Use the cam wheel Ⓐ to adjust the break-away tension to one of the four setting options:
 - Ⓑ hard
 - Ⓒ medium
 - Ⓓ easy
 - Ⓔ very easy

3.3 Adjusting Nucleus Midline Holder



WARNING! **Risk of Injury or Damage**

Loose small parts can lead to choking hazard that may result in injury or death.



- Do not remove any small parts except to replace the joystick knob.
- Do not leave removed joystick knob unattended.
- Closely supervise children, pets or people with physical / mental disabilities.

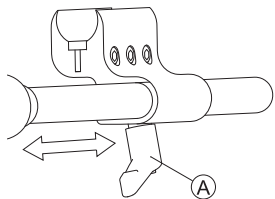


CAUTION!
Risk of Injury or Damage

Remaining burrs and missing end caps after modifications on rods, such as shortened rod, can lead to injury or damage.

- Deburr cut after cutting excessive length.
- Re-install end cap after deburring.
- Check end cap for tight fitting.

3.3.1 Adjusting Depth of Nucleus Midline Holder



1. Loosen lever (A).
2. Shift nucleus midline holder to desired position.
3. Tighten lever.

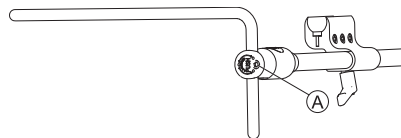
3.3.2 Adjusting Height of Nucleus Midline Holder

You can adjust the height of the nucleus midline holder in two ways:

- Adjust it together with the armrest height. Refer to corresponding armrest chapters, *3.8.1 Adjusting Armrest Height, page 21.*
- Adjust the height of the nucleus midline holder only. Refer to section below.



- 3/16 inch(5 mm) Allen key



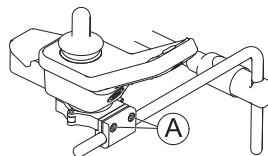
1. Loosen screw (A).
2. Adjust nucleus to desired height.
3. Tighten screw.

3.3.3 Adjusting Remote / Display Position



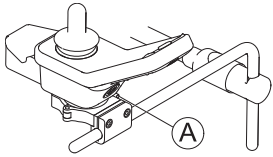
- 4 mm Allen key
- 8 mm wrench

Tilting Remote (DLX-REM110, DLX-REM2XX, DLX-REM400)



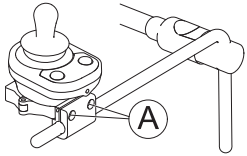
1. Loosen screws (A).
2. Position remote onholder.
3. Tighten screws.

Fig. 3-1 Example of DLX-REM400 adjustment. DLX-REM110, DLX-REM211 and DLX-REM216 are adjusted the same way.

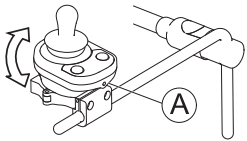
Rotating Remote (DLX-REM110, DLX-REM2XX, DLX-REM400)

1. Loosen screw (A).
2. Rotate remote in clamp to desired position.
3. Tighten screw.

Fig. 3-2 Example of DLX-REM400 adjustment. DLX-REM110, DLX-REM211 and DLX-REM216 are adjusted the same way.

Tilting Remote (DLX-CR400 and DLX-CR400LF)

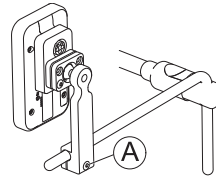
1. Loosen screws (A).
2. Position remote on holder.
3. Tighten screws.

Rotating Remote (DLX-CR400 and DLX-CR400LF)

1. Loosen screw (A) (not shown in picture).
2. Rotate remote in clamp to desired position.
3. Tighten screw.

DLX-REM500

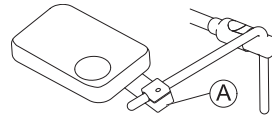
- 3/16 inch (5 mm) Allen key



1. Loosen screw (A).
2. Position display on holder.
3. Tighten screw.

ASL Components on Nucleus Tray

- 3/16 inch (5 mm) Allen key



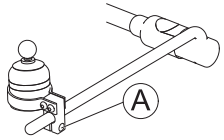
1. Loosen screw (A).
2. Position tray on holder.
3. Tighten screw.

Fig. 3-3 Graphic serves as an example.

ASL Components on Nucleus Midline Holder Only



- 5/32 inch (4 mm) Allen key



1. Loosen screw (A).
2. Position ASL component on holder.
3. Tighten screw.

Fig. 3-4 Graphic serves as an example.

3.4 Adjusting Swing-Away Mechanism



WARNING!

Risk of Injury or Damage

Loose small parts can lead to choking hazard that may result in injury or death.

- Do not remove any small parts except to replace the joystick knob.
- Do not leave removed joystick knob unattended.
- Closely supervise children, pets or people with physical / mental disabilities.



CAUTION!

Risk of Injury or Damage

Remaining burrs and missing end caps after modifications on rods, such as shortened rod, can lead to injury or damage.

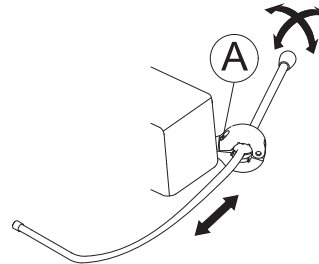
- Deburr cut after cutting excessive length.
- Re-install end cap after deburring.
- Check end cap for tight fitting.

The swing-away mechanism can be used for different options such as:

- PROTON wings of head array
- Extremity control joystick for chin control
- Egg switch



- 5/32 inch (4 mm) Allen key



Adjusting Depth

1. Loosen screw (A).
2. Adjust rod to desired depth.
3. Tighten screw.

Adjusting Position

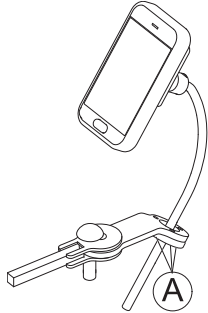
The swing-away mechanism can be turned through 360 degrees.

1. Loosen screw (A).
2. Adjust to desired position.
3. Tighten screw.

3.5 Adjusting Swing-Away Display Holder



- 3 mm Allen key



Adjusting Holder Height

1. Loosen screws (A).
2. Position holder to desired height.
3. Tighten screws.

Adjusting Holder Orientation

The holder can be turned through 360 degrees.

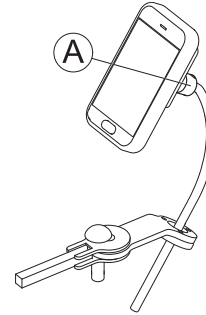
1. Loosen screws (A).
2. Adjust holder orientation.
3. Tighten screws.

Adjusting Display Orientation

The display can be turned through 360 degrees.



- 18 mm wrench



1. Loosen clamping bush (A).
2. Adjust display orientation.
3. Tighten clamping bush.

3.6 Adjusting Manual Chin Control



WARNING!

Risk of Injury or Damage

Loose small parts can lead to choking hazard that may result in injury or death.

- Do not remove any small parts except to replace the joystick knob.
- Do not leave removed joystick knob unattended.
- Closely supervise children, pets or people with physical / mental disabilities.



CAUTION!

Risk of Injury or Damage

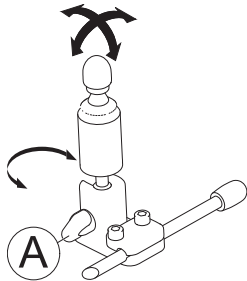
Remaining burrs and missing end caps after modifications on rods, such as shortened rod, can lead to injury or damage.

- Deburr cut after cutting excessive length.
- Re-install end cap after deburring.
- Check end cap for tight fitting.

3.6.1 Adjusting Extremity Control Joystick

Adjusting Joystick Orientation

The joystick can be turned through 360 degrees. A slot on the side allows you to angle the joystick at 90 degrees.

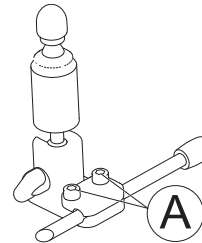


1. Loosen hand screw (A).
2. Turn underpart of joystick to position slot.
3. Adjust joystick orientation. If desired, lock joystick in 90 degree angle in slot.
4. Tighten hand screw.

Adjusting Position on Holder



- 5/32 inch (4 mm) Allen key



1. Loosen screws (A).
2. Position joystick on holder.
3. Tighten screws.

Adjusting Depth and Height

Refer to 3.4 *Adjusting Swing-Away Mechanism*, page 18.

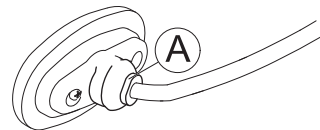
3.6.2 Adjusting Egg Switch

Adjusting Switch Orientation

The egg switch can be turned through 360 degrees.



- 7/16 inch(11 mm) wrench



1. Loosen nut (A).
2. Adjust egg switch orientation.
3. Tighten nut.

Adjusting Depth and Height

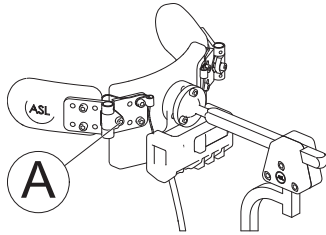
Refer to 3.4 *Adjusting Swing-Away Mechanism*, page 18.

3.7 Adjusting Head Array

Adjusting Pad Position



- 5/32 inch (4 mm) Allen key



1. Loosen screw (A).
2. Adjust pad position.
3. Tighten screw.

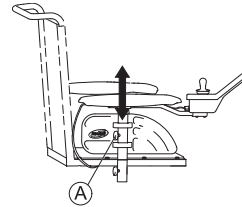
Adjusting PROTON Wings

Refer to 3.4 *Adjusting Swing-Away Mechanism*, page 18.

3.8 Armrests

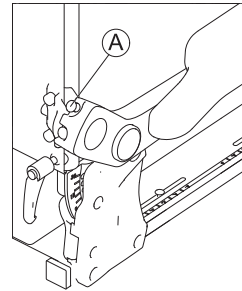
3.8.1 Adjusting Armrest Height

Standard Armrest



1. Loosen wing screw (A).
2. Adjust component to desired position.
3. Tighten wing screw.

Flip-up Armrest

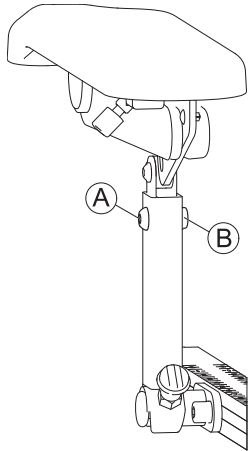


1. Loosen thumb screw (A).
2. Adjust component to desired position.
3. Tighten thumb screw.

Following Armrest



- 5 mm Allen key
 - 13 mm wrench
-



1. Remove screw **A** and nut **B**.
2. Adjust component to desired position.
3. Insert and tighten screw and nut.

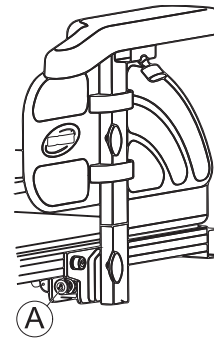
3.8.2 Adjusting Armrest Width



- 8 mm Allen key
-



Depending on the side, the screw is accessible from the front or the rear.

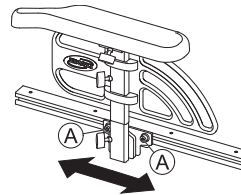


1. Loosen screw **A**.
2. Adjust component to desired position.
3. Tighten screw.

3.8.3 Adjusting Armrest Depth



- 6 mm Allen key
-



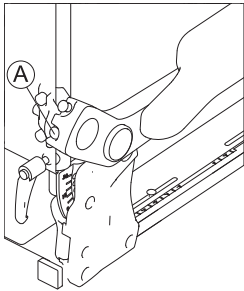
1. Loosen screws **A**.
2. Adjust component to desired position.
3. Tighten screws.

3.8.4 Changing Resistance (Flip-up / Following Armrest)

The movement of the flip-up and following armrests can be set to have greater or less resistance.



- 5 mm Allen key

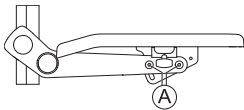



1. To make armrest easier to move, loosen screw (A).
2. To make armrest more difficult to move, tighten screw (A).

3.8.5 Adjusting Arm Pad Angle (Flip-Up/Following Armrest)



- 5 mm Allen key

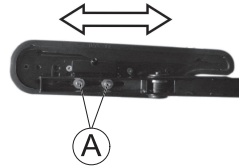


1. Loosen screws (A).
 Do not remove screws (A).
2. Adjust component to desired position.
3. Tighten screws.

3.8.6 Adjusting Arm Pad Position (Flip-Up Armrest)



- 5 mm Allen key



1. Put component in vertical position.
2. Loosen interior screws (A).
3. Adjust component to desired position.
4. Tighten screws.
Make sure Nordlock washers used are re-inserted.

3.9 Adjusting the Headrest

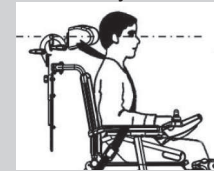


CAUTION!

Risk of injury during use of the power wheelchair as a vehicle seat if a headrest is wrongly adjusted or not installed

This can cause the neck to be hyperextended during collisions.

- A headrest must be installed. The headrest optionally supplied for this power wheelchair by Invacare is perfectly suitable for use during transport.
- The headrest must be adjusted to the user's ear height.





- It may be necessary to remove and modify the back cushion cover in order to access the headrest mounting holes on the back pan.
- An optional shim plate is available. It may be installed between the clamp assembly and the back pan to provide additional spacing / clearance on Posture Back and Deep Back.

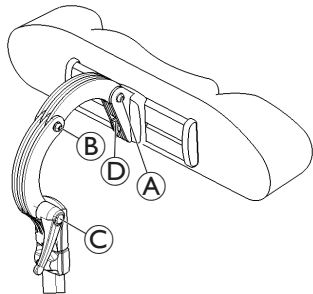
The headrest clamp hardware is designed to install into existing mounting holes in the backrest pan.

3.9.1 Adjusting Position of Rea Headrest or Neckrest

The adjustment of the position is the same for all Rea headrests and neckrests.



- 5 mm Allen key

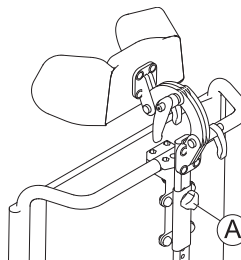


1. Loosen the screws (A), (B) or the clamping lever (C).
2. Adjust the headrest or neckrest to the required position.
3. Re-tighten screws and clamping lever.

4. Loosen the Allen screw (D).
5. Slide the headrest left or right to the required position.
6. Re-tighten the Allen screw.

3.9.2 Adjusting Height of Rea Headrest or Neckrest

The adjustment of the height is the same for all Rea headrests and neckrests.



1. Loosen hand screw (A).
2. Adjust component to desired position.
3. Tighten hand screw.

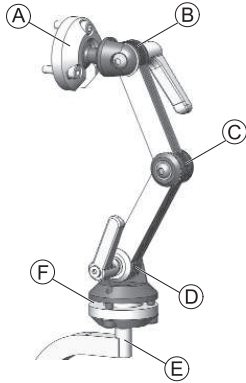
3.9.3 Adjusting Cheek Supports



1. Push components inwards or pull components out to desired position.

3.9.4 Adjusting Elan Headrest Hardware

Elan headrest hardware is highly adjustable. The illustration below shows the possible adjustment ranges of the joints.



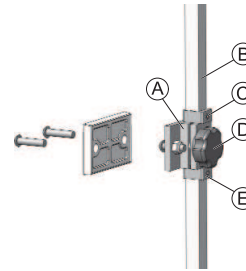
A	Upper multi-angle rotational pivot	<ul style="list-style-type: none"> • 360° rotation • 80° tilt
B	Upper linkage	<ul style="list-style-type: none"> • 180° rotation
C	Middle linkage	<ul style="list-style-type: none"> • 100° rotation
D	Lower linkage	<ul style="list-style-type: none"> • 180° rotation
E	Mounting post	<ul style="list-style-type: none"> • 360° rotation in 90° increments
F	Lower multi-angle rotational pivot	<ul style="list-style-type: none"> • 360° rotation • 50° tilt

Installing



- 2.5 mm Allen key
- 4 mm Allen key
- 5 mm Allen key

1. Using hardware provided, align and install headrest clamp assembly into existing mounting holes in backrest pan A.
2. Install headrest pad (not shown) to headrest rod using mounting hardware provided.



The headrest pad can be adjusted to any desired angle via the pivot ball at the end of the headrest rod by loosening and tightening the mounting hardware.

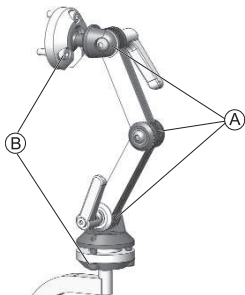
3. Loosen and remove lower D-Ring E from hardware.
4. Slide vertical mounting post B into clamp assembly and adjust overall height of headrest pad to desired position. Tighten knob D. For proper set-up headrest should be adjusted to user's ear height.
5. Adjust upper D-Ring C as required.
6. Once final height position is set, adjust lower D-Ring E so that it rests flush with bottom of clamp assembly (to prevent slipping).

Adjusting Depth and Angle

The headrest can be further adjusted for depth and angle via the articulating hardware.



- 4 mm Allen key
- 5 mm Allen key



1. Loosen screws and clamping levers of dual link adjustment assembly (A) and screws of upper and lower rotational pivots (B).
2. Adjust component to desired position.
3. Tighten screws and clamping levers.

3.10 Adjusting Backrest



CAUTION!

Adjusting the seat tilt or the backrest angle changes the geometry of the power wheelchair and directly influences its dynamic stability!

- For details regarding dynamic stability, negotiating gradients and obstacles and the correct adjustment of seat tilt or backrest angle, refer to the corresponding chapters in the user manual for the power wheelchair.

3.10.1 Adjusting Backrest Height

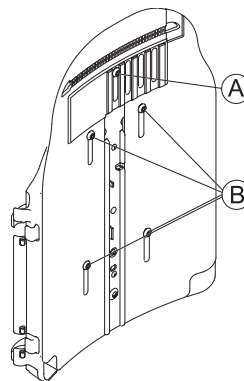
The following section describes the procedures for adjusting the height of the backrest plate.



The sling back is only available in fixed heights of 48 and 54 cm.



- 5 mm Allen key



1. Loosen screws (A) and (B).



Do not remove screws (A) and (B).

2. Adjust component to desired position.
3. Tighten screws.

3.10.2 Adjusting Backrest Width

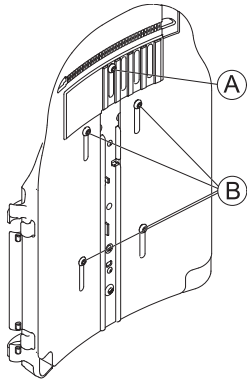
You can adjust the backrest plate width to a certain degree by adjusting the front plate, e.g. in order to adjust the backrest plate in line with the seat cushion. Fairly large adjustments must be made by a service technician to the rear plate and are outlined in the service manual for this power wheelchair.



The sling back is only available in two widths of 38-43 cm and 48-53 cm and, under certain circumstances, must be replaced for a width adjustment. For a replacement description, see the service manual for this power wheelchair. The service manual can be ordered from Invacare. However, they contain instructions for specially trained service technicians and describe operations that are not intended for the end user. Note that if the sling back width is adjusted the backrest cushion must also be replaced.



- 5 mm Allen key



1. Loosen and remove screw **A**.

2. Loosen screws **B**.



Do not remove screws **B**.

3. Adjust component to desired position.

4. Insert screw **A**.

5. Tighten screws.

3.10.3 Adjusting Backrest Angle



CAUTION!

Every change to the seat angle and the backrest angle alters the geometry of the power wheelchair and affects its dynamic stability

- For more information on stability, overcoming obstacles correctly, driving along inclines and slopes and the correct position of the backrest and seat angles, see the user manual of the power wheelchair.



CAUTION!

Risk of falling out of the wheelchair

- When adjusting the backrest, it might move backward unexpectedly and you might fall out of the wheelchair.
- Do not rest against the backrest while adjusting it.

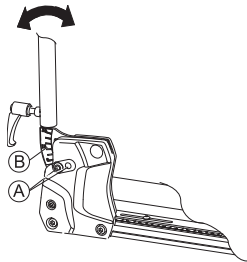


If the backrest is fitted with knobs instead of Allen screws, you do not need tools.

Width-Adjustable Backrest



- 6 mm Allen key



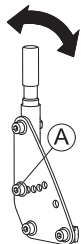
1. Remove upper backrest screw **A** on both sides.
2. Adjust desired backrest angle in 3.8° steps.
Use scale **B** on backrest for this purpose. Ensure that you set same angle on both sides.

3. Insert and tighten screw.
Ensure you insert screw through one of holes of backrest bracket. Screw must be visible on inside of bracket and screw head must be flush with bracket.

Simple Backrest



- 6 mm Allen key



1. Remove middle backrest screw **A** on both sides.
2. Adjust desired backrest angle in 7.5° steps.
Ensure that you set same angle on both sides.
3. Insert and tighten screw.

3.10.4 Adjusting Tension Adjustable Backrest Upholstery

1.



Remove backrest cushion (attached with hook-and-loop straps) by pulling it up and off to access adjustment straps.

2.



Adjust tension of individual straps as desired.

3. Replace backrest cushion.


3.11 Adjusting Seat


3.11.1 Adjusting Seat Width

The telescopic seat support can be adjusted in four stages. The seat width can thus be adjusted together with the adjustable seat plate or the adjustable sling seat.

The description of how the width is adjusted is contained in the service manual for this power wheelchair. The service manual can be ordered from Invacare. However, they contain instructions for specially trained service technicians and describe operations that are not intended for the end user.

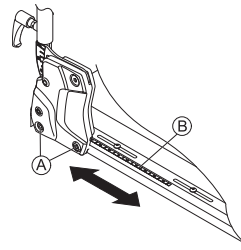
3.11.2 Adjusting Seat Depth

 The seat depth has a major influence on the selection of the centre of gravity of the seat. This impacts its dynamic stability. If you make a major change to the seat depth the centre of gravity of the seat must also be adjusted. See "Adjusting the centre of gravity of the seat" in the service manual for this power wheelchair. The service manual can be ordered from Invacare. However, they contain instructions for specially trained technicians and describe operations that are not intended for the end user.

 The numbers on the scale on the seat serve as a guide. They do not stipulate any dimensions such as seat depth in centimeters. For more information about the scale and adjusting the seat depth, please see the service manual.



- 6 mm Allen key



1. Loosen bottom backrest screws (A) on both sides.



Do not remove screws (A).

2. Adjust component to desired position. You can adjust seat depth steplessly. Use scale (B) on seat as a guide. Ensure that same seat depth is set on both sides.
3. Tighten screws.

3.11.3 Adjusting Seat Angle



CAUTION!

Adjusting the seat tilt or the backrest angle changes the geometry of the power wheelchair and directly influences its dynamic stability!

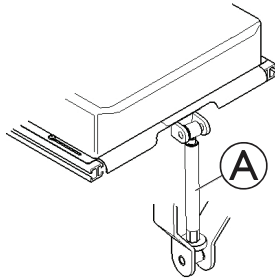
- For details regarding dynamic stability, negotiating gradients and obstacles and the correct adjustment of seat tilt or backrest angle, refer to the corresponding chapters in the user manual for the power wheelchair.

The seat angle is adjusted by means of a spindle, which is to be found at the front underneath the seat frame.

When adjusting the seat angle it should be ensured that at least 1 cm of the threaded bolt always remains inside the spindle and is not completely unscrewed from the spindle.



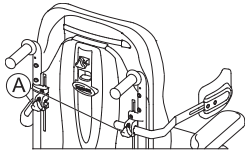
It is easier to adjust the angle of the seat when there is nobody sitting in the wheelchair.



The figure shows the position of the spindle (A) for manual seat angle adjustment.

3.12 Adjusting Lateral Trunk Support

Adjusting Width

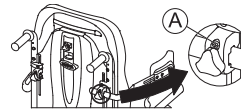


1. Loosen knobs (A).
2. Adjust component to desired position.
3. Tighten knobs.

Adjusting Height



- 5 mm Allen key

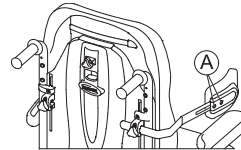


1. Loosen screws (A).
2. Adjust component to desired position.
3. Tighten screws.

Adjusting Depth



- 5 mm Allen key



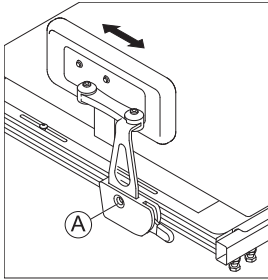
1. Loosen screws (A).
2. Adjust component to desired position.
3. Tighten screws.

3.13 Adjusting Hip Support with Quick Release

Adjusting Position



- 5 mm Allen key

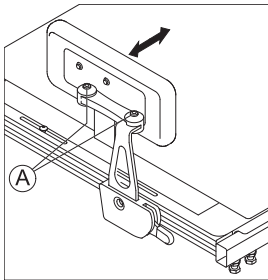



1. Loosen screw **A**.
Do not remove it.
2. Adjust hip support to desired position.
3. Tighten screw.

Adjusting Width



- 2 x 5 mm Allen key

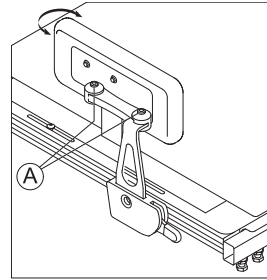


1. Loosen screws **A**.
2. Adjust hip support to desired width.
 You can adjust the width only smaller than the seat width but not wider.
3. Tighten screws.

Adjusting Angle



- 5 mm Allen key

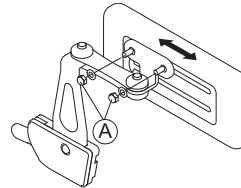


1. Loosen screws **A**.
2. Adjust hip support to desired angle.
3. Tighten screws.

Adjusting Hip Pad Depth



- 10 mm wrench



1. Loosen the two screws **A**.
2. Adjust hip pad to desired depth.
3. Tighten screws.

Adjusting Hip Pad Height

You can adjust the hip pad height in two ways:

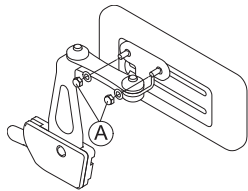
- Via its mounting slots.
- Via its bracket.

Via mounting slots



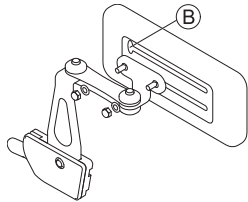
- 10 mm wrench

1.



Loosen the two screws (A).

2.



Remove hip pad bracket from mounting slot via cut-out (B).

3. Insert hip pad bracket in other mounting slot.

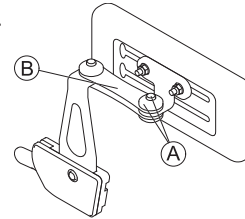
4. Tighten screws.

Via bracket



- 5 mm Allen key

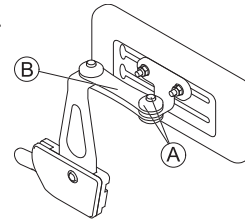
1.



Remove upper screw and friction cap (A).

2. Remove small friction link (B).

3.



Remove hip pad with bracket, turn upside down and reinstall.

4. Insert friction link, friction cap, screw and tighten.

3.14 Adjusting / Removing Tray



WARNING!

Risk of Injury or Damage

If the power wheelchair is fitted with a tray or other auxiliary equipment this could break free during transfer to

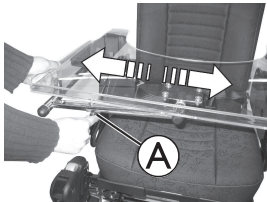


a vehicle and cause damage or injury to users in the event of a collision.

- When possible, other auxiliary power wheelchair equipment should be either secured to the power wheelchair or removed from the power wheelchair and secured in the vehicle during travel.
- If a tray is fitted, always remove it before transporting the power wheelchair.

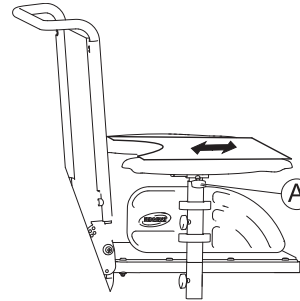


3.14.1 Adjusting Tray Laterally



1. Loosen wing screw Ⓐ.
2. Adjust component to desired position.
3. Tighten wing screw.

3.14.2 Adjusting Depth of Tray / Removing Tray



1. Loosen wing screw Ⓐ.
2. Adjust component to desired position (or remove it entirely).
3. Tighten wing screw.

3.14.3 Swinging Tray Away to Side

The tray can be swivelled up and away to the side to allow the user to get in and out of the power wheelchair.



CAUTION!

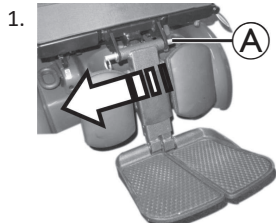
Risk of injury! When the tray is raised it does not lock in place in this position!

- Do not tilt the tray up and leave it leaning in this position.
- Never attempt to drive with the tray tilted up.
- Always lower the tray in a controlled manner.

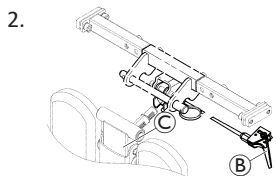
3.15 Central Legrests — Manually Adjustable

3.15.1 Removing Legrest

You can remove central, manually adjustable legrest completely.



Remove removable axle (A).



Hold legrest securely and pull lever (B).

3. Remove legrest from holder (C).

3.15.2 Setting Angle of Legrest



CAUTION! **Risk of injury**

If the legrest is not secured and the lever (A) is pulled, the legrest will drop suddenly, which could cause an injury.
— Secure the legrest before pulling the lever.



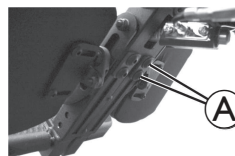
1. Hold the legrest securely.
2. Pull the lever (A).
3. Push the legrest into the required position.

3.15.3 Setting Length of Legrest



- 3/16 inch(5 mm) Allen key

You can adjust the length of the legrests independently of one another.



1. Release the bolts (A) on the rear of the legrest.
2. Set the desired length.
3. Re-tighten the bolts.

3.15.4 Setting Angle of Footplate



- 5/32 inch (4 mm) Allen key

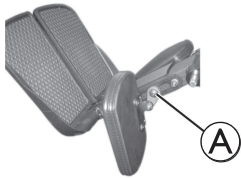


1. Fold the footplates up in order to access the adjusting screws **A**.
2. Set the adjusting screws.
3. Fold the footplates down again.

3.15.5 Adjusting Calf Pads



- 3/16 inch (5 mm) Allen key



1. Fold the calf pad forward in order to access the bolt **A**.
2. Loosen the bolt and adjust the calf pad to the required angle and height.
3. Re-tighten the bolt.
4. Fold the calf pad back.

3.16 LNX Legrest

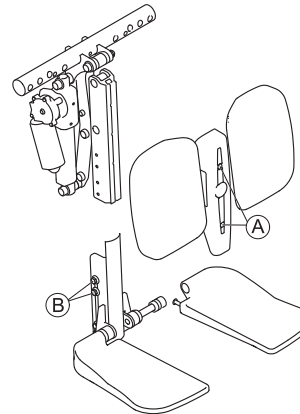
3.16.1 Setting Length of Legrest

If needed, the legrest can be pre-set to 83° or 97° instead of 90°. Contact your Invacare provider.



- 4 mm Allen key
- 10 mm open-ended wrench

You can adjust the length of the legrests independently of one another.



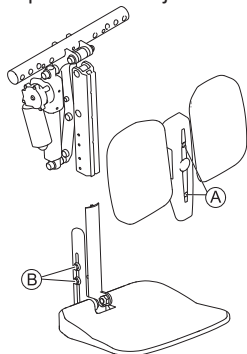
1. Remove screws **A** at the front of legrest.
2. Remove cover together with calf pads.
3. Loosen nuts **B** at the side of legrest.

It may be necessary to remove the nuts and move them from one slot to the other.

4. Set desired length.
5. Re-tighten nuts.
6. Refit the calf pads and cover and re-tighten screws.



The legrest with foot platform is adjusted the same way.



3.16.2 Setting Angle of Footplate



- 5/32 inch (4 mm) Allen key



1. Fold the footplates up in order to access the adjusting screws Ⓐ.
2. Set the adjusting screws.
3. Fold the footplates down again.

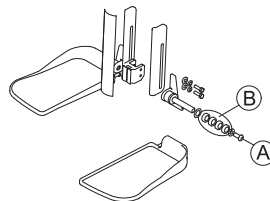
3.16.3 Adjusting Footplate Width

The footplate width is adjusted via spacers:

- Set spacers on the inside to increase width.
 - Set spacers on the outside to decrease width.
- Each spacer increases or decreases the width by 1/4" (6.35 mm).



- 6 mm Allen key

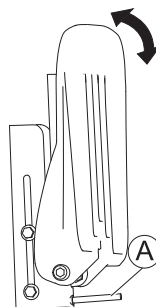


1. Remove screw Ⓐ.
2. Remove spacers Ⓑ and footplate.
3. Set spacers on the inside as needed.
4. Add footplate.
5. Set spacers on the outside as needed.
6. Re-tighten screw.

3.16.4 Setting Angle of Foot Platform



- 5/32 inch (4 mm) Allen key



1. Fold the foot platform up in order to access the adjusting screw Ⓐ.
2. Set the adjusting screw.
3. Fold the foot platform down again.

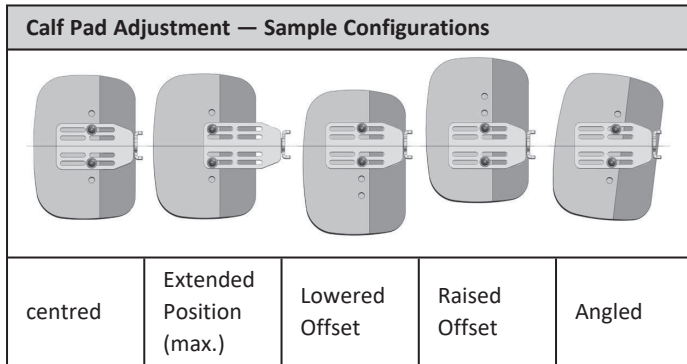
3.16.5 Adjusting Calf Pads



Risk of damage to the power wheelchair

- After changing the configuration of the calf pads make sure that the calf pads contact neither the castors nor the seat plate when adjusting the legrest angle.

Calf pads may be adjusted independently on their respective mounting bracket using the mounting screws at the rear of the calf pads. Calf pads may be adjusted (for depth, height & angle) to achieve a variety of different configurations. The independent pad adjustments provide optimal positioning and comfort for end users - sample configurations are illustrated below.



- 4 mm Allen key

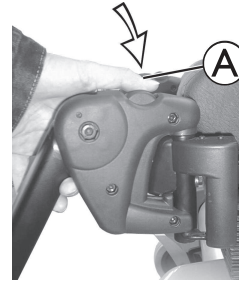
1. Fold the calf pad forward in order to access the bolts.
2. Loosen the bolts and remove them if necessary.

3. Adjust the calf pad to the required height and width.
4. Re-tighten the bolts.
5. Fold the calf pad back.

3.17 Vari-F Legrest

3.17.1 Swivelling Legrest Outward and / or Removing

The small unlocking button is located on the upper section of the legrest. When the legrest is unlocked, it can be swivelled inward or outward when getting into the wheelchair as well as being removed completely.



1. Press the unlocking button (A) and swivel the legrest outward.
2. Remove the legrest in an upward direction.

3.17.2 Setting Angle



CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

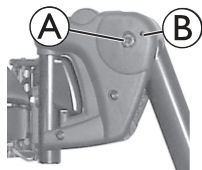
- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



- 6 mm Allen key

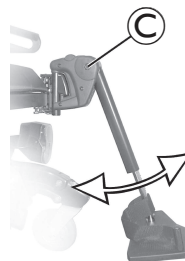
1. Loosen the screw **A** using the Allen key.

2.



If the legrest cannot be moved after loosening the screw, position a metal pin in the designated borehole **B** and use a hammer to knock on this lightly. The clamping mechanism in the interior of the legrest will be released by this. Repeat the procedure from the other side of the legrest if necessary.

3.



Loosen the screw **C**.

4. Set the desired angle.

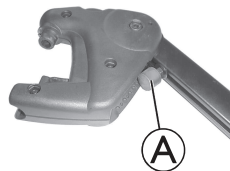
5. Re-tighten the screw.

3.17.3 Setting End Stop of Legrest

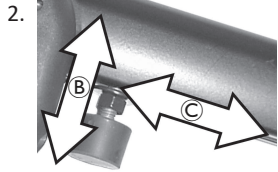


- 6 mm Allen key
- 10 mm wrench

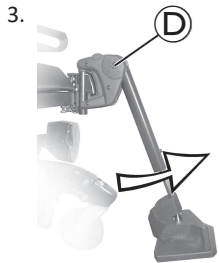
1.



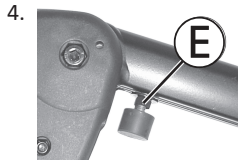
The end position of the legrest is determined by means of a rubber stop **A**.



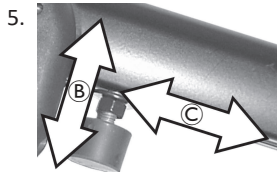
The rubber stop can be screwed in or out **B** or pushed up or down **C**.



Loosen the screw **D** and swivel the legrest upward in order to access the rubber stop.



Loosen the counter nut **E**.



Move the rubber stop to the desired position.

6. Re-tighten the counter nut.



Move the legrest to the desired position.

8. Re-tighten the screw.

3.17.4 Adjusting Length of Legrest



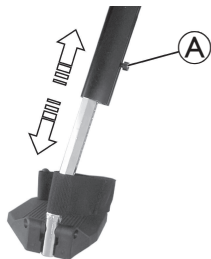
CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



- 5 mm Allen key

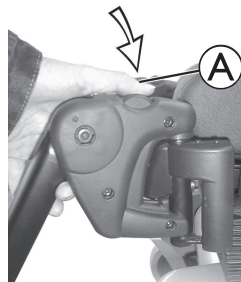


1. Loosen the screw (A).
2. Adjust to the desired length.
3. Re-tighten the screw.

3.18 Vari-A Legrests

3.18.1 Swivelling Legrest Outward and / or Removing

The small unlocking button is located on the upper section of the legrest. When the legrest is unlocked, it can be swivelled inward or outward when getting into the wheelchair as well as being removed completely.



1. Press the unlocking button (A) and swivel the legrest outward.
2. Remove the legrest in an upward direction.

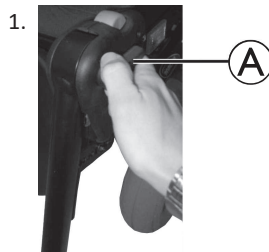
3.18.2 Setting Angle



CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



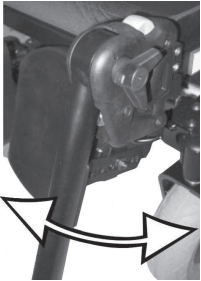
1. Loosen the locking knob (A) counter-clockwise at least one turn.

2.



Hit the knob to release the locking mechanism.

3.



Set the desired angle.

4.



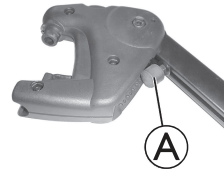
Turn the knob clockwise to tighten it.

3.18.3 Setting End Stop of Legrest



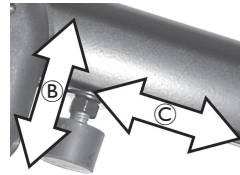
- 10 mm wrench

1.



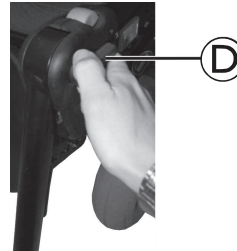
The end position of the legrest is determined by means of a rubber stop (A).

2.



The rubber stop can be screwed in or out (B) or pushed up or down (C).

3.



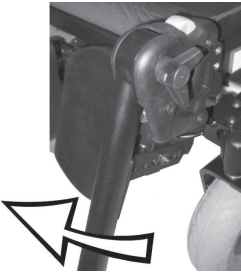
Loosen the locking knob (D) counter-clockwise at least one turn.

4.



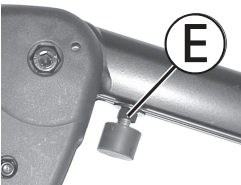
Hit the knob to release the locking mechanism.

5.



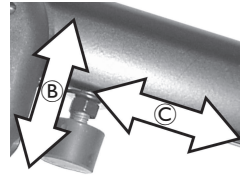
Swivel the legrest upward in order to access the rubber stop.

6.



Use the wrench to loosen the counternut **E**.

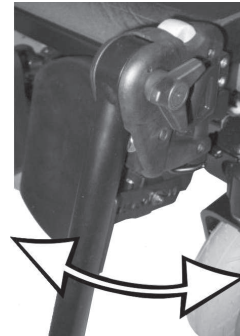
7.



Move the rubber stop to the desired position.

8. Re-tighten the counternut.

9.



Move the legrest to the desired position.

10. Re-tighten the locking knob.

3.18.4 Adjusting Length of Legrest



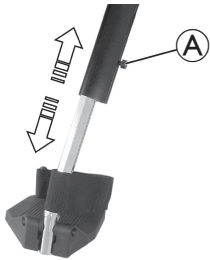
CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



- 5 mm Allen key



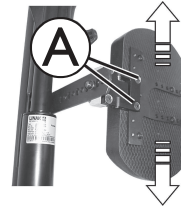
1. Loosen the screw **A**.
2. Adjust to the desired length.
3. Re-tighten the screw.

3.18.5 Adjusting Calf Pads

Adjusting Height



- 4 mm Allen key



1. Loosen the screws **A**.
2. Adjust to the desired position.
3. Re-tighten the screws.

Adjusting Depth

The depth of the calf pad can be adjusted via the holding plate. The holding plate hole combinations allow 5 different depth settings.

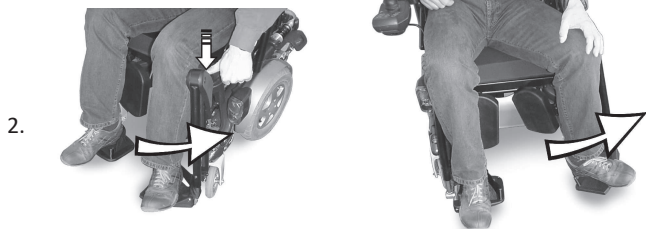


- 10 mm wrench



1. Remove nut **A**.
2. Adjust to the desired depth. Observe that the round holes are intended for the calf pad retaining screw and the oblong holes for the aglet without thread.
3. Screw the nut back on and tighten.

Unlocking and Swivelling Calf Pad Backward



Unlock the legrest and swivel outward.
The calf pad swivels backward on its own.

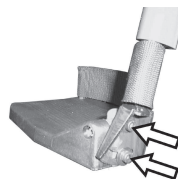


3.18.6 Adjusting Footrests

Adjusting Angle-adjustable Footrests



- 5 mm Allen key



1. Loosen both set screws on the footrest.
2. Adjust to the desired angle.
3. Re-tighten the screws.

Adjusting Angle- and Depth-adjustable Footrests



- 5 mm Allen key

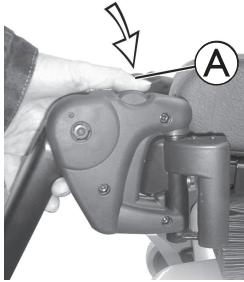


1. Loosen the set screw on the footrest **A**.
2. Adjust the footrest to the desired angle or depth.
3. Re-tighten the screw.

3.19 ADM Legrests

3.19.1 Swivelling Legrest Outward and / or Removing

The small unlocking button is located on the upper section of the legrest. When the legrest is unlocked, it can be swivelled inward or outward when getting into the wheelchair as well as being removed completely.



1. Press the unlocking button (A) and swivel the legrest outward.
2. Remove the legrest in an upward direction.

3.19.2 Setting Angle



CAUTION!
Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



CAUTION!
Risk of crushing

- Do not reach inside the swivelling range of the legrest.

Raising



1. Pull the legrest upward until the desired angle has been achieved.

Lowering



1. Keep the legrest in the foot plate area, pull the lateral adjusting lever (A) and lower the legrest slowly.

3.19.3 Adjusting Length of Legrest



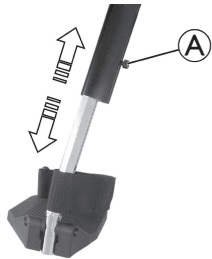
CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



- 5 mm Allen key



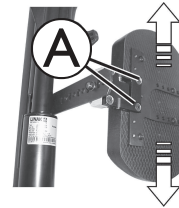
1. Loosen the screw **A**.
2. Adjust to the desired length.
3. Re-tighten the screw.

3.19.4 Adjusting Calf Pads

Adjusting Height



- 4 mm Allen key



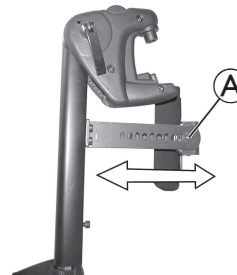
1. Loosen the screws **A**.
2. Adjust to the desired position.
3. Re-tighten the screws.

Adjusting Depth

The depth of the calf pad can be adjusted via the holding plate. The holding plate hole combinations allow 5 different depth settings.






- 10 mm wrench




1. Remove nut **A**.
2. Adjust to the desired depth. Observe that the round holes are intended for the calf pad retaining screw and the oblong holes for the aglet without thread.
3. Screw the nut back on and tighten.

Unlocking and Swivelling Calf Pad Backward

- 

1. Press the calf pad straight down.
- 


2. Unlock the legrest and swivel outward.
The calf pad swivels backward on its own.
- 

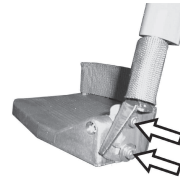
3. Lift leg over the heel strap and place on the ground.

3.19.5 Adjusting Footrests

Adjusting Angle-adjustable Footrests



- 5 mm Allen key



1. Loosen both set screws on the footrest.
2. Adjust to the desired angle.
3. Re-tighten the screws.

Adjusting Angle- and Depth-adjustable Footrests



- 5 mm Allen key

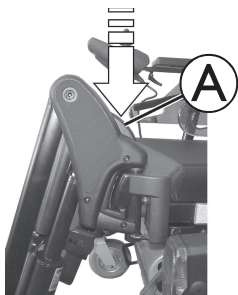


1. Loosen the set screw on the footrest **A**.
2. Adjust the footrest to the desired angle or depth.
3. Re-tighten the screw.

3.20 Powered Elevating Legrests (ADE Legrests)

3.20.1 Swivelling Legrest Outward and / or Removing

The small unlocking button is located on the upper section of the legrest. When the legrest is unlocked, it can be swivelled inward or outward when getting into wheelchair as well as being removed completely.



1. Press the unlocking button (A) and swivel the legrest outward.
2. Remove the legrest in an upward direction.

3.20.2 Setting Angle



CAUTION!

Risk of crushing

- Do not reach inside the swivelling range of the legrest.



CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.

The electrically height-adjustable legrests are operated using the remote. Refer to the separate user manual for your remote for more information.

3.20.3 Adjusting Length of Legrest



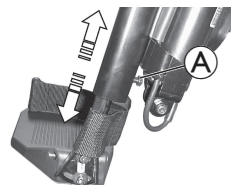
CAUTION!

Risk of injury due to incorrect adjustment of the footrests and legrests

- Before and during every journey it is imperative to ensure that the footrests contact neither the castor wheels nor the ground.



- 10 mm wrench



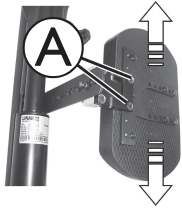
1. Loosen the screw (A).
2. Adjust to the desired length.
3. Re-tighten the screw.

3.20.4 Adjusting Calf Pads

Adjusting Height



- 4 mm Allen key



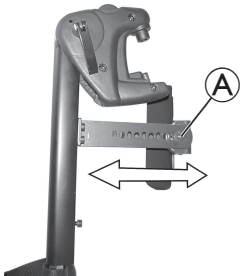
1. Loosen the screws **A**.
2. Adjust to the desired position.
3. Re-tighten the screws.

Adjusting Depth

The depth of the calf pad can be adjusted via the holding plate. The holding plate hole combinations allow 5 different depth settings.



- 10 mm wrench



1. Remove nut **A**.
2. Adjust to the desired depth. Observe that the round holes are intended for the calf pad retaining screw and the oblong holes for the aglet without thread.
3. Screw the nut back on and tighten.

Unlocking and Swivelling Calf Pad Backward



1.

Press the calf pad straight down.



2.



Unlock the legrest and swivel outward.
The calf pad swivels backward on its own.



3.

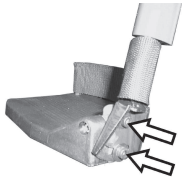
Lift leg over the heel strap and
place on the ground.

3.20.5 Adjusting Footrests

Adjusting Angle—adjustable Footrests



- 5 mm Allen key

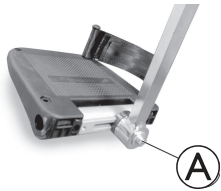


1. Loosen both set screws on the footrest.
2. Adjust to the desired angle.
3. Re-tighten the screws.

Adjusting Angle— and Depth—adjustable Footrests



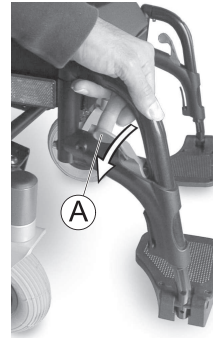
- 5 mm Allen key



1. Loosen the set screw on the footrest **A**.
2. Adjust the footrest to the desired angle or depth.
3. Re-tighten the screw.

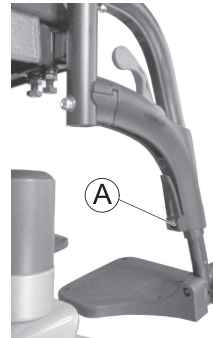
3.21 Adjusting Standard 80° Legrest


Swivelling and / or Removing



1. Push release lever **A** inward or outward.
2. Adjust component to desired position.
3. Pull upward to remove component.

Adjusting Length

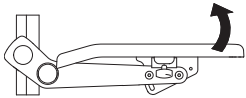


1. Loosen screw **A**.
 Do not remove screw **A**.
2. Adjust component to desired position.
3. Tighten screw.

4 Usage

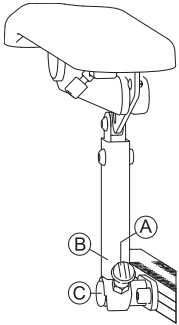
4.1 Removing Armrest for Side Transfer

Flip-up Armrest



1. Flip up armrest for side transfer.

Following Armrest

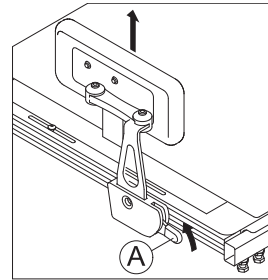


1. Pull knob (A) to unlock armrest support (B) from bearing plate (C).
2. Flip up armrest for side transfer.



For more information about side transfer, see the user manual of the power wheelchair.

4.2 Removing / Inserting Hip Support with Quick Release



Removing Hip Support

1. Pull lever (A) upwards.
2. Remove hip support from holder.

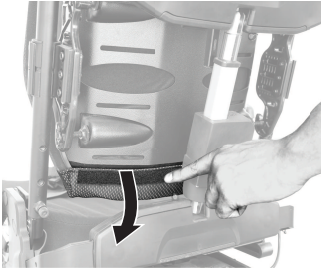
Inserting Hip Support

1. Insert hip support in holder.
2. Push lever (A) downwards. Ensure that hip support locks with an audible click.

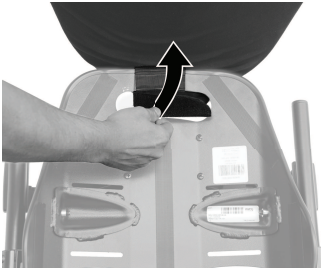
4.3 Replacing Backrest Cushion

only for Matrix Elite backrests

Removing Backrest Cushion

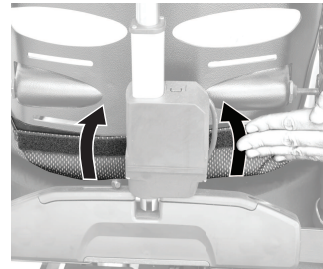


1. Loosen hook and loop strip at the lower backrest.



2. Lift cushion upwards.
3. Loosen hook and loop strip at backrest handle.

Installing Backrest Cushion



1. Attach hook and loop strip at the lower backrest.



2. Fold cushion upwards.



3. Attach hook and loop strip at backrest handle.

4.4 Using LNX Powered Central Legrest with Telescoping Footboard

Adjusting Angle

**WARNING!****Pinch point**

Risk of pinching when adjusting legrest angle.

- Keep top of legrest clear when adjusting legrest angle.

Lowering Footboard

**NOTICE!**

Lowering footboard until preset point could damage floor.

- Stop lowering footboard when it touches the floor.

You can lower the telescoping footboard until a preset point. Depending on the wheelchair configuration, this point might not exactly fit the seat-to-floor height but end a few millimeters above or push a few millimeters into the floor.

Drive Lockout

**NOTICE!**

Driving the wheelchair with lowered footboard could damage the legrest.

- As soon as you move the footboard, a drive lockout engages.

1. To disengage drive lockout, retract footboard to top position.

5 Maintenance Schedule

To ensure the optimal safety and reliability of your power positioning system, adhere to the maintenance schedule / table below. In addition to the maintenance schedule, note the following maintenance tasks and safety warnings that should be incorporated into your daily routine.



WARNING!

Any sudden or gradual deterioration in the function / performance of your power positioning system (i.e. increased actuator motor / gearbox noise, rattling, sloppiness, etc.) must be reported to your dealer immediately

- A complete wheelchair inspection by a qualified technician is recommended to ensure there is no unusual wear and tear, or physical damage that requires servicing and / or repair.



To ensure your power positioning system is operating properly and safely, Invacare recommends a complete dealer inspection be performed on your power positioning system every six (6) months by a qualified technician.



Be certain to read and follow all maintenance and safety information specific to your wheelchair power base. Refer to your wheelchair's user manual (provided separately).

Daily Maintenance:

- Check that all switches (push buttons/toggles) that operate your power positioning system are functioning properly.

- Charge batteries (refer to your wheelchair's user manual for important information on battery charging and proper battery care).

Monthly Inspection Checklist:

- Electrical / Wiring harnesses:
 - Check for pinches or pulls in wiring (over full range of seating system)
 - Inspect for wear & tear damage to wires
 - Ensure connections are secure
- Upholstery:
 - Check all upholstered parts for damage and wear
 - Check all covers especially near metal parts for damage and wear
- Hardware and components:
 - Inspect mounting hardware (seating system to base)
- Limit switches:
 - Check limit switch settings
 - Ensure DLO functions correctly

6 After Use

6.1 Reconditioning

This product is suitable for reuse. To recondition the product for a new user, carry out the following actions:

- Inspection
- Cleaning and disinfection
- Adaptation to the new user

For detailed information, see and the service manual for this product.

Make sure that the user manual is handed over with the product.

If any damage or malfunction is detected, do not reuse the product.

6.2 Disposal

Be environmentally responsible and recycle this product through your recycling facility at its end of life.

Disassemble the product and its components, so the different materials can be separated and recycled individually.

The disposal and recycling of used products and packaging must comply with the laws and regulations for waste handling in each country. Contact your local waste management company for information.

7 Troubleshooting

7.1 Performance Troubleshooting



For additional troubleshooting information regarding the power wheelchair & electronics, refer to the Troubleshooting section of the power wheelchair and remote user manuals (provided separately).

Symptom	Probable Cause	Solutions
Wheelchair power is ON, but system does not drive	System tilted and / or elevated beyond the drive lockout (DLO) angle	Return seating system to neutral (home) position.
	Drive motors not engaged	Engage drive motors.
	LNx powered central legrest with telescoping footboard lowered	Retract footboard to top position.
Seating system not functioning	Low batteries	Check / charge / replace batteries. Contact your provider.
	Loose/faulty electrical connection	Check cable connections / check cable ties (too tight / too loose). Contact your provider.
	Blown fuse	Inspect / replace fuse. Contact your provider.
	Interference / obstructions, pinched wires	Check for sources of interference or obstructions / inspect cables for pinch points. Contact your provider.

Symptom	Probable Cause	Solutions
Intermittent seating system functions (day to day, during tilt, during recline...)	Loose / faulty electrical connection	Check cable connections / check cable ties (too tight / too loose).
	Faulty power harness	Check / replace power harness. Contact your provider.
	Faulty limit switch	Check / replace limit switch. Contact your provider.
	Nearly exhausted battery (fluctuating charge)	Check / replace battery. Contact your provider.
Drive lockout (DLO) is not functioning	Loose / faulty electrical connection	Check connections. Contact your provider.
	DLO limit switch / mechanical switch is not set properly	Contact your provider.
	Faulty DLO limit switch	Contact your provider.
Limit switch not functioning properly	Loose / faulty electrical connection	Check connections. Contact your provider.
	Faulty limit switch	Check/ replace limit switch. Contact your provider.
	Limit switch is not set-up properly	Contact your provider.

Symptom	Probable Cause	Solutions
System only operates in one direction	Limit is exceeded (DLO, RDS, back angle, elevating seat lockout)	Come within limit ranges.
	Faulty limit switch	Check / replace limit switch. Contact your provider.
	Limit switch is not set-up properly	Contact your provider.
	Low voltage	Contact your provider.
	Battery not charged	Charge batteries.
Remote will not function	Remote not plugged in	Inspect cable connection.
	Remote not turned on	Turn on power to the remote via the keypad. Contact your provider.
	Blown base fuse	Inspect / replace fuse.
Actuator keeps running	Pinched switch harness	Inspect / adjust harness position to prevent pinching. Contact your provider.

8 Technical Data

8.1 Technical Specifications

The technical information provided hereafter applies to a standard configuration or represents maximum achievable values. These can change if accessories are added. The precise changes to these values are detailed in the sections for the respective accessories.



Note that in some cases the measured values may vary up to ± 10 mm.

For more technical data of the power wheelchair see the user manual of your wheelchair.

Dimensions and Weights of Modulite Seating System

Dimensions According to ISO 7176-5	Power Wheelchair			
	TDX SP2 (Standard)	AVIVA RX (Standard)	AVIVA RX (HD)	AVIVA FX
Seat Width [mm] (Armrest Adjustment Range in Parentheses)	<ul style="list-style-type: none"> • 380 (380 – 430) • 430 (430 – 480) • 480 (480 – 530) • 530 (530 – 580) 	<ul style="list-style-type: none"> • 330 (330 – 380) • 380 (380 – 430) • 430 (430 – 480) • 480 (480 – 530) • 530 (530 – 580) 	<ul style="list-style-type: none"> • 620 (620 – 670) • 650 (650 – 700) 	<ul style="list-style-type: none"> • 380 (380 – 430) • 430 (430 – 480) • 480 (480 – 530) • 530 (530 – 580)
Seat Depth [mm]	• 410 – 560	• 410 – 510	• 510 – 580	• 410 – 510
Seat Cushion Thickness [mm]	• 50/75/90/100		• 90	• 50/75/90/100
Backrest Angle	• $+90^\circ$... $+120^\circ$			
Backrest Height ¹ [mm]				
Sling Back	• 480 / 540		• 540	• 480 / 540
Telescopic Seat Frame	• 560 – 610		• –	• 560 – 610
Matrx Back	• –	• 400 / 500	• –	• 400 / 500

Dimensions According to ISO 7176-5	Power Wheelchair			
	TDX SP2 (Standard)	AVIVA RX (Standard)	AVIVA RX (HD)	AVIVA FX
Armrest Height Telescopic Seat Frame [mm]				
T-Armrest	• 245 – 310 / 295 – 360			
Flip-up Armrest	• 230 – 360	• —	• 230 – 360	
Following Armrest	• 230 – 300 / 300 – 360	• —	• 230 – 300 / 300 – 360	
Armrest Height One Piece Seat Plate [mm]				
T-Armrest	• 275 – 340 / 325 – 390	• —	• —	
Armrest Depth ² [mm]	• max. 440	• 325 – 397		
Max. Armrest Weight [kg]	• 1.7			
Max. Headrest Weight [kg]	• 1.4			
Seat Angle, Electrical Adjustment (Tilt Only Module 50° [T] / Tilt with Lifter 45° [T / L])				
Standard Mount	• 0° ... 50 (T) / 0° ... 45° (T / L)	• —	• —	
5° Fixed Anterior Mount	• -5° ... 45° (T) / -5° ... 40°(T / L)	• —	• —	
10° Fixed Anterior Mount	• -10° ... 40° (T) / -10° ... 35° (T / L)	• —	• —	
5° Fixed Posterior Mount	• 5° ... 55° (T) / 5° ... 50° (T / L)	• —	• —	
Seat Angle, Electrical Adjustment (30°)				
Standard Mount	• 0° ... +30°			
5° Fixed Anterior Mount	• -5° ... +25°	• —		
Seat Angle, Electrical Adjustment (20°)				

Dimensions According to ISO 7176-5	Power Wheelchair			
	TDX SP2 (Standard)	AVIVA RX (Standard)	AVIVA RX (HD)	AVIVA FX
Standard Mount	• 0° ... +20°			• —
Seat Angle, Manual Adjustment	• 0° ... +8°	• 0°... +15°		• —

Footrests and Legrests					
Vari F	Length [mm]	• 290 – 460	Standard 80°	Length [mm]	• 290 – 460
	Angle	• +70° ... 0°		Angle	• +80°... 0°
	Max. Weight [kg]	• 1.6		Max. Weight [kg]	• 3.1
Vari A	Length [mm]	• 290 – 460	Centre-Mounted (manual)	Length [mm]	• 280 – 385
	Angle	• +70° ... 0°		Angle	• +90°... 0°
	Max. Weight [kg]	• 2.7		Max. Weight [kg]	• 5.4
ADM (manual)	Length [mm]	• 290 – 460	Centre-Mounted Powered LNX ³	Length [mm]	• 340 – 410
	Angle	• +80° ... 0°		Angle	• +97°... + 7° • +90° ... 0° • +83°... -7°
	Max. Weight [kg]	• 3.1			
ADE (powered)	Length [mm]	• 290 – 460			
	Angle	• +80° ... 0°			
	Max. Weight [kg]	• 4.2			

1 Measured without seat cushion

2 Distance between backrest reference plane and most forward part of armrest assembly

3 Legrest not removable, so no component weight measurable

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1656515-G 2024-07-18



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