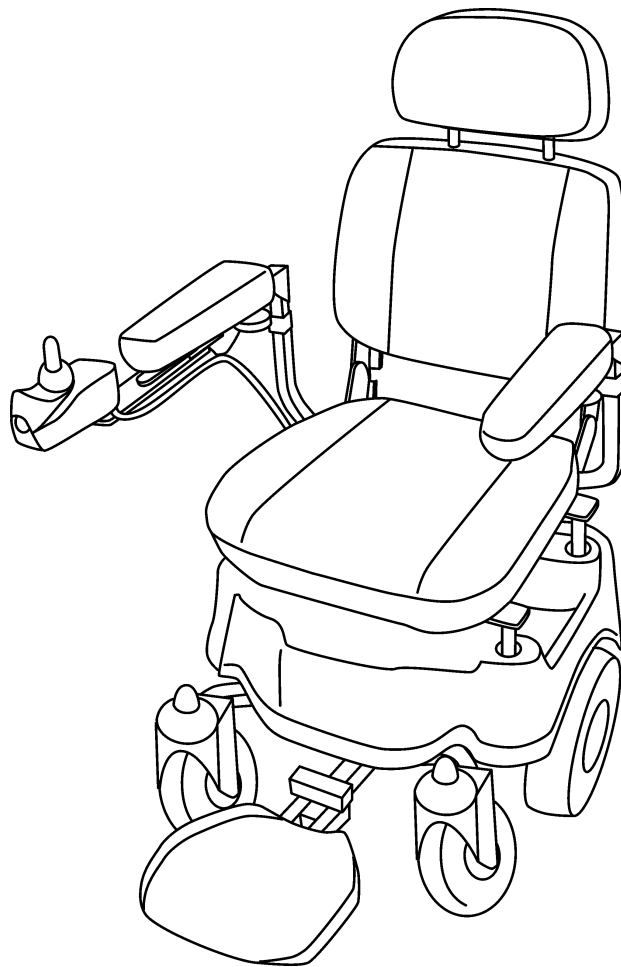


# **Pronto™ M6**



**DEALER:** THIS MANUAL MUST BE GIVEN TO THE USER OF THE WHEELCHAIR.

**USER:** BEFORE USING THIS WHEELCHAIR, READ THIS MANUAL AND SAVE FOR FUTURE REFERENCE.



**Yes, you can.™**

**WARNING**

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**DO NOT OPERATE THIS EQUIPMENT WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL. IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS, AND INSTRUCTIONS, CONTACT A HEALTHCARE PROFESSIONAL, DEALER OR TECHNICAL PERSONNEL IF APPLICABLE BEFORE ATTEMPTING TO USE THIS EQUIPMENT - OTHERWISE INJURY OR DAMAGE MAY RESULT.**

**THE INITIAL SET UP OF THIS WHEELCHAIR MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.**

**PROCEDURES OTHER THAN THOSE DESCRIBED IN THIS MANUAL MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.**

**SPECIAL NOTES**

WARNING/CAUTION notices as used in this manual apply to hazards or unsafe practices which could result in personal injury or property damage.

**NOTICE**

INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

**WHEELCHAIR USER**

As a manufacturer of wheelchairs, Invacare endeavors to supply a wide variety of wheelchairs to meet many needs of the user. However, final selection of the type of wheelchair to be used by an individual rests solely with the user and his/her healthcare professional capable of making such a selection.

**WHEELCHAIR TIE-DOWN RESTRAINTS AND SEAT POSITIONING STRAPS**

Invacare recommends that wheelchair users NOT be transported in vehicles of any kind while in wheelchairs. As of this date, the Department of Transportation has not approved any tie-down systems for transportation of a user while in a wheelchair, in a moving vehicle of any type.

It is Invacare's position that users of wheelchairs should be transferred into appropriate seating in vehicles for transportation and use be made of the restraints made available by the auto industry. Invacare cannot and does not recommend any wheelchair transportation systems.

**AS REGARDS RESTRAINTS - SEAT POSITIONING STRAPS - IT IS THE OBLIGATION OF THE DME DEALER, THERAPISTS AND OTHER HEALTHCARE PROFESSIONALS TO DETERMINE IF A SEAT POSITIONING STRAP IS REQUIRED TO ENSURE THE SAFE OPERATION OF THIS EQUIPMENT BY THE USER. SERIOUS INJURY CAN OCCUR IN THE EVENT OF A FALL FROM A WHEELCHAIR.**

**SAVE THESE INSTRUCTIONS**

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**PRONTO™ M6**

<b>Seat Width Range:</b>	17 - inches
<b>Seat Depth:</b>	17 1/2 - inches-with headrest
<b>Back Height Range:</b>	21 - inches to 27 - inches - In 1 - inch increments
<b>Back Angle Range:</b>	80° to 115°
<b>Seat-to-Floor:</b>	19 1/4 to 20 3/4 - inches
<b>Overall Width (No joystick):</b>	23 - inches
<b>Overall Height:</b>	39 3/4 to 47 1/4 - inches
<b>Overall Length</b>	31 1/2 to 33 1/2 - inches (With Footboard Folded) 42 to 44 - inches (With Footboard Down)
<b>Drive Wheels/Tires</b>	10 x 3 1/2 - inch (Flat Free-Standard)
<b>Caster w/Precision Sealed Bearings:</b>	6.0 x 1.3 - inch Front 5.0 x 1.2 - inch Rear
<b>Footrests/Legrests:</b>	Flip Up, Depth Adjustable
<b>Weight<sup>1</sup></b>	
<b>W/O Batteries:</b>	153 lbs.
<b>W/Batteries (Gel Cell):</b>	205 lbs.
<b>Shipping:</b>	253 lbs.
<b>Armrests:</b>	Adjustable Width, Angle, Height and Depth
<b>Upholstery:</b>	Gray Cloth
<b>Batteries:</b>	U1 Gel Cell - Quantity 2

**PERFORMANCE**

<b>Speed (M.P.H.):</b>	0 to 4 1/2
<b>Turning Radius:</b>	24-inches
<b>Range (variable)<sup>2</sup>:</b>	14 miles
<b>❖ Weight Limitation:</b>	250 lbs.

❖ *NOTE: Refer to PERCENTAGE OF WEIGHT DISTRIBUTION in PROCEDURE 1 of this manual.*

**Footnotes:**

1. Includes seating systems and accessories.
2. Range will vary with battery conditions, surface, terrain and operators weight.

<i><b>This Procedure Includes the Following:</b></i>
<i><b>Controller Settings</b></i>
<i><b>Repair or Service Information</b></i>
<i><b>Operating Information</b></i>
<i><b>Safety/Handling of Wheelchairs</b></i>
<i><b>Warning/Caution Label Location</b></i>

**WARNING**

**REPAIR OR SERVICE/CONTROLLER SETTINGS**

Set-up of the Electronic Control Unit is to be performed **ONLY** by a qualified technician. The final tuning adjustments of the controller may affect other activities of the wheelchair. Reprogramming the controller reduces the stability/controlability of the wheelchair. Other program settings could cause the wheelchair to tip over resulting in serious injury to the user and/or damage to the surrounding property. If any individual other than a qualified technician performs any work on these units, the warranty is void.

**OPERATING INFORMATION**

**GENERAL WARNINGS**

Performance adjustments should only be made by professionals of the healthcare field or persons fully conversant with this process and the driver's capabilities. Incorrect settings could cause injury to the driver, bystanders, damage to the chair and to surrounding property.

After the wheelchair has been set-up, check to make sure that the wheelchair performs to the specifications entered during the set-up procedure. If the wheelchair does **NOT** perform to specifications, turn the wheelchair **OFF** immediately and reenter set-up specifications. Repeat this procedure until the wheelchair performs to specifications.

**ALWAYS** shift your weight in the direction you are turning. **DO NOT** shift your weight in the opposite direction of the turn. Shifting your weight in the opposite direction of the turn may cause the inside drive wheel to lose traction and the wheelchair to tip over.

**DO NOT** shift your weight or sitting position toward the direction you are reaching as the wheelchair may tip over.

**DO NOT** engage or disengage the motor locks until the power is in the **OFF** position.

**DO NOT** operate on roads, streets or highways.

**DO NOT** climb, go up or down ramps or traverse slopes greater than 9°.

**DO NOT** attempt to move up or down an incline with a water, ice or oil film.

**DO NOT** attempt to drive over curbs or obstacles. Doing so may cause your wheelchair to turn over and cause bodily harm or damage to the chair.

**DO NOT** use parts, accessories, or adapters other than those authorized by Invacare.

**DO NOT** leave the power button **ON** when entering or exiting your wheelchair.

**DO NOT** stand on the frame of the wheelchair.

**DO NOT** stand on the flip-up footboard. When getting in or out of the wheelchair, make sure that the flip-up footboard is in the upward position .

**ALWAYS** wear your seat positioning strap.

**GENERAL WARNINGS (CONTINUED)****ACCESSORIES**

**EXTREME** care should be exercised when using oxygen in close proximity to electric circuits. Contact your oxygen supplier for instruction in the use of oxygen.

**BATTERIES**

The warranty and performance specifications contained in this manual are based on the use of deep cycle gel cell or sealed lead acid batteries. Invacare strongly recommends their use as the power source for this unit.

Carefully read battery/battery charger information prior to installing, servicing or operating your wheelchair.

**CHARGING BATTERIES**

Carefully read all warnings, cautions and any other information printed on the battery charger prior to recharging the batteries.

**NEVER** attempt to recharge the batteries by attaching cables directly to the battery terminals.

**DO NOT** attempt to recharge the batteries and operate the wheelchair at the same time.

**DO NOT** attempt to recharge the batteries when the wheelchair has been exposed to **ANY** type of moisture.

**DO NOT** attempt to recharge the batteries when the wheelchair is outside.

**DO NOT** sit in the wheelchair while recharging the batteries.

**DO NOT** attempt to recharge the batteries using **BOTH** the on-board battery charger **AND** an independent battery charger (plugged into the joystick charger port) at the **SAME** time. Doing so will reduce the life of the batteries.

**GROUNDING INSTRUCTIONS:**

**DO NOT**, under any circumstances, cut or remove the round grounding prong from any plug used with or for Invacare products. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards and fire. Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the National Electrical Code. If you must use an extension cord, use **ONLY** a three-wire extension cord having the same or higher electrical rating as the device being connected. In addition, Invacare has placed **RED/ORANGE WARNING TAGS** on some equipment. **DO NOT** remove these tags.

**RAIN TEST**

**INVACARE** has tested its power wheelchairs in accordance with ISO 7176 Part 9 "Rain Test". This provides the end user or his/her assistant sufficient time to remove his/her power wheelchair from a rain storm and retain wheelchair operation.

**DO NOT** leave power wheelchair in a rain storm of any kind.

**DO NOT** use power wheelchair in a shower or leave it in a damp bathroom while taking a shower.

**DO NOT** leave power wheelchair in a damp area for any length of time.

Direct exposure to rain or dampness will cause the chair to malfunction electrically and mechanically; may cause the chair to prematurely rust or may damage the upholstery.

Check to ensure that the red and black battery terminal caps are secured in place, joystick boot is **NOT** torn or cracked where water can enter and that all electrical connections are secure at all times.

**DO NOT** use the joystick if the boot is torn or cracked. If the joystick boot becomes torn or cracked, replace **IMMEDIATELY**.

**GENERAL WARNINGS (CONTINUED)****WEIGHT TRAINING**

Invacare DOES NOT recommend the use of its wheelchairs as a weight training apparatus. Invacare wheelchairs have NOT been designed or tested as a seat for any kind of weight training. If occupant uses said wheelchair as a weight training apparatus, INVACARE SHALL NOT BE LIABLE FOR BODILY INJURY AND THE WARRANTY IS VOID.

**WEIGHT LIMITATION**

The Pronto™ M6 model has a weight limitation of 250 lbs.

**WARNING**

**CAUTION: IT IS VERY IMPORTANT THAT YOU READ THIS INFORMATION REGARDING THE POSSIBLE EFFECTS OF ELECTROMAGNETIC INTERFERENCE ON YOUR POWERED WHEELCHAIR.**

**ELECTROMAGNETIC INTERFERENCE (EMI) FROM RADIO WAVE SOURCES**

Powered wheelchairs and motorized scooters (in this text, both will be referred to as powered wheelchairs) may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two way radios, and cellular phones. The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered wheelchair's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered wheelchair can resist EMI up to a certain intensity. This is called its "immunity level." The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. This powered wheelchair model as shipped, with the INT/DL40i Non-Programmable (NP) electronics, has an immunity level of unknown.

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed, your risk to EMI will be minimized.

The sources of radiated EMI can be broadly classified into three types:

- 1) Hand-held Portable transceivers (transmitters-receivers with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie," security, fire, And police transceivers, cellular telephones, and other personal communication devices. \*\*NOTE: Some cellular telephones and similar devices transmit signals while they are ON, even when not being used;
- 2) Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle; and
- 3) Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

*NOTE: Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances, such as electric shavers and hair dryers, so far as we know, are not likely to cause EMI problems to your powered wheelchair.*

**WARNINGS**

**POWERED WHEELCHAIR ELECTROMAGNETIC INTERFERENCE (EMI)**

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the powered wheelchair's control system while using these devices. This can affect powered wheelchair movement and braking. Therefore, the warnings listed are recommended to prevent possible interference with the control system of the powered wheelchair.

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered wheelchairs and motorized scooters. Following the warnings listed below should reduce the chance of unintended brake release or powered wheelchair movement which could result in serious injury.

- 1) Do not operate hand-held transceivers (transmitters receivers), such as citizens band (CB) radios, or turn ON personal communication devices, such as cellular phones, while the powered wheelchair is turned ON;
- 2) Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them;
- 3) If unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe;
- 4) Be aware that adding accessories or components, or modifying the powered wheelchair, may make it more susceptible to EMI (Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair); and
- 5) Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a source of EMI nearby.

**IMPORTANT INFORMATION**

- 1) 20 volts per meter (V/m) is a generally achievable and useful immunity level against EMI (as of May 1994) (the higher the level, the greater the protection);
- 2) The immunity level of this product is unknown.

**SAFETY/HANDLING OF WHEELCHAIRS**

"Safety and Handling" of the wheelchair requires the close attention of the wheelchair user as well as the assistant. This manual points out the most common procedures and techniques involved in the safe operation and maintenance of the wheelchair. It is important to practice and master these safe techniques until you are comfortable in maneuvering around the frequently encountered architectural barriers.

Use this information only as a "basic" guide. The techniques that are discussed on the following pages have been used successfully by many.

Individual wheelchair users often develop skills to deal with daily living activities that may differ from those described in this manual. Invacare recognizes and encourages each individual to try what works best for him/her in overcoming architectural obstacles

that they may encounter, however, ALL WARNINGS and CAUTIONS given in this manual MUST be followed. Techniques in this manual are a starting point for the new wheelchair user and assistant with "safety" as the most important consideration for all.

**Stability and Balance**

**WARNING**

**ALWAYS wear your seat positioning strap.**

To assure stability and proper operation of your wheelchair, you must at all times maintain proper balance. Your wheelchair has been designed to remain upright and stable during normal daily activities as long as you do not move beyond the center of gravity. DO NOT lean forward out of the wheelchair any further than the length of the armrests.



**Coping With Everyday Obstacles**

Coping with the irritation of everyday obstacles can be alleviated somewhat by learning how to manage your wheelchair. Keep in mind your center of gravity to maintain stability and balance.

**A Note to Wheelchair Assistants**

When assistance to the wheelchair user is required, remember to use good body mechanics. Keep your back straight and bend your knees whenever tilting wheelchair or traversing curbs, or other impediments.

Also, be aware of detachable parts such as arms or the footboard. These must NEVER be used for handhold or lifting supports, as they may be inadvertently released, resulting in possible injury to the user and/or assistant(s).

When learning a new assistance technique, have an experienced assistant help you before attempting it alone.

**Stairways**

**WARNING**

**DO NOT attempt to move an occupied power wheelchair between floors using a stairway. Use an elevator to move an occupied power wheelchair between floors. If moving a power wheelchair between floors by means of a stairway, the occupant MUST be removed and transported independently of the power wheelchair.**

Extreme caution is advised when it is necessary to move an UNOCCUPIED power wheelchair up or down the stairs. Invacare recommends using two (2) assistants and making thorough preparations. Separate the front frame assembly of the wheelchair from the rear frame assembly of the wheelchair. Make sure to use ONLY secure, non-detachable parts for handhold supports.

**DO NOT attempt to lift the wheelchair by any removable (detachable) parts. Lifting by means of any removable (detachable) parts of a wheelchair may result in injury to the user or damage to the wheelchair.**

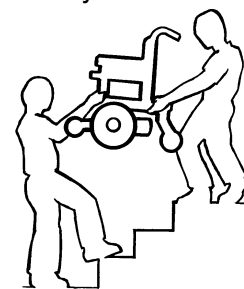
Follow this procedure for moving the wheelchair between floors when an elevator is NOT available:

**WARNING**

The weight of the wheelchair without the user and batteries is 153 lbs. Use proper lifting techniques (lift with your legs) to avoid injury.

1. Remove the occupant from the wheelchair.

2. Separate the front frame assembly of the wheelchair from the rear frame assembly of the wheelchair. Refer to TRANSPORTING THE WHEELCHAIR in PROCEDURE 10 of the manual.
3. Remove the battery boxes from the wheelchair. Refer to INSTALLING/REMOVING THE BATTERIES in PROCEDURE 9 of this manual.
4. Bend your knees and keep your back straight.
5. Using non-removable (non-detachable) parts of the wheelchair, lift the front frame assembly off of the ground and transfer it up or down the stairs.
6. The front frame assembly should not be lowered until the last stair has been negotiated and the front frame assembly has been carried away from the stairway.



7. Repeat STEPS 4-6 for the rear frame assembly.

**ESCALATORS? SORRY!**

**DO NOT use an escalator to move a wheelchair between floors. Serious bodily injury may occur.**

**Transferring to and From Other Seats**

**WARNING**

**ALWAYS turn the wheelchair power OFF and engage the motor locks to prevent the wheels from moving BEFORE attempting to transfer in or out of the wheelchair. Also, make sure every precaution is taken to reduce the gap distance by aligning both the front AND rear casters parallel with the object you are transferring onto.**

**CAUTION**

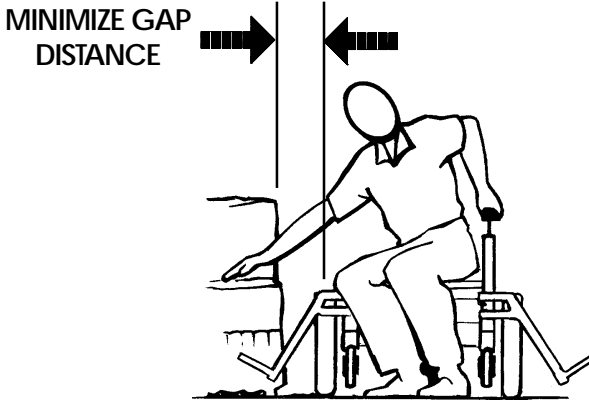
**When transferring, position yourself as far back as possible in the seat. This will prevent broken screws, damaged upholstery and the possibility of the wheelchair tipping forward.**

*NOTE: This activity may be performed independently provided you have adequate mobility and upper body strength.*

1. Position the wheelchair as close as possible along side the seat to which you are transferring, with the rear casters pointing away from it.

2. After the wheelchair is positioned properly for transfer, verify that the motor locks are engaged. Refer to **ENGAGING/DISENGAGING MOTOR LOCKS** in PROCEDURE 7 of this manual.
3. Shift body weight into seat with transfer.

During independent transfer, little or no seat platform will be beneath you. Use a transfer board if at all possible.



**Percentage of Weight Distribution**

**WARNING**

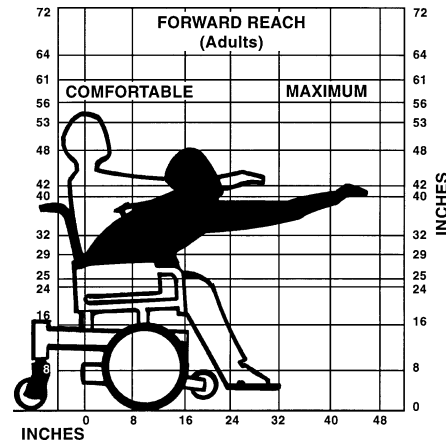
DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees.

Many activities require the wheelchair user to reach, bend and transfer in and out of the wheelchair. These movements will cause a change to normal balance, center of gravity, and weight distribution of the wheelchair. To determine and establish your particular safety limits, practice bending, reaching and transferring activities in several combinations in the presence of a qualified healthcare professional BEFORE attempting active use of the wheelchair.

Proper positioning is essential for your safety. When reaching, leaning, bending or bending forward, it is important to use the casters as a tool to maintain stability and balance.

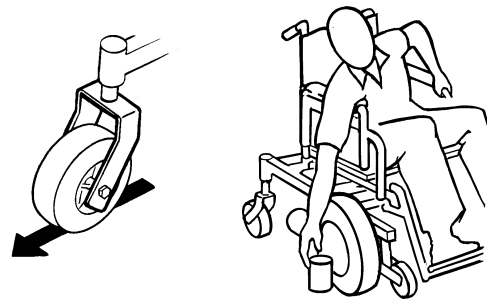
**Functional Reach From a Wheelchair**

The approximate reach-limit values shown in the accompanying graphs were derived on the basis of a sample of 91 male and 36 female wheelchair users. Note the difference between the maximum and the comfortable reach limits, a subjective but important consideration in design.



**Reaching, Leaning, Bending and Bending - Forward**

Position the front AND rear casters so that they are extended as far rearward as possible and engage motor locks. **DO NOT ATTEMPT TO REACH OBJECTS IF YOU HAVE TO MOVE FORWARD IN THE SEAT OR PICK THEM UP FROM THE FLOOR BY REACHING DOWN BETWEEN YOUR KNEES.**



**Reaching, Bending - Backward**

**WARNING**

DO NOT lean over the top of the back upholstery. This will change your center of gravity and may cause you to tip over.

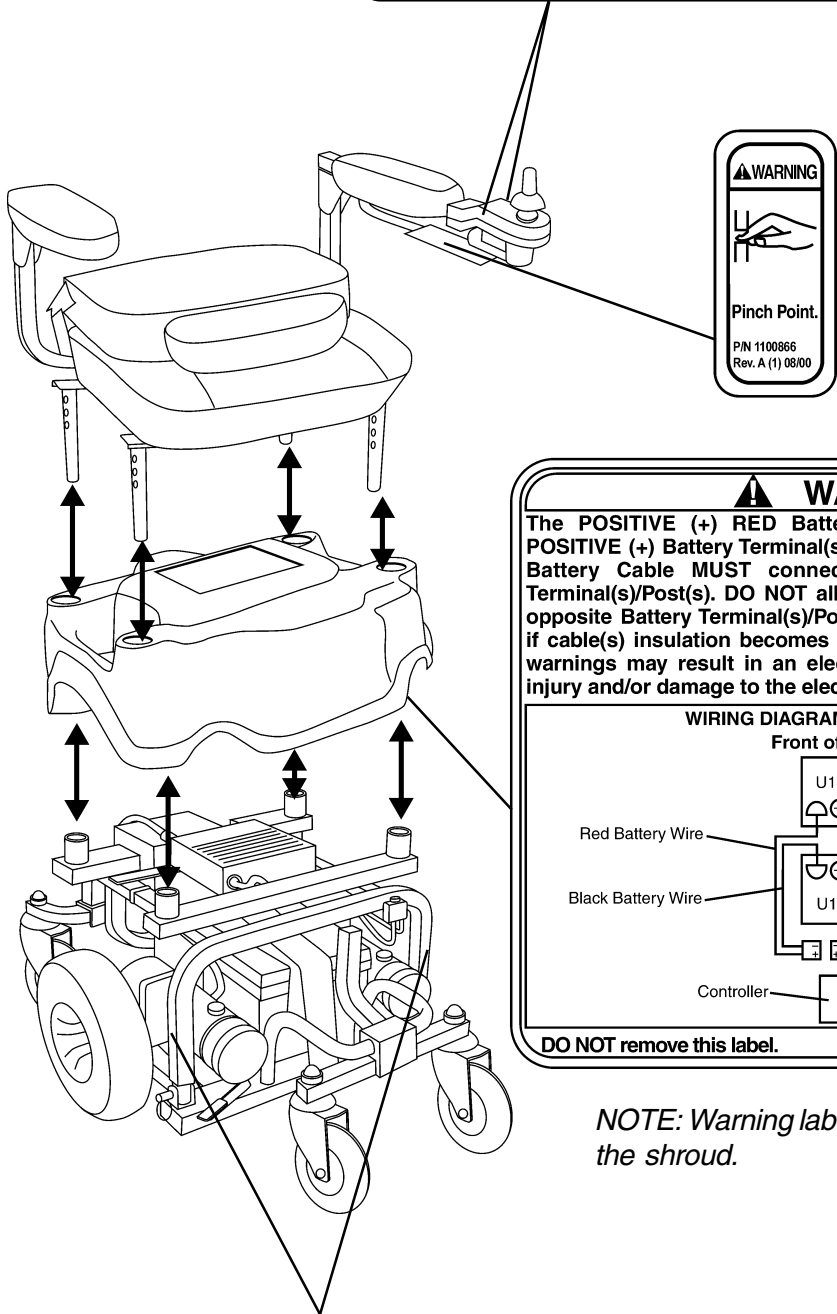
Position wheelchair as close as possible to the desired object. Point the front AND rear casters rearward to create the longest possible wheelbase. Reach back only as far as your arm will extend without changing your sitting position.



**WARNING/CAUTION LABEL LOCATION - PRONTO™ M6**

GENERAL GUIDELINES

**⚠ WARNING**  
 Positioning joystick **PARALLEL** to armrest allows wheelchair to be **SLOWLY** maneuvered up to a desk/table. **ANY** other wheelchair operation is to be performed with joystick secured with retaining pin in **FRONTAL** position - otherwise injury or damage may result.  
 Rev. A (1)-05/00 P/N 1098340



**⚠ WARNING**  
 Pinch Point.  
 P/N 1100866  
 Rev. A (1) 08/00

**⚠ WARNING**  
 The **POSITIVE (+) RED** Battery Cable **MUST** connect to the **POSITIVE (+) Battery Terminal(s)/Post(s)**. The **NEGATIVE (-) BLACK** Battery Cable **MUST** connect to the **NEGATIVE (-) Battery Terminal(s)/Post(s)**. **DO NOT** allow Battery Cable(s) to contact the opposite Battery Terminal(s)/Post(s). Replace cable(s) immediately if cable(s) insulation becomes damaged. Failure to observe these warnings may result in an electrical short with serious personal injury and/or damage to the electrical system. See Owner's Manual.

**WIRING DIAGRAM FOR U1 BATTERIES**  
 Front of Wheelchair

**DO NOT remove this label.** Rev. A (1)-05/00 P/N 1098342

*NOTE: Warning label 1098342 is located UNDER the shroud.*

**⚠ WARNING**  
 When reassembling the wheelchair, ensure the retaining pins securing the frame assemblies together are properly engaged - otherwise, injury and/or damage may result.  
 Rev. A (1)-05/00 P/N 1098316

SAFETY INSPECTION

<i>This Procedure Includes the Following:</i>
<i>Safety Inspection Checklist</i>
<i>Troubleshooting Guide</i>

**SAFETY INSPECTION CHECKLIST**

Initial adjustments should be made to suit personal body structure and preference. Thereafter, follow these maintenance procedures:

TROUBLESHOOTING

ITEM	INSPECT/ ADJUST INITIALLY	INSPECT/ ADJUST WEEKLY	INSPECT/ ADJUST MONTHLY	INSPECT/ ADJUST PERIODICALLY
<b>GENERAL (MECHANICAL TROUBLESHOOTING)</b> ● Wheelchair rolls straight (no excessive drag or pull to one side).	X			X
<b>ARMS - (PROCEDURE 3)</b> ● Secure but easy to release; adjustment levers engage properly. ● Adjustable height arms operate and lock securely. ● Pivot points free of wear and looseness.	X X X		X	X X
<b>SEAT AND BACK UPHOLSTERY</b> ● Inspect for rips or sagging.	X			X
<b>SEAT</b> ● Seat secured to the wheelchair frame. ● Remove seat release pins and inspect. Replace if any signs of wear.	X X	X		X
<b>DRIVE WHEELS</b> ● Mounting bolts are secure. ● No excessive side movement or binding when lifted and spun when disengaged (free-wheeling).	X X			
<b>CASTER ASSEMBLIES - (PROCEDURE 7)</b> ● Bolts are tight. ● Inspect caster assembly for proper tension by spinning caster assembly; caster assembly should come to a gradual stop. <b>CAUTION: As with any vehicle, the wheels and tires should be checked periodically for cracks and wear, and should be replaced.</b>	X X		X X	
<b>CASTER ASSEMBLIES/WHEEL - (PROCEDURE 7)</b> ● Ensure all fasteners are secure.	X	X		
<b>WHEELS/TIRES - (PROCEDURE 7)</b> ● Inspect for flat spots and wear. <b>CAUTION: As with any vehicle, the wheels and tires should be checked periodically for cracks and wear, and should be replaced.</b>	X	X		
<b>CLEANING</b> ● Clean upholstery and armrests.	X			X

*NOTE: Every six (6) months take your wheelchair to a qualified dealer for a thorough inspection and servicing. Regular cleaning will reveal loose or worn parts and enhance the smooth operation of your wheelchair. To operate properly and safely, your wheelchair must be cared for just like any other vehicle. Routine maintenance will extend the life and efficiency of your wheelchair.*

**TROUBLESHOOTING GUIDE**

SYMPTOM	PROBABLE CAUSE	SOLUTION
<b>LIMITED DRIVING DISTANCE.</b>	Batteries not charged long enough.  Batteries weak, won't hold charge.	Charge batteries overnight or ensure 8 hours of charge between use times (PROCEDURE 8).  Replace Batteries (PROCEDURE 8).
<b>BATTERIES NOT CHARGING.</b>	Charger not working.  Battery Connections loose.  <b>NO</b> current at wall outlet. <b>BAD</b> connection on Charger, Charger Cable, Plug or Internal Wiring problem.	Switch on back of charger NOT set to 115 volts (PROCEDURE 8). Replace Charger. Check all connections. Secure connections (PROCEDURE 8). Switch to another wall outlet. Replace Charger or internal repairs required. Contact Dealer or Invacare.
<b>BATTERIES DRAW EXCESSIVE CURRENT WHEN CHARGING.</b>	Battery Failure.	Replace Batteries (PROCEDURE 8).
<b>CHARGE INDICATOR SHOWS LOW CHARGE LEVEL IMMEDIATELY AFTER CHARGING.</b>	Batteries weak, won't hold charge.  Electrical Malfunction Charger not operating.	Replace Batteries (PROCEDURE 8).  Contact Dealer or Invacare. Replace Charger.
<b>BATTERY INDICATOR FLASHES THE CHARGE LEVEL IS LOW - TOO SOON AFTER BEING RECHARGED.</b>	Have charger checked.  Weak batteries.	Service or replace charger. Contact Dealer or Invacare.  Replace batteries (PROCEDURE 8).
<b>WHEELCHAIR WILL NOT DRIVE.</b>	Motor locks disengaged.  Batteries require charging.  Charger plugged in. Circuit breaker tripped.	Engage motor locks. (PROCEDURE 7)  Charge batteries (PROCEDURE 8).  Unplug charger from scooter. Reset breaker. If breaker trips again, it may indicate need for internal repairs. Contact Dealer or Invacare.
<b>MOTOR "CHATTERS" OR RUNS IRREGULARLY.</b>	Electrical malfunction.	Contact Dealer or Invacare.
<b>JOYSTICK ERRATIC OR DOES NOT RESPOND AS DESIRED.</b>	Electrical malfunction.  Controller programmed improperly.	Contact Dealer or Invacare.  Contact Dealer or Invacare.
<b>ONLY ONE (1) REAR WHEEL TURNS.</b>	Electrical Malfunction.  One (1) motor lock is engaged.	Contact Dealer or Invacare.  Disengage motor lock.
<b>WHEELCHAIR DOES NOT RESPOND TO COMMANDS. POWER INDICATOR OFF - EVEN AFTER RECHARGING.</b>	Poor battery terminal connection.  Electrical malfunction.	Clean terminals (PROCEDURE 8).  Contact dealer or Invacare.

**This Procedure Includes the Following:**  
**Wheelchair Operation**

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

**WHEELCHAIR OPERATION**

**Switches/Indicators (Figure 1)**

The following switches and indicators are located on the joystick housing:

**ON/OFF SWITCH** - The on/off switch is located on the BACK of the joystick housing. This two (2) position toggle switch is used for turning the wheelchair ON and OFF (DETAIL "B").

**SPEED CONTROL KNOB** - The speed control knob is located on the BACK of the joystick housing. This rotary knob is used for controlling the maximum speed of the wheelchair. Turning the knob clockwise INCREASES the maximum speed of the wheelchair. Turning the knob counter-clockwise DECREASES the maximum speed of the wheelchair (DETAIL "B").

**BATTERY DISCHARGE INDICATOR (BDI)** - The battery discharge indicator is located at the FRONT of the joystick housing. It provides information on the remaining charge in the batteries. At full charge the BDI will be Green. As the battery becomes discharged, the BDI will become Yellow (Amber), then Red and finally the BDI will flash ON and OFF Red. At this level, the user should charge the batteries as soon as possible (DETAIL "C").

The BDI will flash ON and OFF Yellow to indicate a reduced speed or power output.

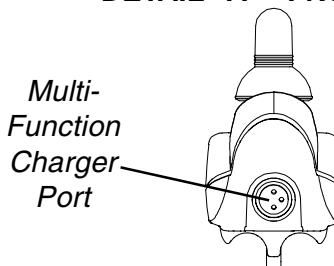
The BDI also serves as a system diagnostic device when a fault is detected by the control module. A specific number of Green flashes will indicate the type of fault detected. For more information on using the battery discharge indicator as a system diagnostic device, contact a qualified technician.

*NOTE: When reading the Battery Discharge Indicator (BDI), the joystick MUST be in the NEUTRAL position for an accurate reading.*

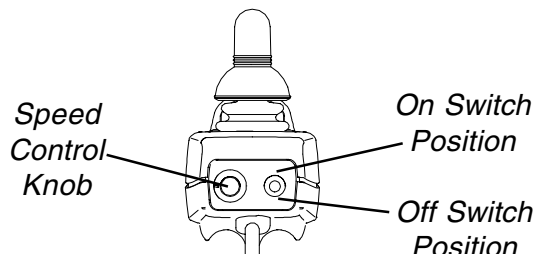
**MULTI FUNCTION CHARGER PORT**- The multi function charger port is located at the front of the joystick housing. It provides access for charging the wheelchair batteries using an INDEPENDENT battery charger, refer to CHARGING BATTERIES in PROCEDURE 8 of this manual. This port also serves as the Remote Programmer/AVS communication connection and is used for setting-up/programming the electronic control unit (DETAIL "A").

**WARNING**  
 Set-up/programming of the Electronic Control Unit is to be performed ONLY by a qualified technician. The fine tuning adjustments of the controller may affect other activities of the wheelchair. Damage to the equipment could occur under these circumstances. If unqualified individuals perform any work on these units, the warranty is voided.

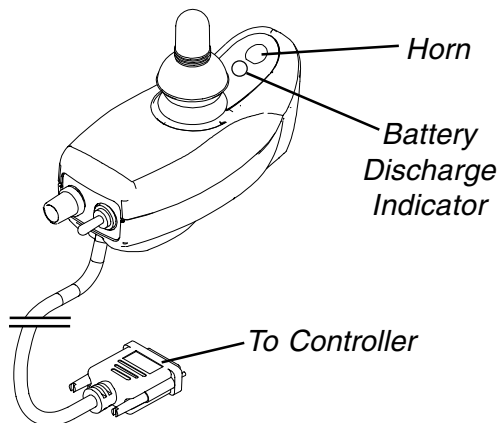
**DETAIL "A" - FRONT VIEW**



**DETAIL "B" - REAR VIEW**



**DETAIL "C"**



**FIGURE 1 - WHEELCHAIR OPERATION - SWITCHES/INDICATORS**

**Using The Joystick To Drive The Chair**

The joystick is located at the front of the joystick housing and provides smooth control of speed and direction. It is equipped with 360 degrees of mobility for ease of operation. The joystick is spring-loaded, and automatically returns to the upright (neutral) position when released. Pushing the joystick in a given direction causes the chair to move in that direction.

The joystick has proportional drive control, meaning that the further it is pushed from the upright (neutral) position, the faster the wheelchair moves. Your top speed, however, is limited by the setting of the speed-control knob.

To slow the wheelchair to a stop, simply release the joystick. The wheelchair has automatic speed and direction compensation to minimize corrections.

When first learning to drive, select a SLOW speed and try to drive the wheelchair AS SLOWLY as possible by pushing the joystick slightly forward. This exercise will help you learn to utilize the full potential of the proportional control and allow you to start and stop smoothly.

To operate the wheelchair, perform the following:

1. Adjust speed control knob to the appropriate setting.
2. Position the ON/OFF switch into the ON position.
3. Maneuver the joystick in the following manner:

- A. To move **FORWARD** - Push forward on the joystick.
- B. To move in **REVERSE**- Pull back on the joystick.
- C. To turn **RIGHT**- Move the joystick RIGHT.
- D. To turn **LEFT**- Move the joystick LEFT.
- E. To **STOP** - Release the joystick and the wheelchair will quickly slow down.

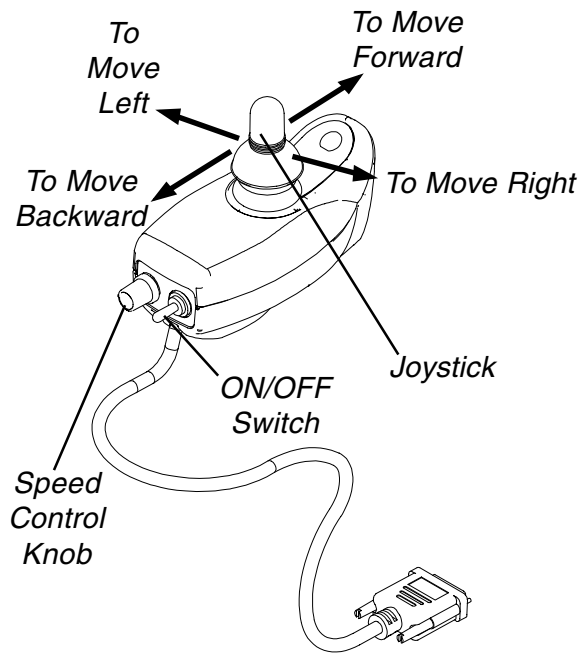


FIGURE 2 - WHEELCHAIR OPERATION - USING THE JOYSTICK TO DRIVE THE CHAIR

**This Procedure Includes the Following:**  
**Armrest Angle Adjustment**  
**Armrest Width Adjustment**  
**Armrest Depth Adjustment**  
**Armrest Height Adjustment**

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.  
 For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**ARMREST ANGLE ADJUSTMENT (FIGURE 1)**

1. Lift the armrest up.
2. Loosen adjustment locknut.
3. Adjust mounting screw up or down to the desired arm angle position.
4. Retighten adjustment locknut.
5. To determine the same angle for the opposite armrest, count the exposed threads on the adjustment knob.
6. Repeat STEPS 1-4 for opposite armrest.

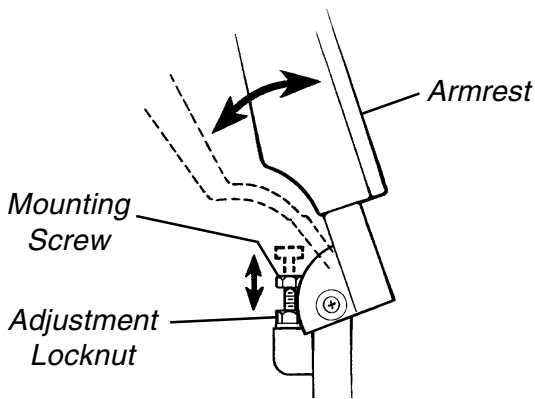


FIGURE 1 - ARMREST ANGLE ADJUSTMENT

**ARMREST WIDTH ADJUSTMENT (FIGURE 2)**

1. Loosen the adjustment knob located on the back of the seat frame.
2. Adjust the armrest in or out to the desired position.

*NOTE: The armrest can be adjusted to a maximum distance of 4.5 inches between the inside of the armrest and the mounting shaft the armrest is inserted into. If the armrest is adjusted beyond the maximum 4.5 inches, it will fall out.*

3. Retighten the adjustment knob securely.

*NOTE: Perform STEPS 4-5 to adjust BOTH armrests to the same width.*

4. Measure distance between the inside of armrest and the mounting shaft the armrest is inserted into.
5. Repeat STEPS 1-4 for opposite armrest setting armrest at distance determined in STEP 4.

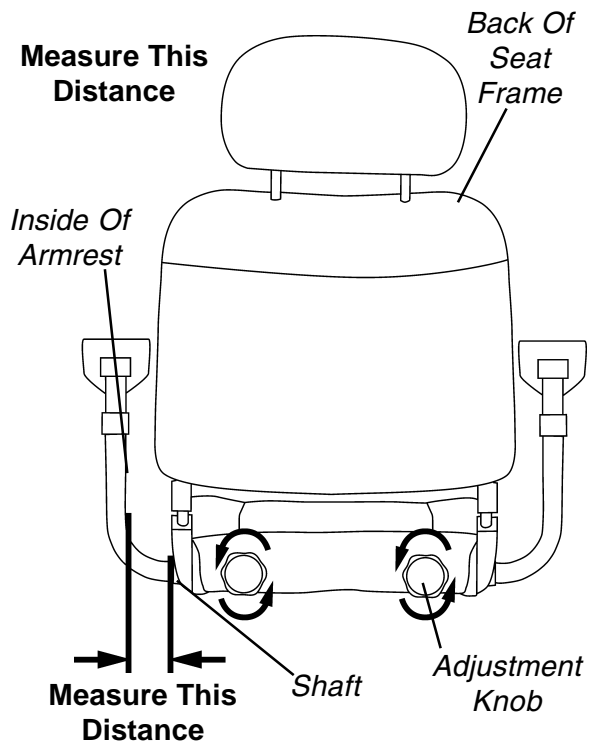


FIGURE 2 - ARMREST WIDTH ADJUSTMENT



### ARMREST DEPTH ADJUSTMENT (FIGURE 3)

1. Loosen bottom adjustment knob.
2. Adjust armrest to desired position.
3. Retighten bottom adjustment knob securely.

*NOTE: Perform STEPS 4-5 to adjust BOTH armrests to the same depth.*

4. Measure distance from the end of the armrest pad to the end of the armrest support post.
5. Repeat STEPS 1-4 for opposite armrest setting armrest at distance determined in STEP 4.

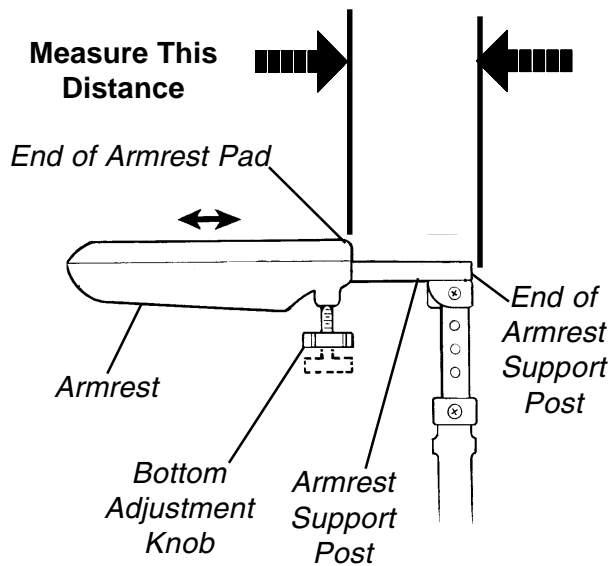


FIGURE 3 - ARMREST DEPTH ADJUSTMENT

### ARMREST HEIGHT ADJUSTMENT (FIGURE 4)

1. Loosen, but do not remove, the stability set screws on the armrest post.
2. Remove the mounting screw and locknut that secure the armrest in place.
3. Adjust armrest to desired mounting position and secure with existing mounting screw and locknut. Securely tighten.
4. Retighten the stability set screws on the armrest post.

*NOTE: Perform STEPS 5-6 to adjust BOTH armrests to the same height.*

5. Count the number of exposed mounting holes above the armrest.
6. Repeat STEPS 1-4 for opposite armrest setting armrest at the mounting hole determined in STEP 5.

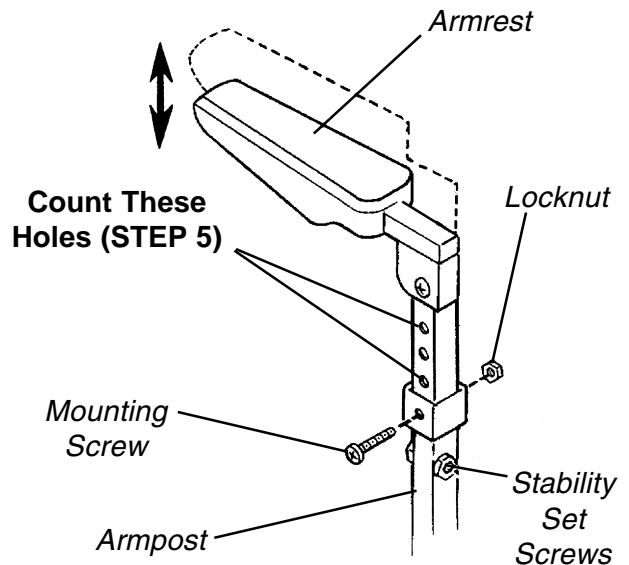


FIGURE 4 - ARMREST HEIGHT ADJUSTMENT

**This Procedure Includes the Following:**  
**Removing/Installing Seat Support Collars**  
**Removing/Installing the Seat Assembly**  
**Adjusting the Seat Height**  
**Adjusting the Seat Support Posts**  
**Adjusting the Seat Depth**  
**Replacing the Seat Positioning Strap**

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.  
 For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**REMOVING/INSTALLING SEAT SUPPORT COLLARS (FIGURE 1)**

*NOTE: The seat support collars are included but DO NOT have to be used. Installing the seat support collars allows the weight of the seat assembly to rest on the seat support collars AND automatically aligns the mounting holes in the seat support posts with the mounting holes in the seat mounting supports. The seat support collars are provided to enable the end-user to easily remove and/or adjust the seat assembly.*

*NOTE: If the seat assembly is to be positioned in the LOWEST height position, a seat support collar is NOT necessary.*

*NOTE: To remove the seat support collars, reverse the following steps.*

1. Remove the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in this procedure of the manual.
2. Position one (1) seat support collar over one (1) seat support post.
3. Determine the correct mounting hole in the seat support post to achieve the desired seat height. Refer to ADJUSTING THE SEAT HEIGHT - SEAT ASSEMBLIES WITH SEAT SUPPORT COLLARS in this procedure of the manual.
4. Align the mounting hole in the seat support collar with the mounting hole in the seat support post determined in STEP 2.
5. Install one (1) nut and bolt through mounting hole in the seat support collar and through the mounting hole in the seat support post determined in STEP 2. Securely tighten.
6. Repeat STEPS 2-5 for the three (3) remaining seat support posts.
7. Reinstall the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in this procedure of the manual.

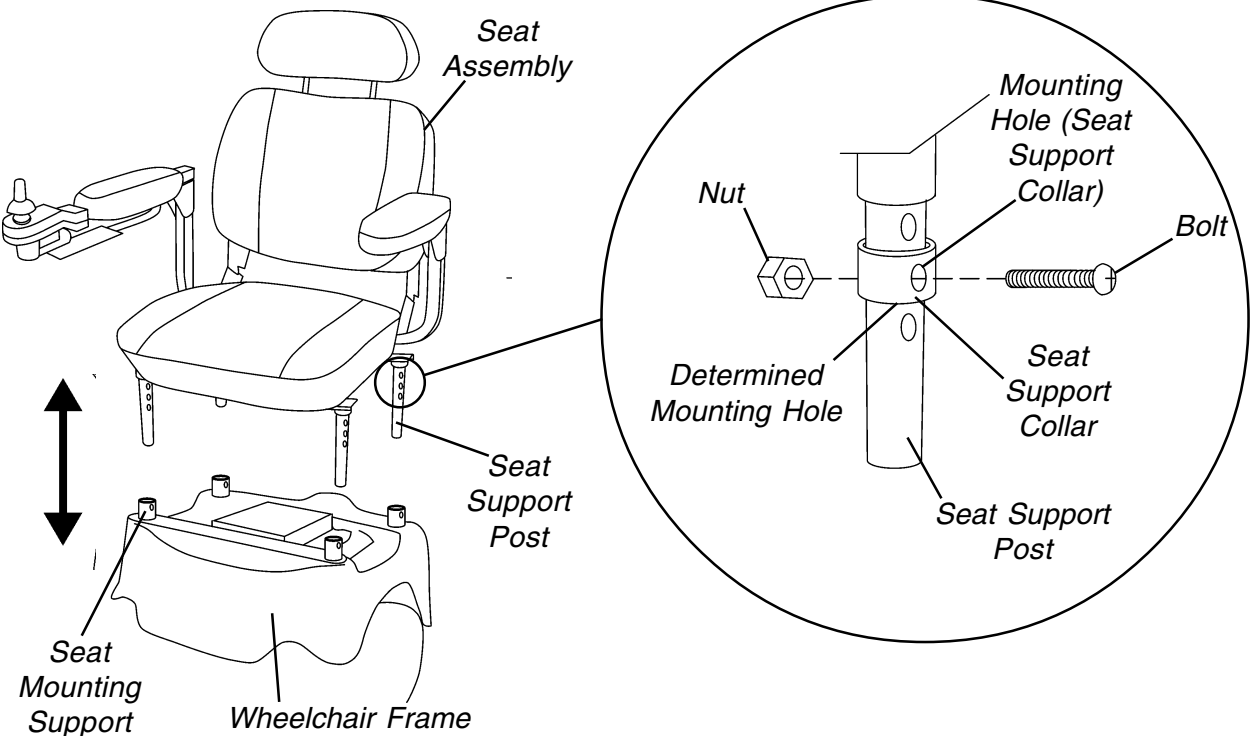


FIGURE 1 - REMOVING/INSTALLING SEAT SUPPORT COLLARS

## REMOVING/INSTALLING THE SEAT ASSEMBLY

### Seat Assemblies WITHOUT Seat Support Collars (FIGURE 2)

#### REMOVING.

1. Disconnect the joystick. Refer to CONNECTING/DISCONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of this manual.
2. Release the four (4) retaining pin locks by performing the following steps:
  - A. Bend the END of the retaining pin lock AWAY from the retaining pin until it is clear of the retaining pin (DETAIL "A").
  - B. While performing STEP A, swivel the retaining pin lock away from the retaining pin (DETAIL "A").
3. Lift up on the seat assembly to remove the weight of the seat assembly from the retaining pins.

#### CAUTION

When the four (4) retaining pins are removed the weight of the seat assembly MUST be supported to prevent it from falling onto the frame.

4. Remove the four (4) retaining pins that secure the seat support posts to the seat mounting supports on the wheelchair frame.
5. Lift the seat assembly UP to remove it from the wheelchair frame.

#### INSTALLING.

#### WARNING

Ensure that the four (4) retaining pins securing the seat assembly to the wheelchair frame are properly engaged and locked. Otherwise, injury and/or damage may result.

1. Position the seat assembly onto the wheelchair frame, making sure that the four (4) seat support posts align with the four (4) seat mounting supports on the wheelchair frame.

*NOTE: When installing the retaining pins, it necessary to support the weight of the seat assembly.*

2. Grasp one (1) retaining pin and position it so that it passes through the desired height mounting hole in the seat support post AND through the mounting hole in the seat mounting support.

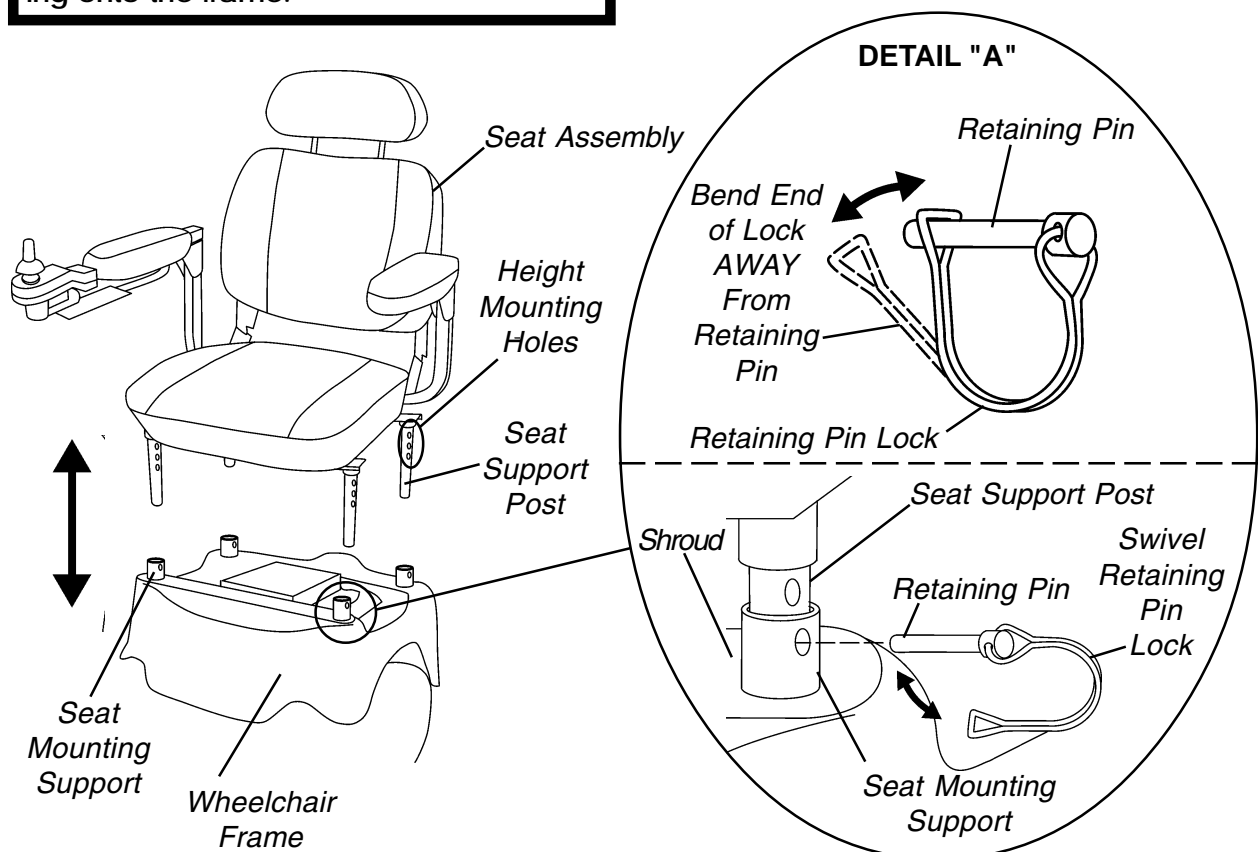


FIGURE 2 - REMOVING/INSTALLING THE SEAT ASSEMBLY - SEAT ASSEMBLIES WITHOUT SEAT SUPPORT COLLARS

*NOTE: If the retaining pin will NOT pass through the desired height mounting hole in the seat support post, it may be necessary to adjust the seat support post. Refer to ADJUSTING THE SEAT SUPPORT POSTS in this procedure of the manual.*

3. Lock the retaining pins by performing the following steps:
  - A. Swivel the retaining pin lock until it is parallel to the retaining pin (DETAIL "A").
  - B. Bend the end of the retaining pin lock and position it over the end of the retaining pin (DETAIL "A").
4. Repeat STEPS 2-3 for the seat support post located diagonally across from the seat support post in STEP 2.
5. Repeat STEPS 2-4 for the two (2) remaining seat support posts.
6. Reconnect the joystick. Refer to CONNECTING/DISCONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of this manual.

**Seat Assemblies WITH Seat Support Collars (FIGURE 3)**

**REMOVING.**

1. Disconnect the joystick. Refer to CONNECTING/DISCONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of this manual.
2. Release the four (4) retaining pin locks by performing the following steps:
  - A. Bend the END of the retaining pin lock AWAY from the retaining pin until it is clear of the retaining pin (DETAIL "A").
  - B. While performing STEP A, swivel the retaining pin lock away from the retaining pin (DETAIL "A").
3. Remove the four (4) retaining pins that secure the seat support posts to the seat mounting supports on the wheelchair frame.
4. Lift the seat assembly UP to remove it from the wheelchair frame.

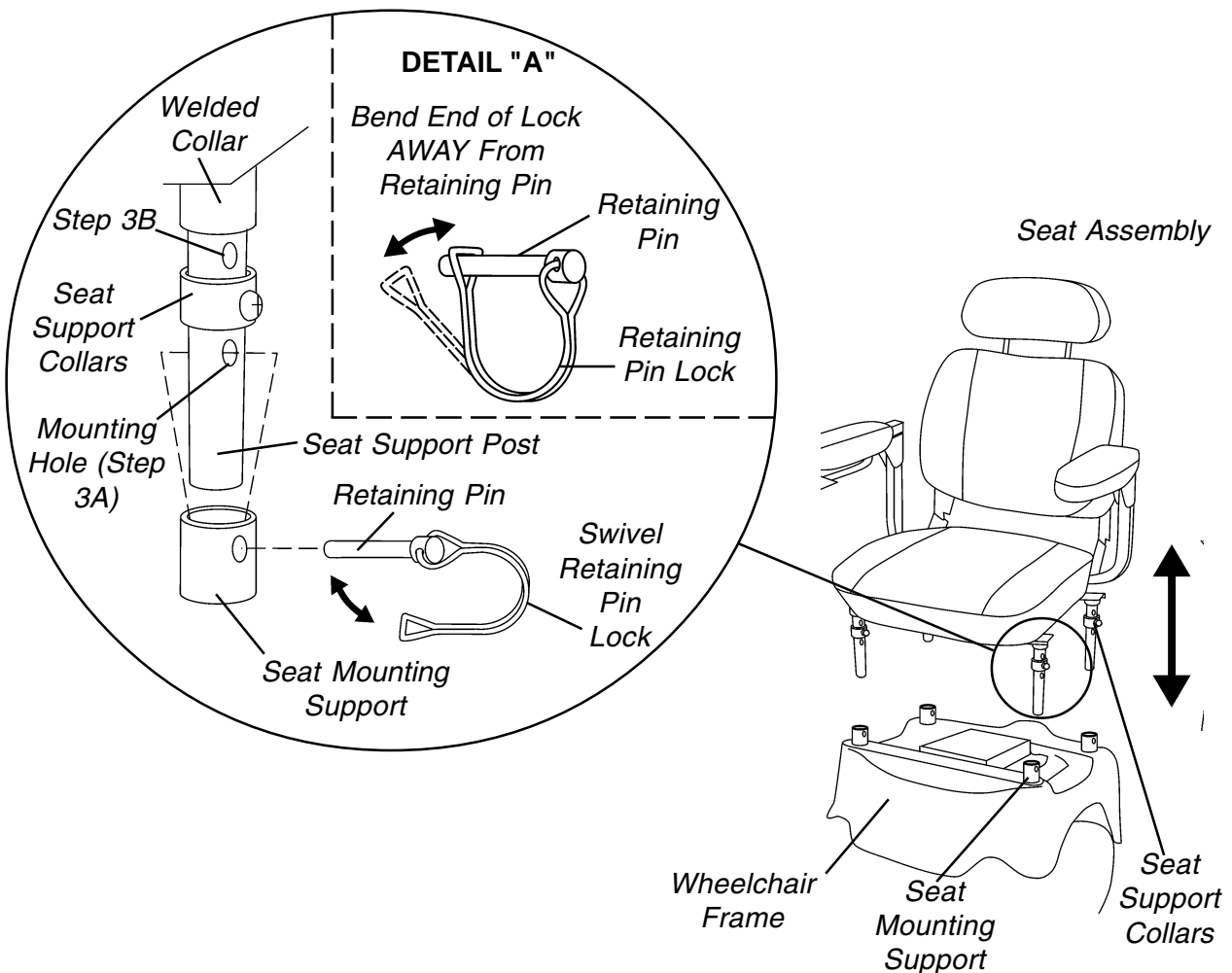


FIGURE 3 - REMOVING/INSTALLING THE SEAT ASSEMBLY - SEAT ASSEMBLIES WITH SEAT SUPPORT COLLARS

**INSTALLING.****WARNING**

Ensure that the four (4) retaining pins securing the seat assembly to the wheelchair frame are properly engaged and locked. Otherwise, injury and/or damage may result.

1. Position the seat assembly onto the wheelchair frame, making sure that the four (4) seat support posts align with the four (4) seat mounting supports on the wheelchair frame.
2. Allow the seat assembly to rest on the four (4) seat support collars.
3. Grasp one (1) retaining pin and position it so that one (1) of the following occurs:
  - A. Pin passes through the mounting hole directly below the seat support collars.
  - B. Pin passes through the mounting holes directly below the welded collar of the seat assembly.

*NOTE: If the retaining pin will NOT pass through the desired height mounting hole in the seat support post, it may be necessary to adjust the seat support post. Refer to ADJUSTING THE SEAT SUPPORT POSTS in this procedure of the manual.*

4. Lock the retaining pin by performing the following steps:
  - A. Swivel the retaining pin lock until it is parallel to the retaining pin (DETAIL "A").
  - B. Bend the end of the retaining pin lock and position it over the end of the retaining pin (DETAIL "A").
5. Repeat STEPS 1-4 for the four (4) remaining seat support posts.
6. Reconnect the joystick. Refer to CONNECTING/DISCONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of this manual.

**ADJUSTING THE SEAT HEIGHT****Seat Assemblies WITHOUT The Seat Support Collars (FIGURE 4)**

*NOTE: The seat can be adjusted to three (3) height positions.*

1. Release the four (4) retaining pins locks by performing the following steps:

- A. Bend the END of the retaining pin lock AWAY from the retaining pin until it is clear of the retaining pin (DETAIL "A").
- B. While performing STEP A, swivel the retaining pin lock away from the retaining pin (DETAIL "A").

2. Lift up on the seat assembly to remove the weight of the seat assembly from the retaining pins.

**CAUTION**

When the four (4) retaining pins are removed the weight of the seat assembly MUST be supported to prevent it from falling onto the frame.

3. Remove the four (4) retaining pins that secure the seat support posts to the wheelchair frame.
4. Adjust the seat assembly to the desired height.

**WARNING**

Ensure that the four (4) retaining pins securing the seat assembly to the wheelchair frame are properly engaged and locked. Otherwise, injury and/or damage may result.

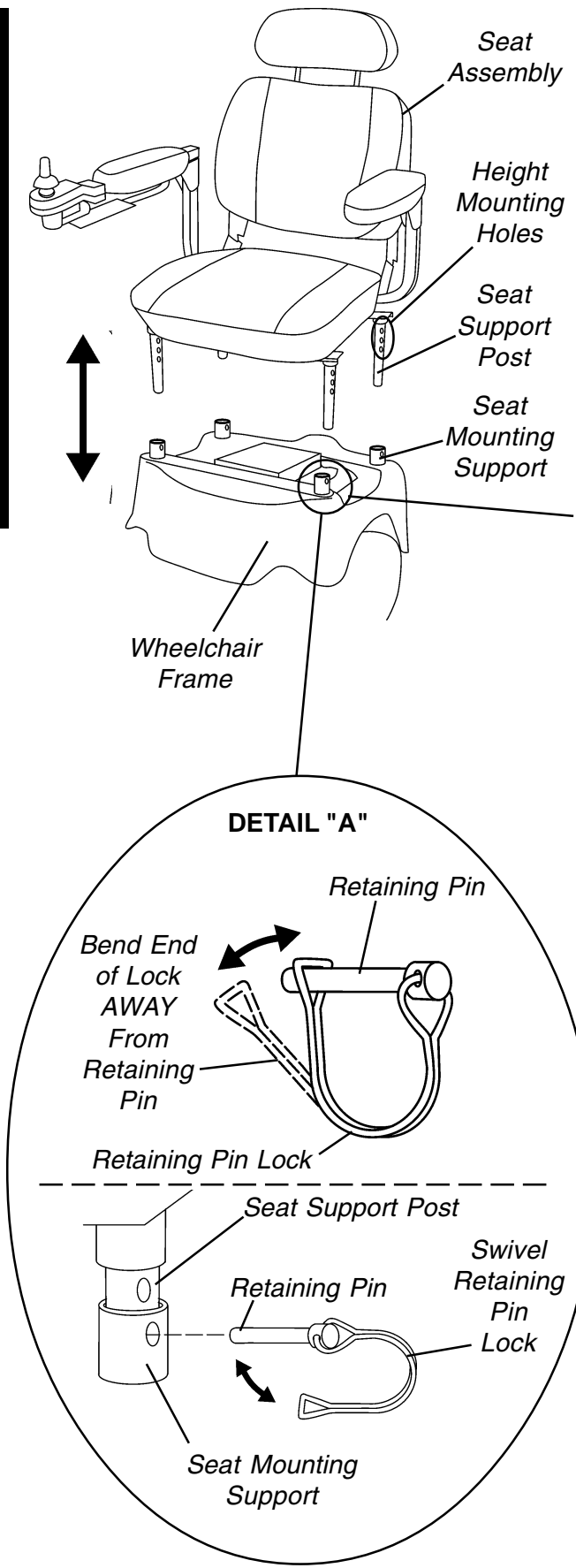
*NOTE: When installing the retaining pins, it necessary to support the weight of the seat assembly.*

5. Grasp one (1) retaining pin and positioning it so that it passes through the seat mounting support AND through the desired mounting hole in the seat support post.
6. Lock the retaining pins by performing the following steps:
  - A. Swivel the retaining pin lock until it is parallel to the retaining pin (DETAIL "A").
  - B. Bend the end of the retaining pin lock and position it over the end of the retaining pin (DETAIL "A").

*NOTE: If the retaining pin will NOT pass through the desired height mounting hole in the seat support post, it may be necessary to adjust the seat support post. Refer to ADJUSTING THE SEAT SUPPORT POSTS in this procedure of the manual.*

7. Repeat STEP 2 for the seat support post located DIAGONALLY across from the seat support post in STEP 2.
8. Repeat STEPS 3-4 for the two (2) remaining seat support posts.

SEAT



**Seat Assemblies WITH Seat Support Collars (FIGURE 5)**

1. Remove the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in this procedure of the manual.
2. Remove the four (4) seat support collars. Refer to REMOVING/INSTALLING THE SEAT SUPPORT COLLARS in this procedure of the manual.
3. Perform one (1) of the following:
  - A. To position the seat assembly in the HIGHEST position, align the mounting hole in the seat support collar with the MIDDLE mounting hole in the seat support post.
  - B. To position the seat assembly in the MIDDLE height position, align the mounting hole in the seat support collar with the TOP mounting hole in the seat support post.
  - C. To position the seat assembly in the LOWEST height position, a seat support collar is NOT necessary. The welded seat support of the seat assembly will rest on the seat mounting support of the wheelchair frame.
4. Install one (1) nut and bolt through mounting hole in the seat support collar and through the mounting hole in the seat support post determined in STEP 2. Securely tighten.
5. Repeat STEPS 2-5 for the three (3) remaining seat support posts.
6. Reinstall the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in this procedure of the manual.

FIGURE 4 - ADJUSTING THE SEAT HEIGHT - SEAT ASSEMBLIES WITHOUT SEAT SUPPORT COLLARS

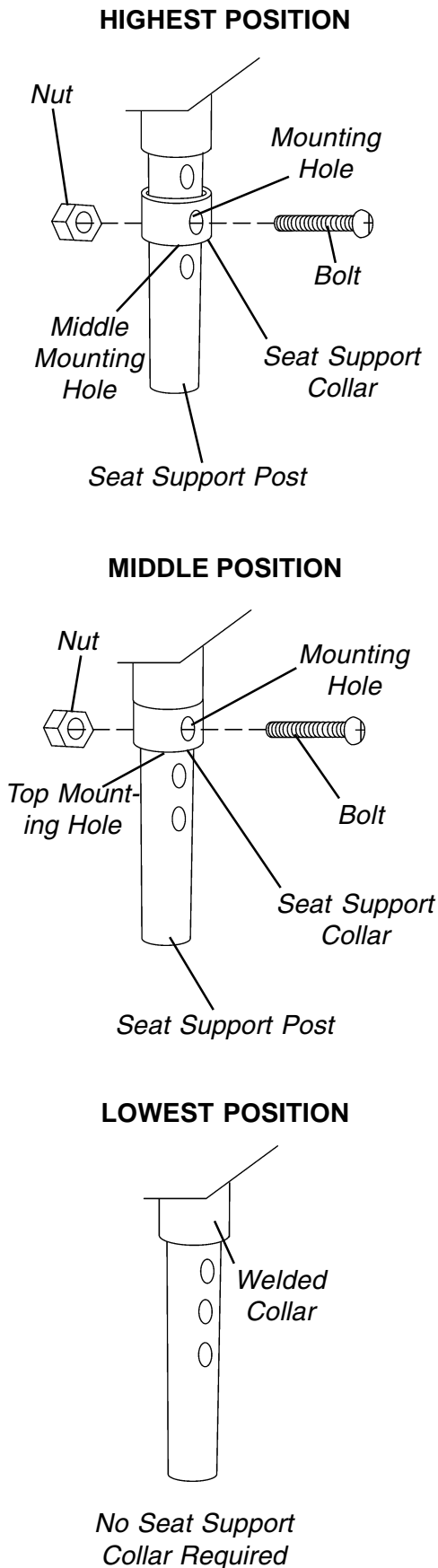


FIGURE 5 - ADJUSTING THE SEAT HEIGHT - SEAT ASSEMBLIES WITH SEAT SUPPORT COLLARS

**ADJUSTING THE SEAT SUPPORT POSTS (FIGURE 6)**

*NOTE: If the retaining pin will NOT pass through the seat mounting support AND through one (1) of the three (3) height mounting holes in the seat support post, perform the following steps:*

1. Loosen, but DO NOT remove, the hex bolt securing the seat support post to the seat stand.
2. Grasp the seat support post and rotate it until the height adjustment holes align with the holes in the seat mounting support.
3. Keeping the holes aligned, tighten the hex bolt securing the seat support post to the seat stand.
4. If necessary, repeat STEPS 1-3 for the remaining seat support posts.

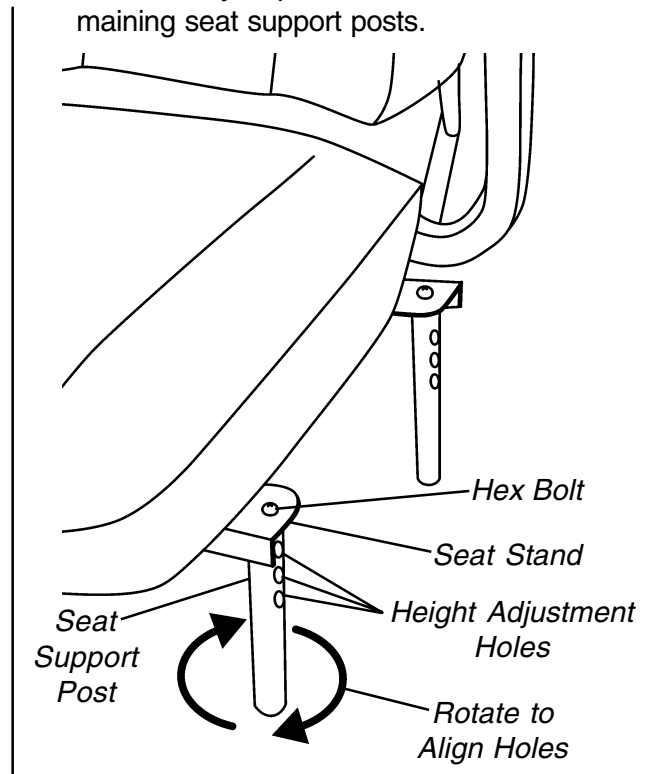


FIGURE 6 - ADJUSTING THE SEAT SUPPORT POSTS

**ADJUSTING THE SEAT DEPTH  
(FIGURE 7 AND 8)**

1. Remove the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in this procedure of the manual.
2. Remove the four (4) bolts, self-locking washers and washers securing the seat assembly to the seat pan (FIGURE 7).
3. Separate the seat assembly from the seat pan.
4. Refer to the chart in FIGURE 8 to determine the correct mounting holes to achieve the desired seat depth position (FIGURE 8).

*NOTE: By using the three (3) sets of mounting holes in the seat assembly in combination with the mounting hole in the seat pan, three (3) seat depth positions can be achieved (in one (1) inch increments).*

5. Align the seat assembly mounting holes determined in STEP 4 with the seat pan mounting holes determined in STEP 4 (FIGURE 8).
6. Secure the seat assembly to the seat pan using the four (4) bolts, self-locking washers and washer. Securely tighten (FIGURE 7).
7. Reinstall the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in this procedure of the manual.

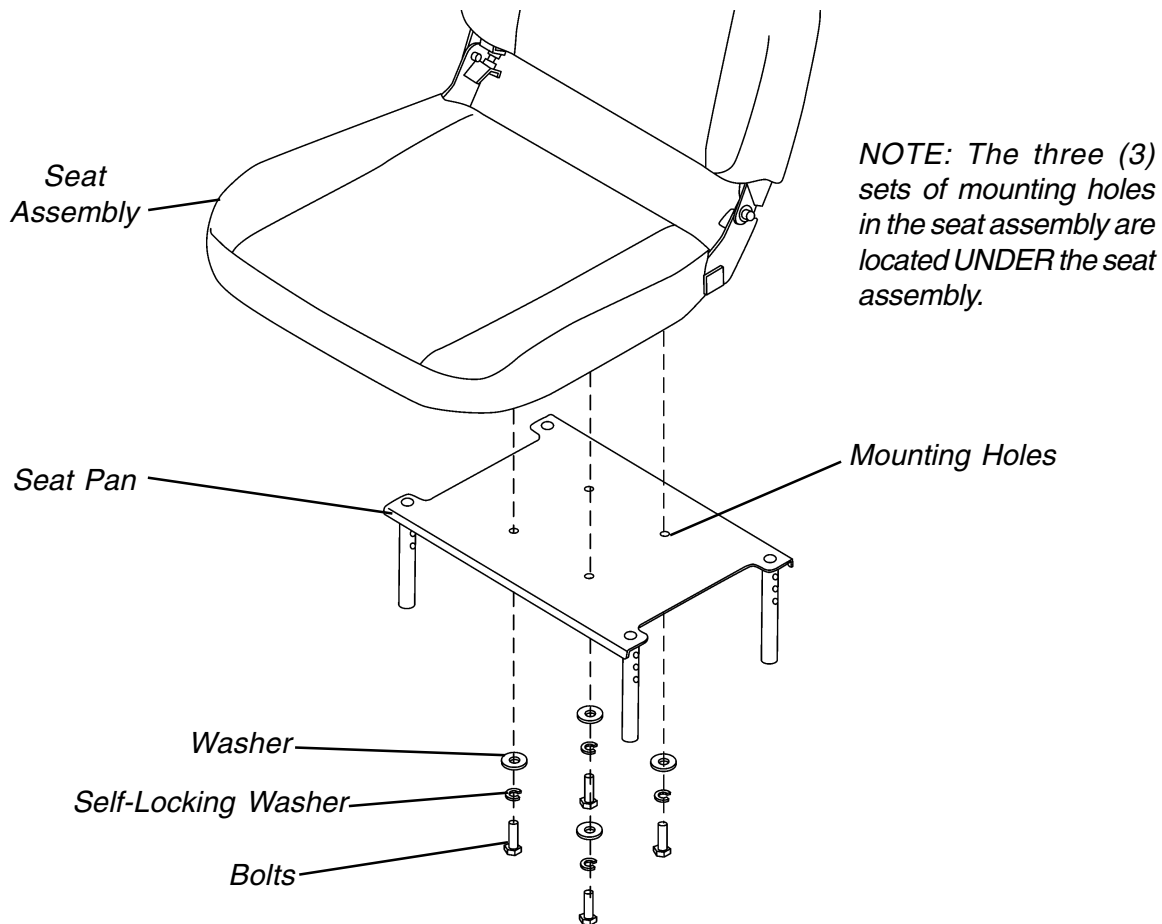


FIGURE 7 - ADJUSTING THE SEAT DEPTH



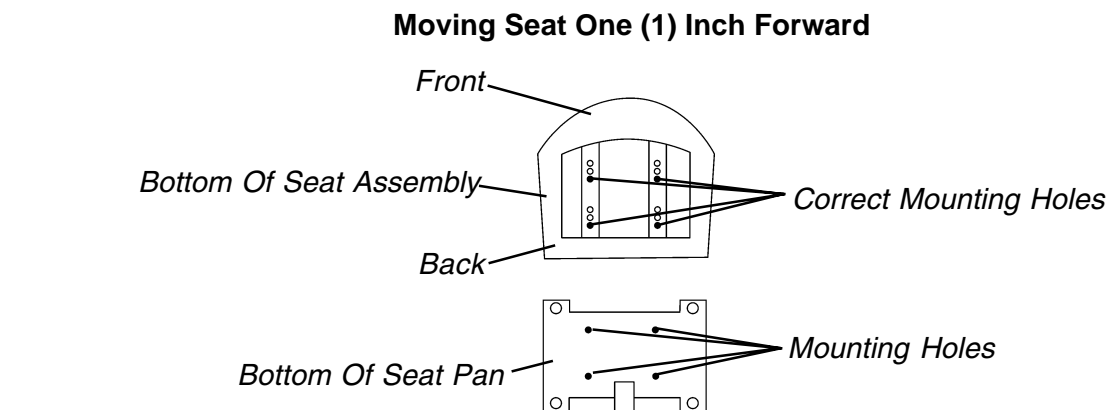
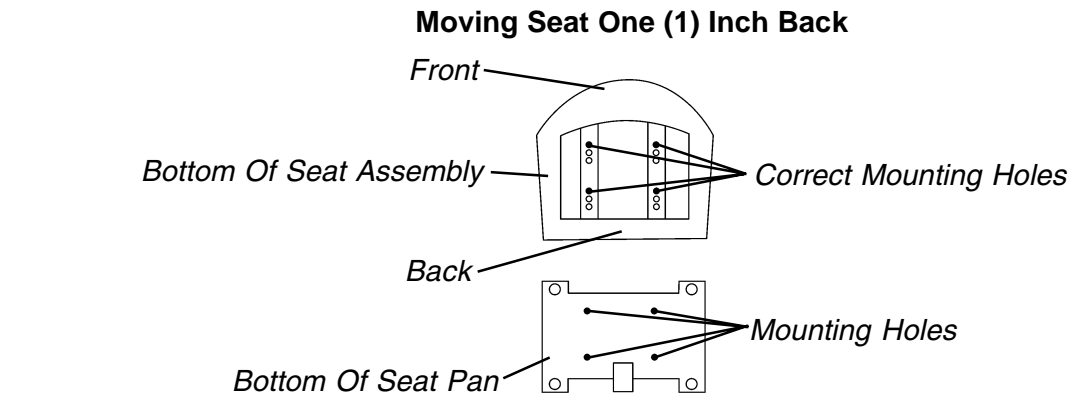
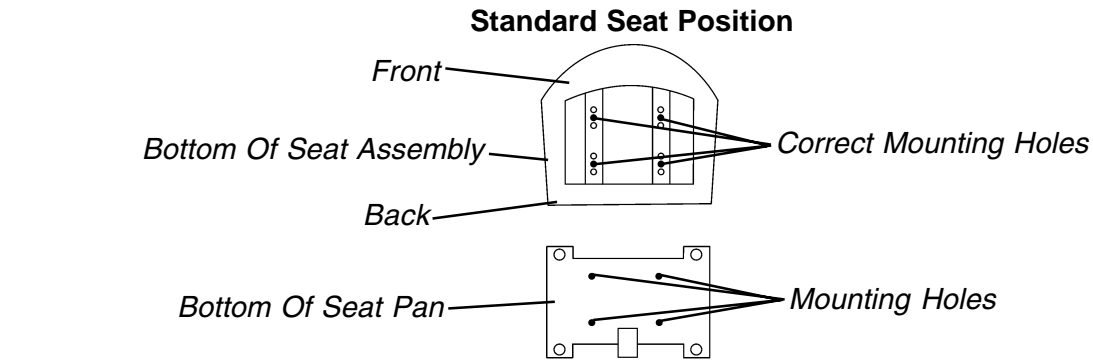


FIGURE 8 - ADJUSTING THE SEAT DEPTH

## REMOVING/INSTALLING THE SEAT POSITIONING STRAP (FIGURE 9)

*NOTE: To remove, reverse the following procedure.*

### Installing

1. Remove the width adjustment knob that is located on the back of the seat frame.
2. Slide width adjustment knob through grommet on seat positioning strap.
3. Reinstall width adjustment knob into seat frame.
4. Repeat STEPS 1-3 for opposite seat positioning strap.

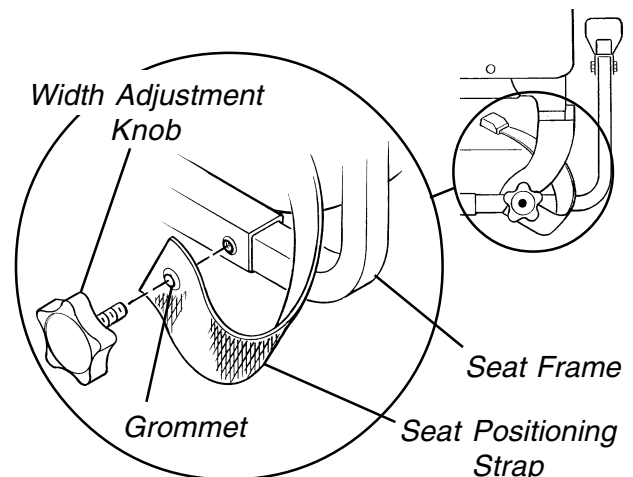


FIGURE 9 - REMOVING/INSTALLING THE SEAT POSITIONING STRAP

***This Procedure Includes the Following:***  
***Folding/Unfolding the Back***  
***Adjusting the Back Angle***  
***Adjusting the Headrest***

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.  
 For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**FOLDING/UNFOLDING THE BACK (FIGURE 1)**

1. To fold, push back down towards seat.
2. To unfold, pull back up into the upright position.

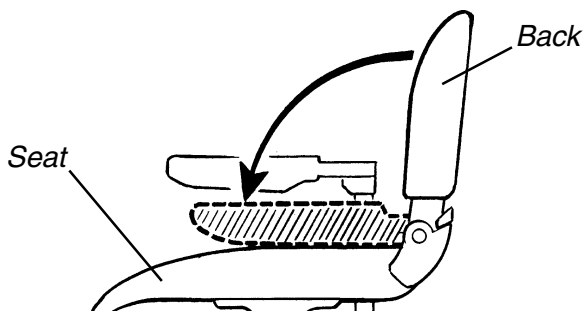


FIGURE 1 -FOLDING/UNFOLDING THE BACK

**ADJUSTING THE BACK ANGLE (FIGURE 2)**

1. While holding the mounting screw, loosen the outside jam nut.
2. Adjust mounting screw up or down to obtain the desired back angle.
3. Thread inside jam nut upwards to the top edge of the back bracket.
4. Securely tighten both the inside and outside jam nuts to secure mounting screw in place.

**WARNING**  
 Both mounting screws MUST be adjusted to obtain the same back angle so the weight of the user is evenly distributed. Otherwise, injury to the user and/or damage to the wheelchair may occur.

5. Repeat STEPS 1-4 for opposite side of back. To maintain same angle, count the number of exposed threads between the mounting screw and the outside jam nut.

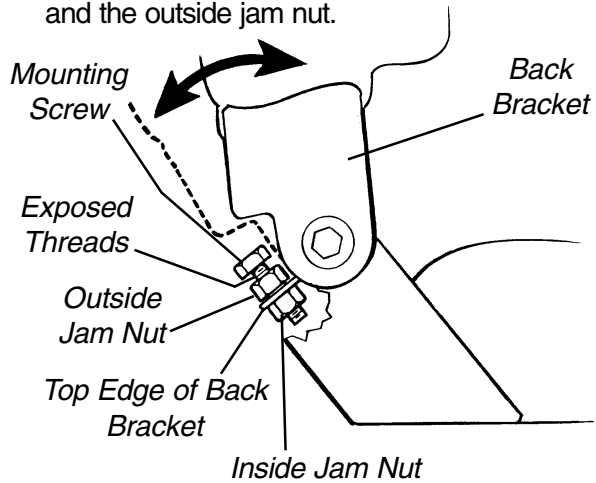


FIGURE 2 - ADJUSTING THE BACK ANGLE

**ADJUSTING THE HEADREST (FIGURE 3)**

1. To raise headrest, lift headrest up to desired position.
- NOTE: Headrest is locked in position when an audible "click" is heard.*
2. To lower headrest, push release tab towards the inside of the chair. Lower headrest to desired position.

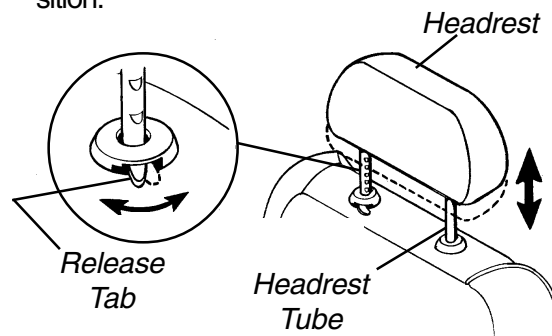


FIGURE 3 - ADJUSTING THE HEADREST

***This Procedure Includes the Following:***  
***Removing/Installing/Adjusting the Footboard Assembly***  
***Adjusting the Footboard Assembly Depth***

**WARNING**

After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

DO NOT stand on the flip-up footboard. When getting in or out of the wheelchair, make sure that the flip-up footboard is in the upward position .

1. Position the footboard assembly onto the wheelchair frame so that the mounting holes in the wheelchair frame align with the desired mounting holes in the footboard assembly.
2. Grasp the retaining pin and position it so that it passes through the mounting holes in the wheelchair frame AND through the desired mounting holes in the footboard assembly, making sure the end of the retaining pin protrudes enough to allow the detent pin to engage.

**Adjusting**

*NOTE: The footboard assembly can be adjusted to three (3) depth positions.*

1. Remove the retaining pin that secures the footboard assembly to the wheelchair frame.

**REMOVING/INSTALLING/  
 ADJUSTING THE FOOTBOARD  
 ASSEMBLY (FIGURE 1)**

**Removing**

1. Remove the retaining pin that secures the footboard assembly to the wheelchair frame.
2. Remove the footboard assembly from the wheelchair frame.

**Installing**

**WARNING**

Ensure that the end of the retaining pin securing the footboard assembly to the frame protrudes enough to allow the detent pin to properly engage. Otherwise, injury and/or damage may result.

**WARNING**

Ensure that the end of the retaining pin securing the footboard assembly to the frame protrudes enough to allow the detent pin to properly engage. Otherwise, injury and/or damage may result.

2. Adjust footboard to desired depth by grasping the retaining pin and positioning it so that it passes through the mounting holes in the wheelchair frame AND through the desired depth adjustment holes in the footboard assembly, making sure the end of the retaining pin protrudes enough to allow the detent pin to engage.

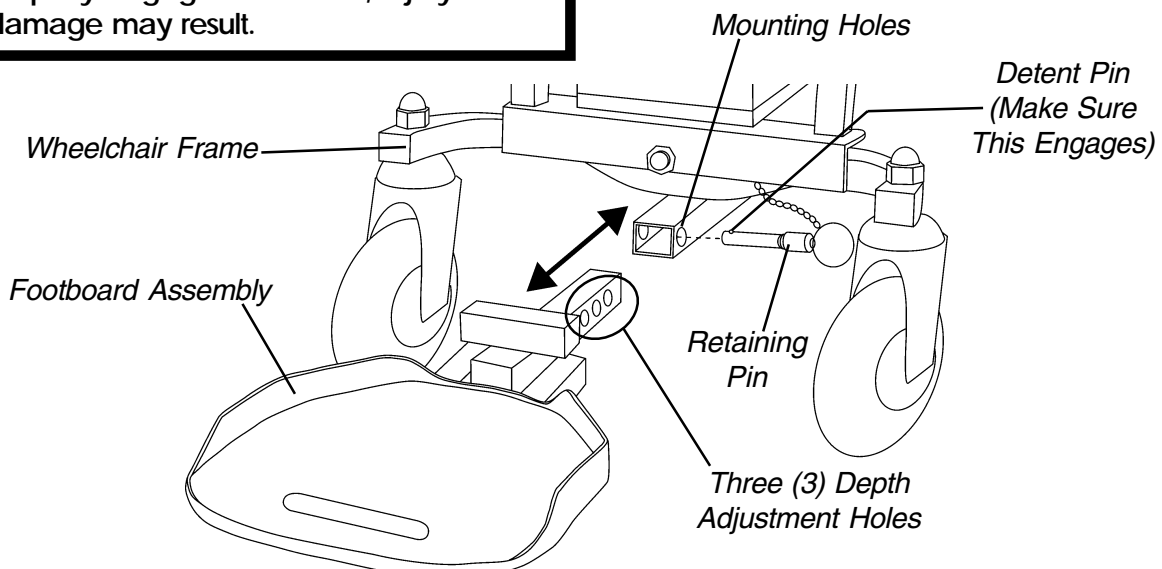


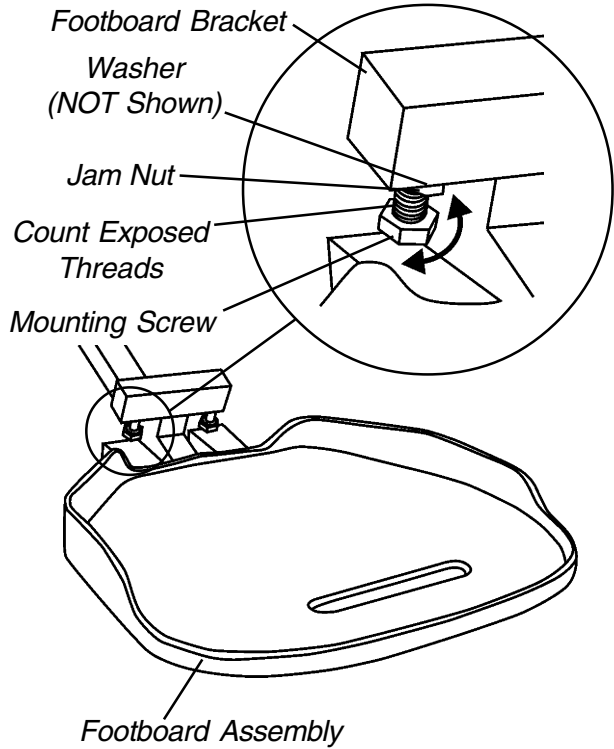
FIGURE 1 -REMOVING/INSTALLING/ADJUSTING THE FOOTBOARD ASSEMBLY

**ADJUSTING THE FOOTBOARD ASSEMBLY ANGLE (FIGURE 3)**

1. Loosen the jam nut and washer.
2. Adjust the mounting screw up or down to obtain the desired footboard assembly angle.
3. Thread the jam nut and washer upwards until it is flush with the footboard bracket.
4. Securely tighten the jam nut and washer to secure the mounting screw in place.

**WARNING**  
 Both mounting screws **MUST** be adjusted to the same length to obtain the same footboard assembly angle and distribute the weight of the user evenly. Otherwise, injury to the user and/or damage to the wheelchair may occur.

5. Count the number of exposed threads between the mounting screw and the jam nut.
6. Repeat STEPS 1-4 for the mounting screw on the opposite side of the footboard assembly, setting the screw at distance determined in STEP 5.



*NOTE: The washer is located BETWEEN the jam nut and the footboard bracket. The washer is NOT shown above.*

**FIGURE 3 -ADJUSTING THE FOOTBOARD ASSEMBLY ANGLE**

***This Procedure Includes the Following:******Replacing the Foam Filled Tires onto the Wheel Rim******Removing/Installing the Shroud******Engaging/Disengaging Motor Locks******Removing/Installing the Axle Shroud Covers******Replacing the Front/Rear Caster Assemblies*****WARNING**

After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**REPLACING THE FOAM FILLED TIRES ONTO THE WHEEL RIM****WARNING**

This procedure MUST be performed by a qualified technician.

*NOTE: During initial use of the wheelchair, the user may experience flat spots on the wheels. Flat spots will vanish with continued use of the wheelchair.*

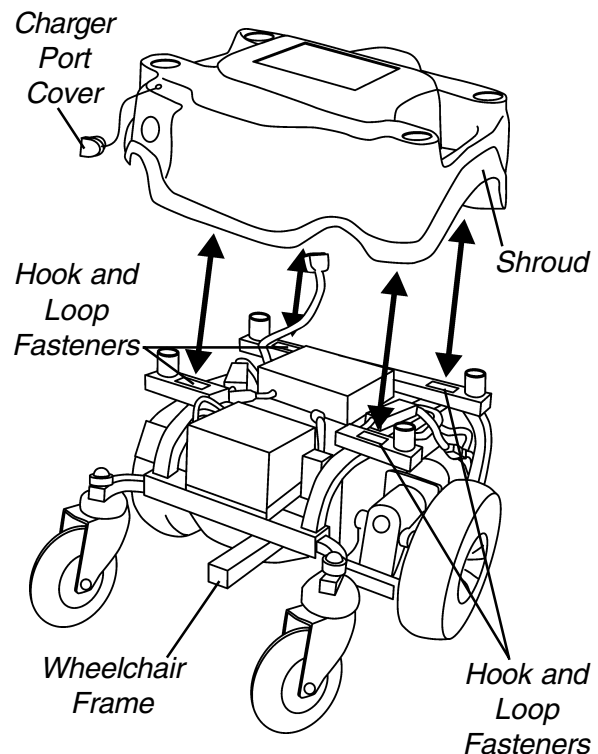
**REMOVING/INSTALLING THE SHROUD (FIGURE 1)****Removing**

1. Disconnect the joystick. Refer to CONNECTING/DISCONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of the manual.
2. Remove the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in PROCEDURE 4 of the manual.
3. Grasp the charger port cover and remove it from the charger port.
4. Lift the shroud off of the wheelchair frame.

**Installing**

1. Align the four (4) hook and loop fasteners on the underside of the shroud with the four (4) hook and loop fasteners on the wheelchair frame.
2. Firmly push the shroud onto the wheelchair frame, making sure the hook and loop fasteners meet.

3. Grasp the charger port cover and position it in the charger port.
4. Reinstall the seat. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in PROCEDURE 4 of the manual.
5. Reconnect the joystick. Refer to CONNECTING/DISCONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of the manual.



*NOTE: Hook and loop fasteners under shroud NOT shown for clarity*

FIGURE 1 - REMOVING/INSTALLING THE SHROUD

**ENGAGING/DISENGAGING MOTOR LOCKS (FIGURE 2)****WARNING**

DO NOT engage or disengage the motor locks until the ON/OFF switch on the joystick is in the OFF position.

**CAUTION**

Ensure both motor locks are fully engaged BEFORE driving the wheelchair

*NOTE: The motor lock disengagement/engagement allows freewheeling OR joystick controlled operation. Freewheeling allows an attendant to maneuver the wheelchair WITHOUT power.*

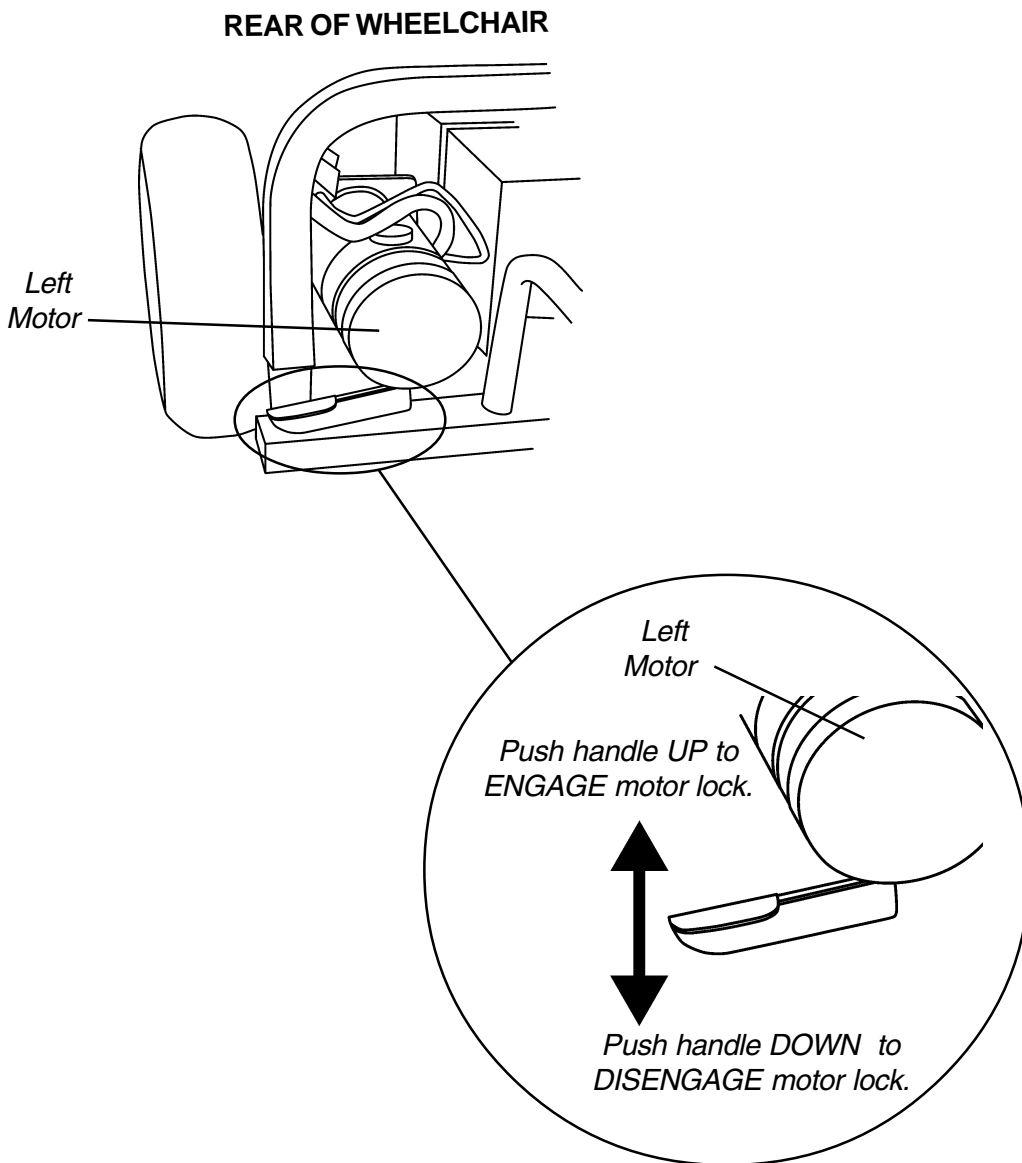
1. Locate the motor lock handles on the motors.
2. Perform one (1) of the following:

A. To DISENGAGE the motor locks -

- Grasp the motor lock handle connected to the RIGHT motor and position it in the UP position.
- Grasp the motor lock handle connected to the LEFT motor and position it in the DOWN position.

B. To ENGAGE the motor locks -

- Grasp the motor lock handle connected to the RIGHT motor and position it in the DOWN position.
- Grasp the motor lock handle connected to the LEFT motor and position it in the UP position.



*NOTE: To ENGAGE/DISENGAGE the motor lock for the RIGHT motor, position the motor lock handle in the OPPOSITE position shown above.*

**FIGURE 2 - ENGAGING/DISENGAGING MOTOR LOCKS**

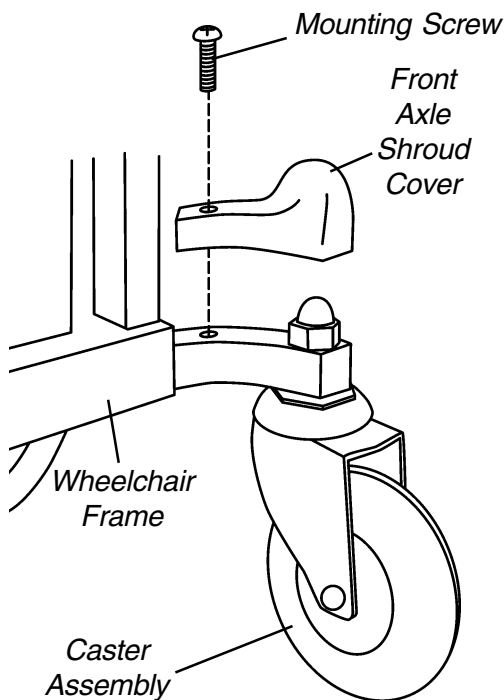
### REMOVING/INSTALLING THE AXLE SHROUD COVERS (FIGURE 3)

*NOTE: The front and rear axle shroud covers are removed/installed in the same manner.*

*NOTE: To install the front and rear axle shroud covers, reverse the following steps.*

#### Removing

1. If necessary, remove the shroud. Refer to REMOVING/INSTALLING THE SHROUD in PROCEDURE 7 of the manual.
2. Remove the mounting screw securing the axle shroud cover to the wheelchair frame.
3. Remove the axle shroud cover from the wheelchair frame.



*NOTE: Rear axle shroud cover NOT shown.*

FIGURE 3 - REMOVING/INSTALLING THE FORK AND STEM COVERS

### REPLACING THE FRONT/REAR CASTER ASSEMBLIES (FIGURE 4)

*NOTE: Front and rear caster assemblies are replaced in the same manner.*

*NOTE: When replacing the front/rear caster assemblies, it is necessary to brace the caster assemblies to prevent the wheel from spinning.*

1. Remove the fork or stem cover from the wheelchair frame. Refer to REMOVING/INSTALLING THE FORK AND STEM COVERS in this procedure of the manual.
2. Hold the caster assembly with one (1) hand and loosen the cap nut with the other hand using a crescent wrench.
3. Remove the EXISTING cap nut securing the EXISTING caster assembly to the wheelchair frame.
4. Remove the EXISTING caster assembly from the wheelchair frame.
5. Position the NEW caster assembly in the mounting hole in the wheelchair frame.
6. Secure the NEW caster assembly to the wheelchair frame with the NEW cap nut. Securely tighten.
7. If necessary, repeat STEPS 1-4 for the remaining three (3) caster assemblies.

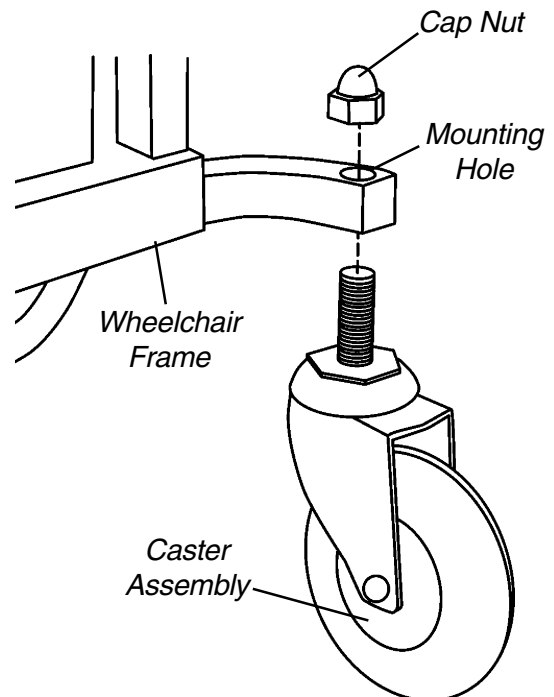


FIGURE 4 - REPLACING THE FRONT/REAR CASTER ASSEMBLIES

- This Procedure Includes the Following:**
- Removing/Installing Batteries without Removing Cables
  - Connecting/Disconnecting Battery Cables
  - Connecting/Disconnecting Circuit Breaker Cables
  - Replacing Batteries
  - When to Charge Batteries
  - Charging Batteries
  - Battery Charger Operation

**WARNING**

For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

The use of rubber gloves and safety glasses is recommended when working with batteries.

Invacare strongly recommends that battery installation and battery replacement always be done by a qualified technician.

After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

**CAUTION**

The POSITIVE (+) RED battery cable MUST connect to the battery clamp of the POSITIVE (+) battery terminal/post, otherwise serious damage will occur to the electrical system.

**REMOVING/INSTALLING BATTERIES WITHOUT REMOVING CABLES (FIGURE 1)**

*NOTE: To install the batteries without removing cables, reverse the following steps.*

**Removing**

**WARNING**

Always use a battery lifting strap when lifting a battery. It is the most convenient method and assures that the battery acid will not spill. It also helps to prolong the life of the battery.

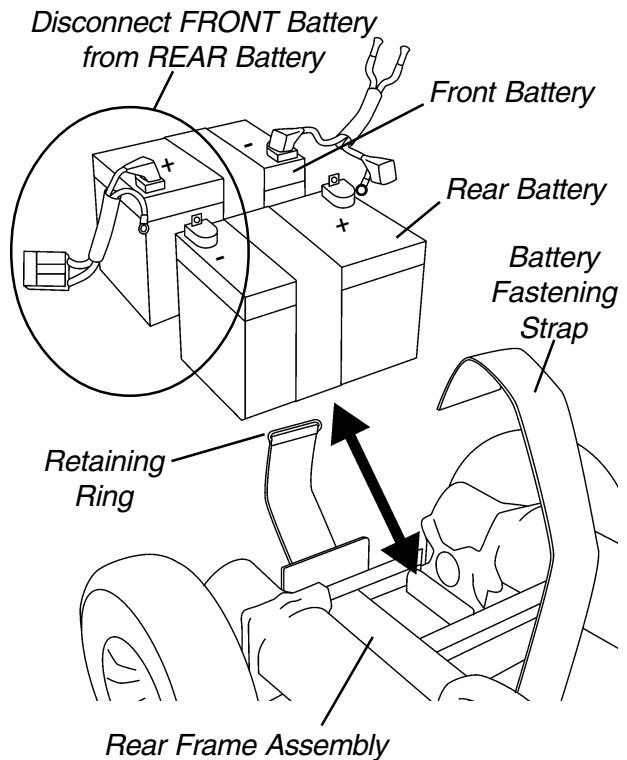
DO NOT tip the batteries. Keep the batteries in an upright position.

*NOTE: If there is battery acid on the bottom or the sides of the battery(ies) or on the frame of the wheelchair, apply baking soda to these areas to neutralize the battery acid. Before reinstalling the NEW or EXISTING batteries, clean the baking soda from the battery(ies).*

1. Disconnect the joystick. Refer to DISCONNECTING/CONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of the manual.
2. Remove the seat assembly. Refer to REMOVING/INSTALLING THE SEAT ASSEMBLY in PROCEDURE 4 of the manual.
3. Remove the shroud. Refer to REMOVING/INSTALLING THE SHROUD in PROCEDURE 7 of the manual.
4. Separate the FRONT frame assembly from the REAR frame assembly. Refer to TRANSPORTING THE WHEELCHAIR in PROCEDURE 10 of the manual.
5. Disconnect the battery fastening strap and pull it through the retaining ring.

**CAUTION**

Before removing the batteries, it is necessary to disconnect the FRONT battery from the REAR battery. Otherwise, damage to the batteries may occur.



**FIGURE 1 - REMOVING/INSTALLING THE BATTERIES WITH CABLES**



6. Disconnect the FRONT battery from the REAR battery. Refer to CONNECTING/DISCONNECTING BATTERY CABLES in this procedure of the manual.
7. Remove both batteries with cables from the rear frame assembly.

**CONNECTING/DISCONNECTING BATTERY CABLES (FIGURE 2)**

*NOTE: To disconnect the battery cables, reverse the following steps.*

**Connecting**

**WARNING**

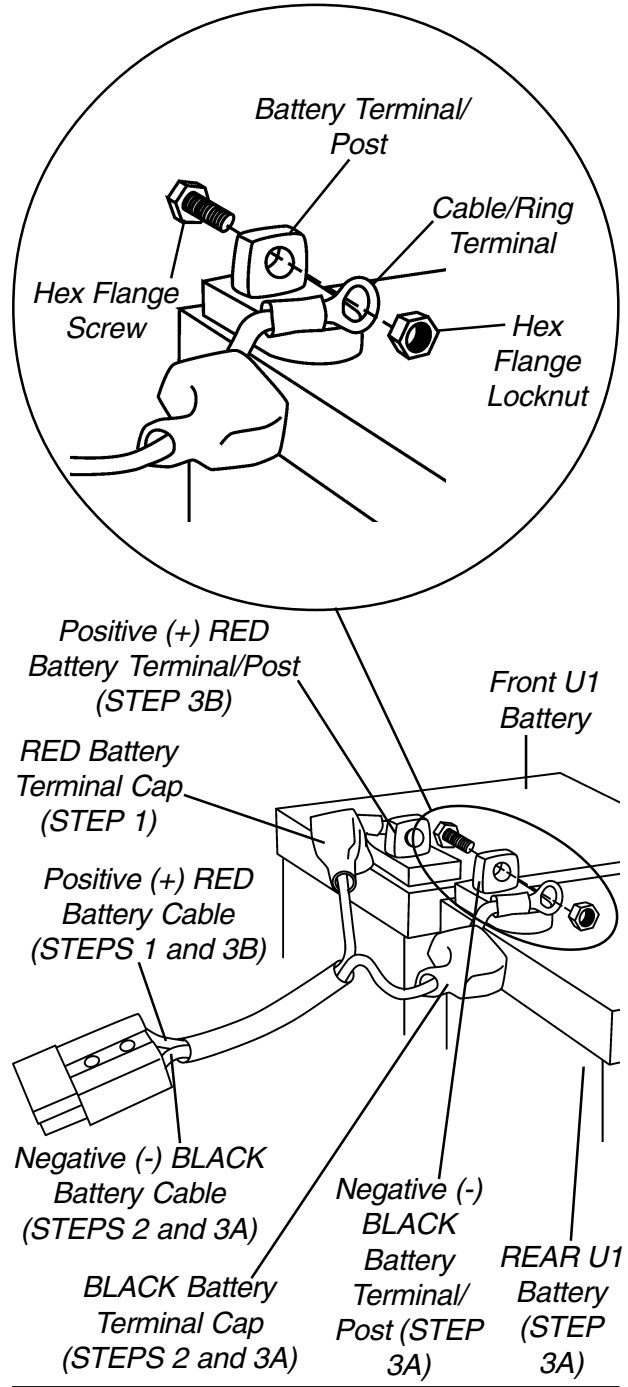
NEVER allow any of your tools and/or battery cable(s) to contact BOTH battery terminal(s)/post(s) at the same time. An electrical short may occur and serious personal injury or damage may occur.

The use of rubber gloves and safety glasses is recommended when working with batteries.

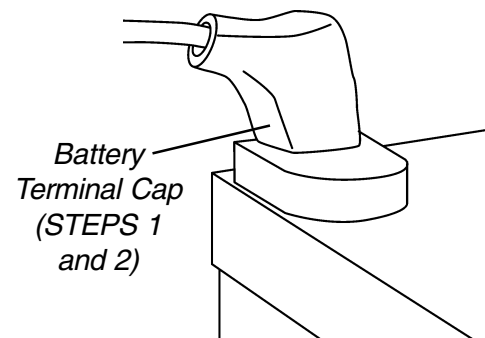
**CAUTION**

The POSITIVE (+) RED battery cable MUST connect to the battery clamp of the POSITIVE (+) battery terminal/post, otherwise serious damage will occur to the electrical system.

1. Install the RED battery terminal cap onto the RED battery cable.
2. Install the BLACK battery terminal cap onto the BLACK battery cable.
3. Connect battery cable(s) to battery(ies) terminal(s)/post(s) as follows:
  - A. NEGATIVE (-) BLACK battery cable to NEGATIVE (-) battery terminal/post on the REAR battery.
  - B. POSITIVE (+) RED battery cable to POSITIVE (+) battery terminal/post on the FRONT battery.
4. Secure the battery cable(s)/ring terminal(s) to the battery terminal(s)/post(s), BLACK to NEGATIVE (-) and RED to POSITIVE (+), with the provided hex flange screw and hex flange locknut. Securely tighten.
5. Verify all battery cable(s)/ring terminal(s) are correctly installed and securely tightened.
6. Slide terminal cap(s) down battery cable(s) and onto battery terminals (DETAIL "A").



**DETAIL "A"**



**FIGURE 2 - CONNECTING/DISCONNECTING BATTERY CABLES**

7. Install the batteries with cables into the wheel chair. Refer to REMOVING/INSTALLING THE BATTERIES WITH CABLES in this procedure of the manual.

**CAUTION**

**ALWAYS** charge new batteries before initial use or battery life will be reduced.

8. If necessary, charge the batteries. Refer to CHARGING THE BATTERIES in this procedure of the manual.

**CONNECTING/DISCONNECTING CIRCUIT BREAKER CABLES (FIGURE 3)**

*NOTE: To disconnect the circuit breaker cables, reverse the following steps.*

**Connecting**

**WARNING**

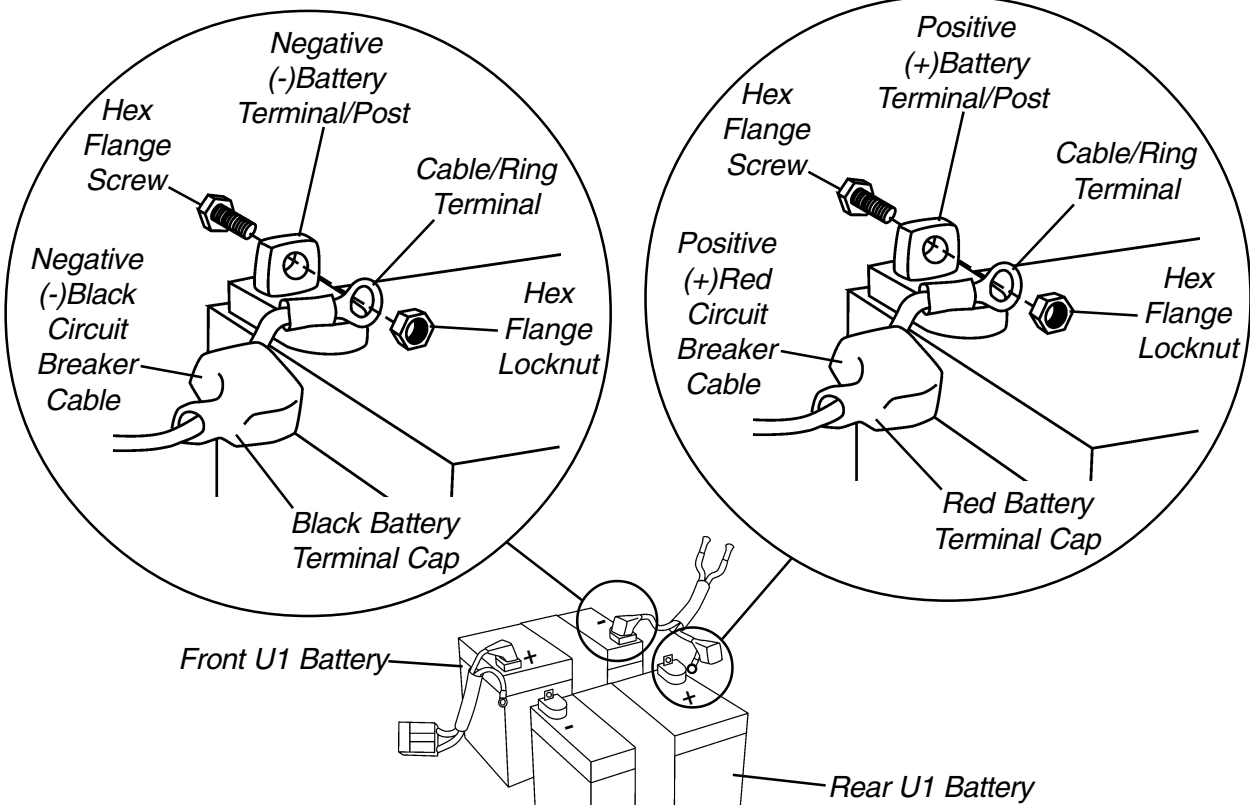
**NEVER** allow any of your tools and/or battery cable(s) to contact **BOTH** battery terminal(s)/post(s) at the same time. An electrical short may occur and serious personal injury or damage may occur.

The use of rubber gloves and safety glasses is recommended when working with batteries.

**CAUTION**

The **POSITIVE (+) RED** battery cable **MUST** connect to the battery clamp of the **POSITIVE (+) battery terminal/post**, otherwise serious damage will occur to the electrical system.

1. Install the RED battery terminal cap onto the RED circuit breaker cable.
2. Install the BLACK battery terminal cap onto the BLACK circuit breaker cable.
3. Connect circuit breaker cable(s) to battery(ies) terminal(s)/post(s) as follows (FIGURE 2):
  - A. **NEGATIVE (-) BLACK** circuit breaker cable to **NEGATIVE (-) battery terminal/post** on the **FRONT** battery.
  - B. **POSITIVE (+) RED** circuit breaker cable to **POSITIVE (+) battery terminal/post** on the **REAR** battery.
4. Secure the circuit breaker cable(s)/ring terminal(s) to the battery terminal(s)/post(s), **BLACK** to **NEGATIVE (-)** and **RED** to **POSITIVE (+)**, with the provided hex flange screw and hex flange locknut. Securely tighten (FIGURE 2).
5. Verify all circuit breaker cable(s)/ring terminal(s) are correctly installed and securely tightened.



**FIGURE 3 - CONNECTING/DISCONNECTING CIRCUIT BREAKER CABLES**

6. Slide terminal cap(s) down circuit breaker cable(s) and onto battery terminals (FIGURE 3).
7. Install the batteries with cables into the wheelchair. Refer to REMOVING/INSTALLING THE BATTERIES WITH CABLES in this procedure of the manual.

**CAUTION**

**ALWAYS** charge new batteries before initial use or battery life will be reduced.

8. If necessary, charge the batteries. Refer to CHARGING THE BATTERIES in this procedure of the manual.

4. Clean the NEW battery terminals. Refer to CLEANING BATTERY TERMINALS in this procedure of the manual.
5. Reconnect the EXISTING battery cables to the NEW batteries. Refer to CONNECTING/DISCONNECTING BATTERY CABLES in this procedure of the manual.
6. Reconnect the EXISTING circuit breaker cables to the NEW batteries. Refer to CONNECTING/DISCONNECTING CIRCUIT BREAKER CABLES in this procedure of the manual.
7. Install the NEW batteries with cables. Refer to REMOVING/INSTALLING THE BATTERIES WITH CABLES in this procedure of the manual.

**REPLACING BATTERIES**

**WARNING**

Most batteries are not sold with instructions. However, warnings are frequently noted on the cell caps. Read them carefully, otherwise injury or damage can occur.

*NOTE: Invacare recommends that both batteries be replaced if one (1) battery is defective.*

**Recommended Battery Types**

**WARNING**

The warranty and performance specifications contained in this manual are based on the use of deep cycle gel cell or sealed lead acid batteries. Invacare strongly recommends their use as the power source for this unit.

**CAUTION**

Failure to use the correct battery size and/or voltage may cause damage to your wheelchair and give you unsatisfactory performance.

*NOTE: The recommended battery type is U1 deep cycle.*

1. Remove the EXISTING batteries with cables. Refer to REMOVING/INSTALLING THE BATTERIES WITH CABLES in this procedure of the manual.
2. Disconnect the battery cables. Refer to CONNECTING/DISCONNECTING BATTERY CABLES in this procedure of the manual.
3. Disconnect the circuit breaker cables. Refer to CONNECTING/DISCONNECTING CIRCUIT BREAKER CABLES in this procedure of the manual.

**Cleaning Battery Terminals**

**WARNING**

**DO NOT** allow the liquid in the battery to come in contact with skin, clothes or other possessions. It is a form of acid and harmful or damaging burns may result. Should the liquid touch your skin, wash the area immediately and thoroughly with cool water. In serious cases or if eye contact is made, seek medical attention IMMEDIATELY.

**NEVER** smoke or strike a match near batteries. If the caps of the battery cells are removed, **NEVER** look directly into them while charging batteries.

1. Examine battery clamps and terminals for corrosion.
2. Slide the terminal cap up the wire to expose the battery terminal.
3. Disconnect the battery cable from one (1) battery terminal/post. Refer to CONNECTING/DISCONNECTING BATTERY CABLES in this procedure of the manual.
4. Clean the terminals and inside the battery clamps by using a battery cleaning tool, wire brush, or medium grade sand paper.

*NOTE: When done, these areas should be shiny, not dull.*

5. Carefully dust off all metal particles.
6. Slide the terminal cap back down the wire to cover the battery terminal.
7. Reconnect the battery cable to the battery terminal/post. Refer to CONNECTING/DISCONNECTING BATTERY CABLES in this procedure of the manual.
8. If necessary, repeat STEPS 1-7 for the remaining battery terminal/post.

**WHEN TO CHARGE BATTERIES (FIGURE 4)**

It is advantageous to recharge daily rather than only when necessary. In fact, a battery's life is extended if the charge level is maintained well above a low condition.

The range per battery charge using recommended batteries should be approximately 5 to 9 hours of typical operation. Extensive use on inclines or the age of the batteries may substantially reduce per charge mileage.

**MKIV RII Joystick**

**BATTERY DISCHARGE INDICATOR (BDI)** is located at the front of the joystick housing and provides information on the remaining charge in the batteries. At FULL charge the BDI will be GREEN. As the battery becomes discharged, the BDI indicator will turn AMBER (YELLOW), then RED and finally FLASHING RED. If the BDI is FLASHING RED, the user should charge the batteries as soon as possible.

*NOTE: Accurate readings are displayed when in neutral.*

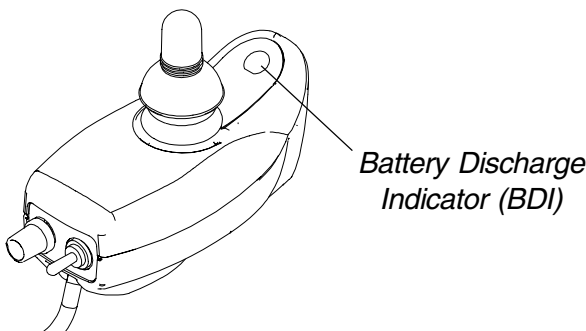


FIGURE 4 - WHEN TO CHARGE BATTERIES

**CHARGING BATTERIES**

**WARNING**

**NEVER** attempt to recharge the batteries by attaching cables directly to the battery terminals.

**DO NOT** attempt to recharge the batteries and operate the wheelchair at the same time.

**DO NOT** attempt to recharge the batteries when the wheelchair has been exposed to ANY type of moisture.

**DO NOT** attempt to recharge the batteries when the wheelchair is outside.

**DO NOT** sit in the wheelchair while recharging the batteries.

**DO NOT** attempt to recharge the batteries using BOTH the on-board battery charger AND an independent battery charger (plugged into the joystick charger port) at the SAME time. Doing so will reduce the life of the batteries.

**READ** and **CAREFULLY** follow the individual instructions for each charger (supplied or purchased). If charging instructions are not supplied, consult a qualified technician for proper procedures.

**CAUTION**

New batteries **MUST** be fully charged prior to initial use of the wheelchair.

**ALWAYS** charge new batteries before initial use or battery life will be reduced.

As a general rule, you should recharge your batteries as frequently as possible to assure the longest possible life and to minimize required charging time. Plan to recharge them when you do not anticipate using the wheelchair.

**There are some basic concepts which will help you understand this automatic process:**

The amount of electrical current drawn within a given time to charge a battery is called "charge rate". If, due to usage, the charge stored in the battery is low, the charge rate is high. As a charge builds up, the charge rate is reduced, and the battery charger rate decreases to a "trickle charge".

*NOTE: If the batteries need to be charged more often or take longer to charge than normal, they may need to be replaced. Contact a qualified technician.*

*NOTE: The batteries can be charged using the on-board battery charger OR by plugging an independent battery charger into the port located on the front of the MKIV joystick.*

**Charging Using The On-Board Battery Charger (FIGURE 5)**

**WARNING**

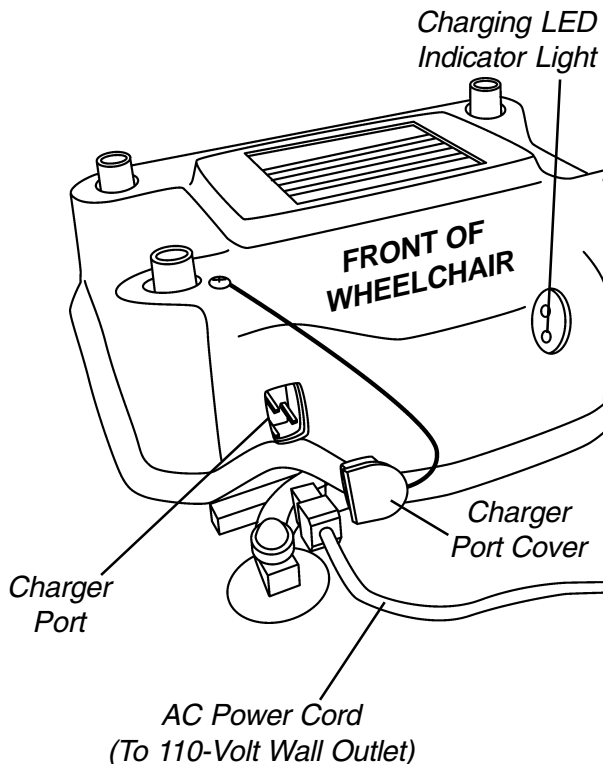
NEVER leave the charger unattended when the circuit breaker (charger) is tripping ON and OFF.

**Required Items:**

MODEL	Battery Charger	* Power Cord
Pronto™ M6	On-Board	Supplied

\* NOTE: AC power cord (3-prong plug, 15 ampere current rating; industrial type)

1. Grasp the charger port cover and remove it from the charger port.
2. Plug AC power cord into the charger port located in the FRONT of the wheelchair.
3. Plug AC power cord into 110-volt wall outlet.
4. Refer to BATTERY CHARGER OPERATION in this procedure of the manual.
5. When charging is complete, grasp the charger port cover and position it in the charger port.



NOTE: Seat NOT shown for clarity.

**FIGURE 5 - CHARGING USING THE ON-BOARD BATTERY CHARGER**

**Charging Using An Independent Charger Plugged Into The Joystick (FIGURE 6)**

NOTE: The charger port located on the FRONT of the joystick requires the use of an independent charger. The independent charger is NOT supplied with the wheelchair

**WARNING**

READ and CAREFULLY follow the individual instructions for each charger (supplied or purchased). If charging instructions are not supplied, consult a qualified technician for proper procedures.

**CAUTION**

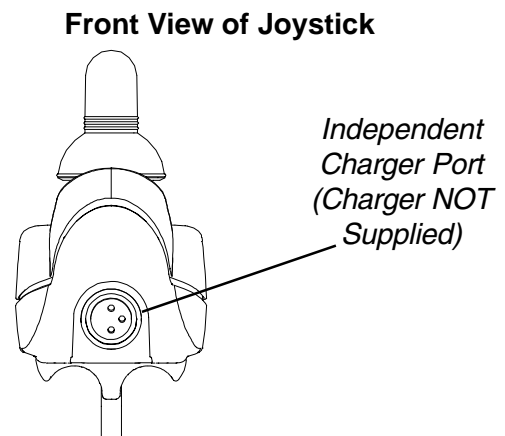
DO NOT use an independent charger rated for over 6 amps. Otherwise, damage may occur.

**Required Items:**

MODEL	Battery Charger	* Power Cord
Pronto™ M6	Not Supplied	Not Supplied

\* NOTE: AC power cord (3-prong plug, 15 ampere current rating; industrial type)

1. Attach the battery charger connector to the charger port on the FRONT of the joystick.
2. Plug the charger's AC power cord, or extension, into the grounded 110-volt wall outlet.
3. Wait until charging is complete.



**FIGURE 6 - CHARGING USING AN INDEPENDENT CHARGER PLUGGED INTO THE JOYSTICK**

**BATTERY CHARGER OPERATION**

**WARNING**

READ and CAREFULLY follow the individual instructions for each charger (supplied or purchased). If charging instructions are not supplied, consult a qualified technician for proper procedures.

**On-Board Battery Charger (FIGURE 7)**

1. Remove the shroud. Refer to REMOVING/INSTALLING THE SHROUD in PROCEDURE 7 of this manual.
2. Locate the switch on the BACK of the battery charger and confirm it is set to 115 volts and perform one (1) of the following:
  - Switch set to 115 volts -**
    - A. Continue onto STEP 3.
  - Switch NOT set to 115 volts -**
    - B. Peel back the plastic cover that is positioned over the switch (DETAIL "A").
    - C. Flip the switch to the upward position so it is set to 115 volts (DETAIL "A").
    - D. Reposition the plastic cover over the switch (DETAIL "A").
    - F. Continue onto to STEP 3.
3. Reinstall the shroud. Refer to REMOVING/INSTALLING THE SHROUD in PROCEDURE 7 of this manual.

*NOTE: The ON/OFF LED indicator light AND the charger LED indicator light are located in the FRONT of the wheelchair next to the charger port.*

4. The ON/OFF LED indicator will illuminate solid RED indicating that the charger is ON.
5. If the ON/OFF LED indicator is "BLINKING" RED, this is abnormal. Unplug AC power cord from the on-board battery charger and wall outlet. Contact Invacare at the number listed on the back page.
6. When the ON/OFF LED indicator light is OFF, charger is OFF.
7. When the CHARGE LED indicator light is "BLINKING" GREEN, the batteries are charging.
8. When the CHARGE LED indicator light is solid GREEN, the batteries are FULLY charged (or as fully charged as their condition will allow). At this point, the charger automatically stops charging.

6. If the charger is on and the CHARGE LED indicator light is OFF, the charger is disconnected. Check that all connections are secure. If CHARGE LED indicator light is still OFF, unplug AC power cord from the on-board battery charger and wall outlet. Contact Invacare at the number listed on the back page.

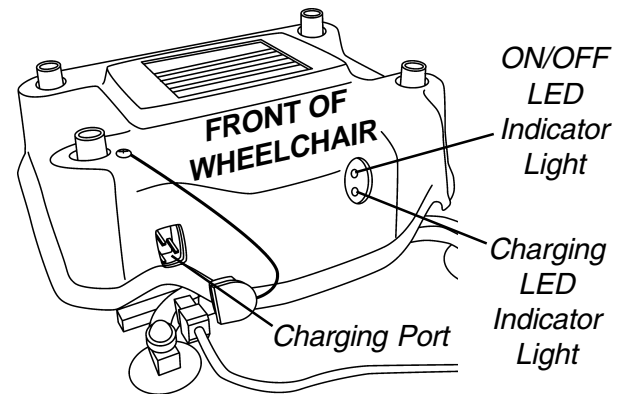
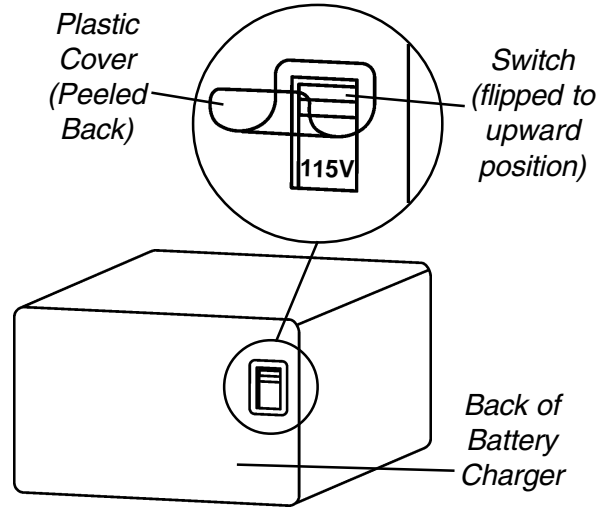
*NOTE: The wheelchair is designed with an electrical lockout to prevent it from being driven while the charger is plugged in to an outlet.*

ON/OFF INDICATOR	STATUS
SOLID RED	CHARGER ON
"BLINKING" RED	ABNORMAL
LED "OFF"	CHARGER OFF

CHARGING INDICATOR	STATUS
"BLINKING" GREEN	CHARGING
SOLID GREEN	FULLY CHARGED
LED "OFF"	CHARGER DISCONNECTED

**DETAIL "A"**



*NOTE: Seat NOT shown for clarity.*

**FIGURE 7 - BATTERY CHARGER OPERATION**

**Independent Battery Charger**

*NOTE: The charger port located on the FRONT of the joystick requires the use of an independent charger. The independent charger is NOT supplied with the wheelchair*

**WARNING**

READ and CAREFULLY follow the individual instructions for each charger (supplied or purchased). If charging instructions are not supplied, consult a qualified technician for proper procedures.

**CAUTION**

DO NOT use an independent charger rated for over 6 amps. Otherwise, damage may occur.

**REMOVING/INSTALLING ON-BOARD BATTERY CHARGER****WARNING**

This procedure MUST be performed by a qualified technician.

**This Procedure Includes the Following:**  
**Retracting the MKIV Joystick**  
**Repositioning the MKIV Joystick**  
**Disconnecting/Connecting the MKIV Joystick**

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.  
 For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**RETRACTING THE MKIV JOYSTICK (FIGURE 1)**

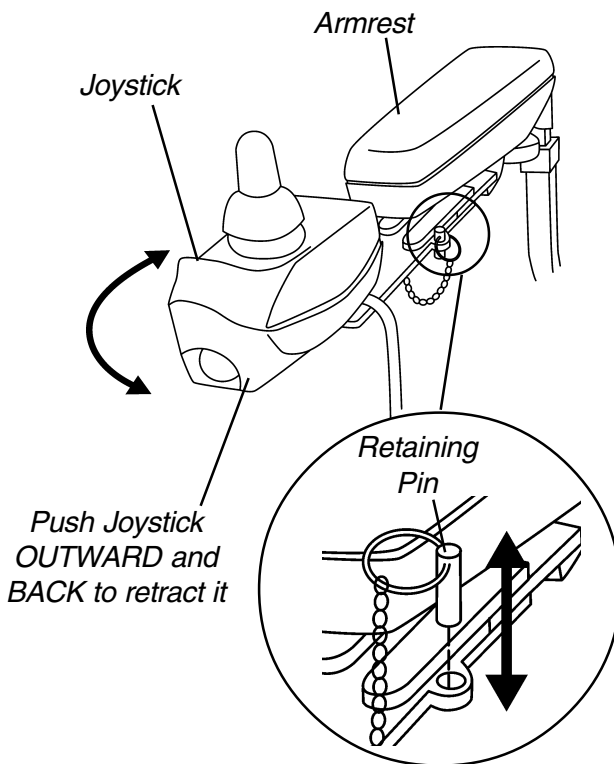
*NOTE: The MKIV joystick can be retracted from its position in front of the armrest and maneuvered so that it is parallel to the armrest. When the MKIV joystick is parallel to the armrest, the wheelchair can be SLOWLY maneuvered to allow the end-user to position the wheelchair at a table, desk, etc...*

**WARNING**  
 Positioning the joystick PARALLEL to the armrest allows the wheelchair to be SLOWLY maneuvered up to a desk/table. ANY other wheelchair operation is to be performed with the joystick secured with the retaining pin in the FRONTAL position - otherwise injury or damage may result.

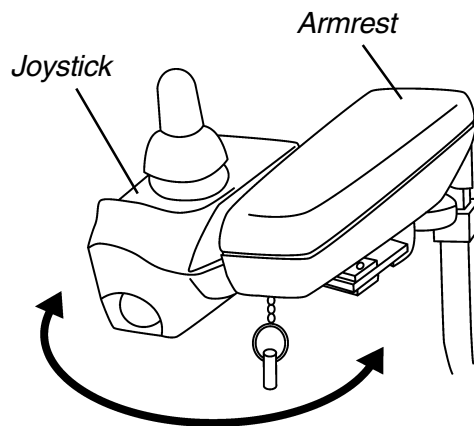
*NOTE: To return the MKIV joystick to the frontal position, reverse the following steps.*

1. Position the wheelchair so that it is close to and facing the desk, table, etc...
2. Pull the retaining pin securing the joystick in the frontal position.
3. Grasp the joystick and push it OUTWARD and BACK, until the joystick is parallel to the armrest.
4. Slowly maneuver the wheelchair up to the desk, table, etc...

**MKIV JOYSTICK IN FRONTAL POSITION**



**MKIV JOYSTICK PARALLEL TO ARMREST**



**FIGURE 1 - RETRACTING THE MKIV JOYSTICK**



## REPOSITIONING THE MKIV JOYSTICK

### WARNING

This procedure **MUST** be performed by a qualified technician.

*NOTE: The MKIV joystick is factory installed on the side specified by the end user when ordering the wheelchair. To reposition the MKIV joystick onto the opposite side of the wheelchair, contact a qualified technician.*

## DISCONNECTING/CONNECTING THE MKIV JOYSTICK (FIGURE 2)

### Disconnecting

1. Loosen the thumb screws on the connector for the joystick.
2. Disconnect the joystick connector from the controller connector.

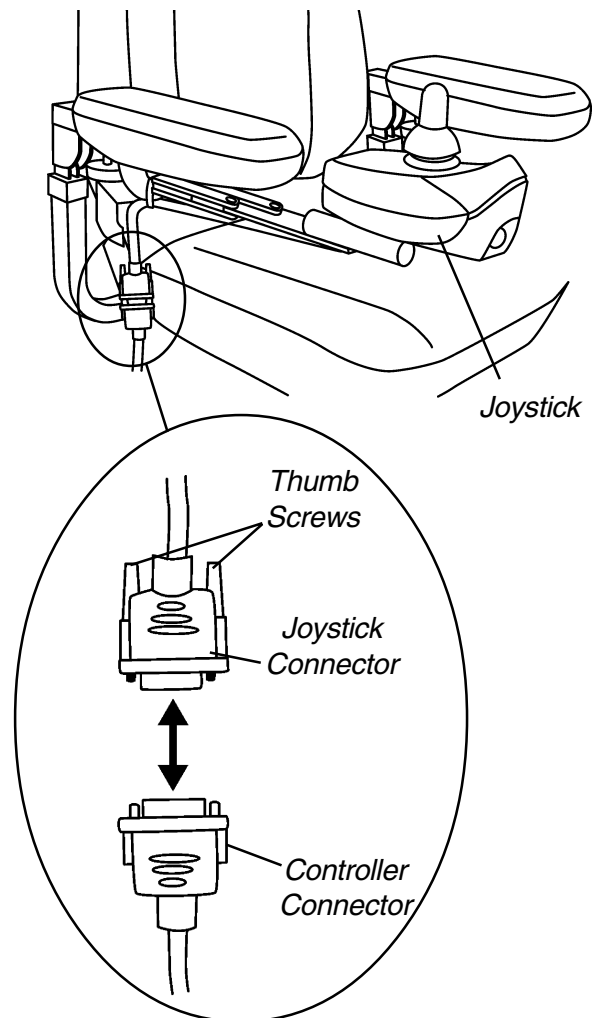
### Connecting

1. Align the joystick connector with the controller connector.
2. Secure the joystick connector to the controller connector using the thumb screws on the controller connector.

### WARNING

The excess joystick cable **MUST** be coiled, tie wrapped and positioned on **TOP** of the shroud - otherwise injury or damage may result.

3. Coil any slack in the joystick cable and tie wrap it together (DETAIL "A").
4. Position the coiled joystick cable on **TOP** of the shroud (DETAIL "A")



### DETAIL A

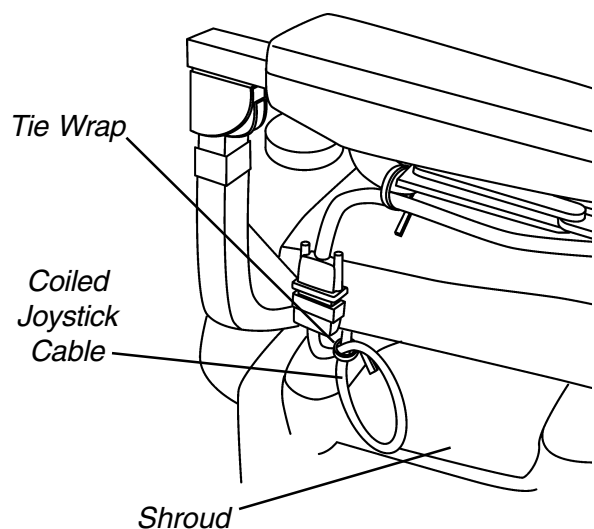


FIGURE 2 - DISCONNECTING/CONNECTING THE MKIV JOYSTICK

**This Procedure Includes the Following:**  
**Transporting the Wheelchair**

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.  
 For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**TRANSPORTING THE WHEELCHAIR (FIGURES 1 AND 2)**

**Disassembling The Wheelchair**

*NOTE: To reassemble the wheelchair, reverse the following steps.*

1. Disconnect the joystick. Refer to DISCONNECTING/CONNECTING THE MKIV JOYSTICK in PROCEDURE 9 of the manual.

2. Fold down the back. Refer to FOLDING/UNFOLDING THE BACK in PROCEDURE 5 of the manual.
3. Remove the seat. Refer to REMOVING/INSTALLING THE SEAT in PROCEDURE 4 of the manual.
4. Remove the shroud. Refer to REMOVING/INSTALLING THE SHROUD in PROCEDURE 7 of the manual.

*NOTE: The motor connectors are located UNDERNEATH the FRONT frame assembly.*

**WARNING**  
 When reconnecting the motors, be sure the motor wires are routed toward the INSIDE of the wheelchair frame - otherwise, injury or damage may result.

5. Disconnect the LEFT motor connector from the controller connector.
6. Repeat STEP 5 for the RIGHT motor connector.

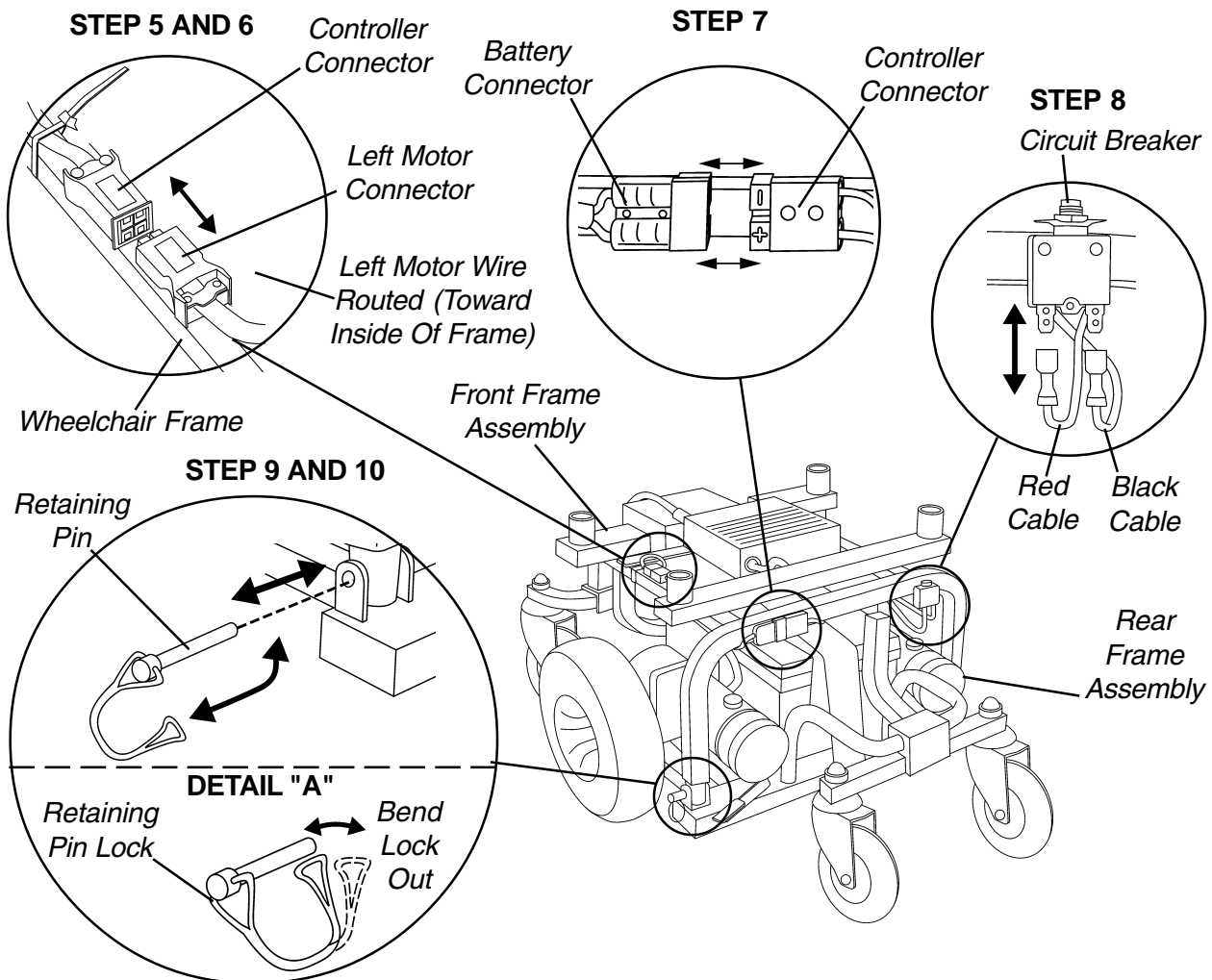


FIGURE 1 - TRANSPORTING THE WHEELCHAIR

7. Disconnect the battery connector from the controller connector.
8. Disconnect the RED and BLACK circuit breaker cables from the circuit breaker.

**WARNING**

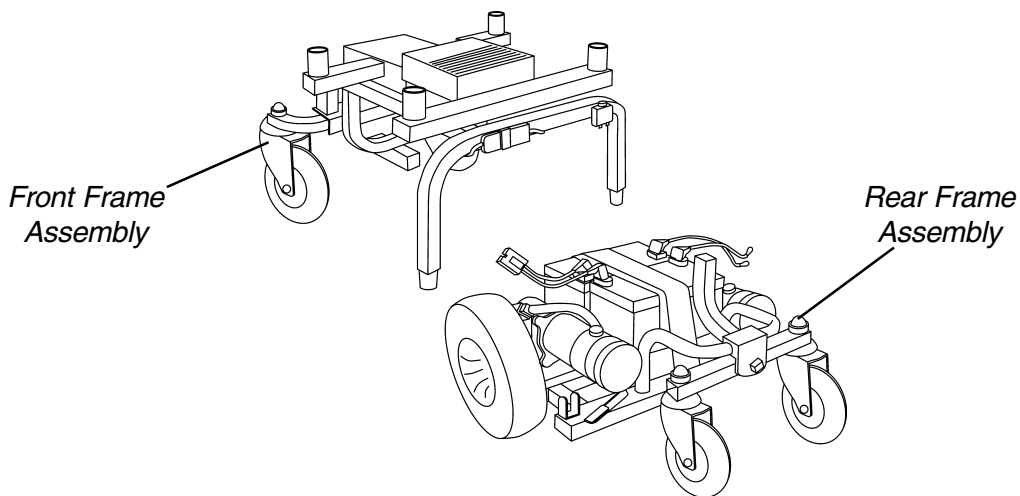
When reassembling the wheelchair, ensure the retaining pins securing the frame assemblies together are properly engaged and locked. Otherwise, injury and/or damage may result.

9. Release the two (2) retaining pins locks by performing the following steps:

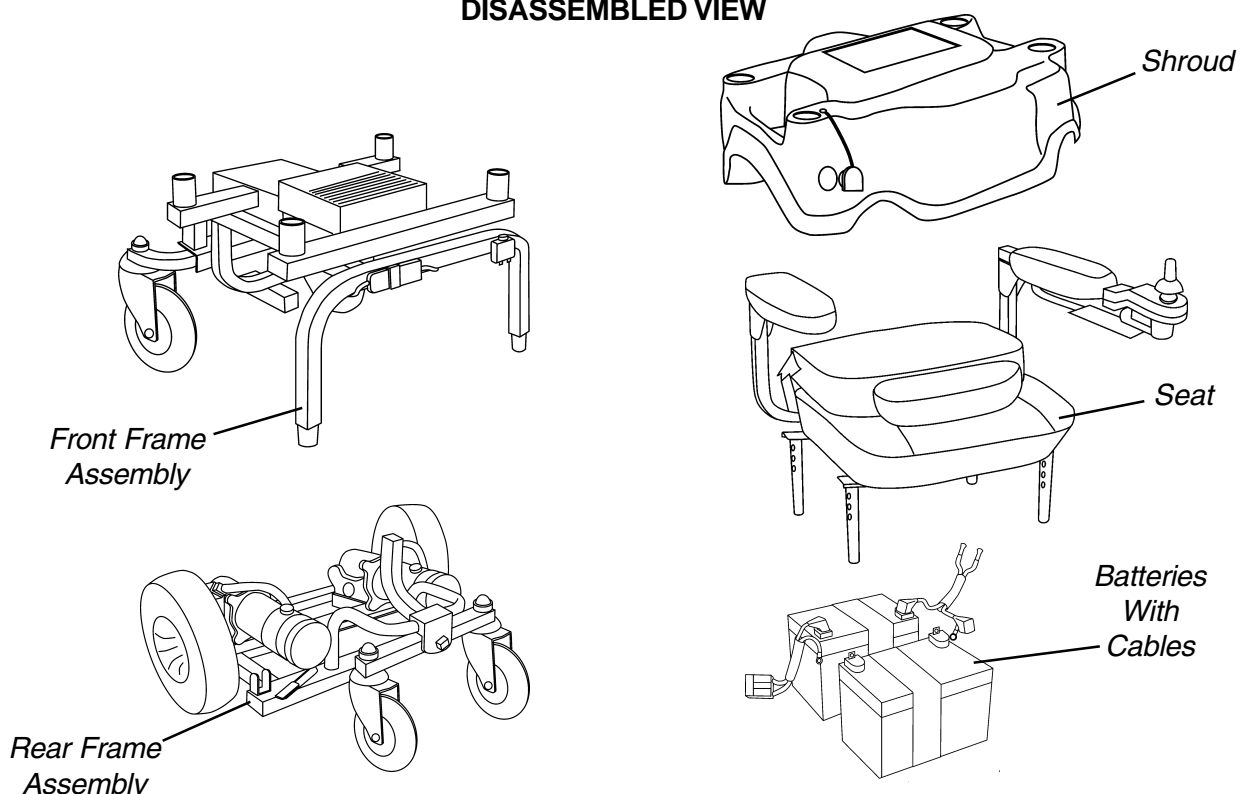
- A. Bend the END of the retaining pin lock AWAY from the retaining pin until it is clear of the retaining pin (DETAIL "A").
  - B. While performing STEP A, swivel the retaining pin lock away from the retaining pin (DETAIL "A").
10. Remove the two (2) retaining pin that secures the rear frame assembly to the front frame assembly.
  11. Separate the front frame assembly from the rear frame assembly.
  12. Remove the batteries with cables. Refer to REMOVING/INSTALLING THE BATTERIES WITH CABLES in PROCEDURE 8 of the manual.

TRANSPORT

**STEP 11**



**DISASSEMBLED VIEW**



**FIGURE 2 - TRANSPORTING THE WHEELCHAIR**

**This Procedure Includes the Following:**  
**Removing/Installing the Crutch/Cane Holder**  
**Removing/Installing The Safety Flag**

**WARNING**  
 After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.  
 For the following procedures, make sure the ON/OFF switch on the joystick is in the OFF position.

**REMOVING/INSTALLING THE CRUTCH/CANE HOLDER (FIGURE 1)**

*NOTE: To remove, reverse the following procedure.*

**WARNING**  
 The installation of the crutch/cane holder onto the back of the wheelchair seat significantly increases the length of the wheelchair. When turning the wheelchair or swiveling the wheelchair seat, it is important to take note of this increased length - otherwise, injury and/or damage to the surrounding property may result.

**Installing**

1. Install the crutch/cane holder into the accessory tube located on the back of the seat.
2. Install mounting screw to secure the crutch/cane holder in place. Securely tighten.
3. Align slot on base with hook on crutch/cane holder and slide base down into position.

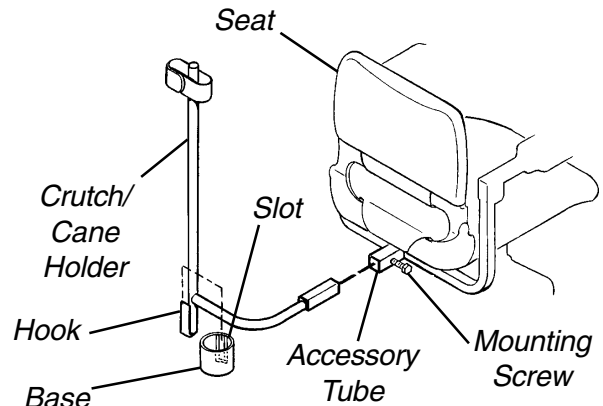


FIGURE 1 - REMOVING/INSTALLING THE CRUTCH/CANE HOLDER

**REMOVING/INSTALLING THE SAFETY FLAG (FIGURE 2)**

*NOTE: To remove, reverse the following procedure.*

**WARNING**  
 The installation of the safety flag onto the back of the wheelchair seat significantly increases the length of the wheelchair. When turning the wheelchair or swiveling the wheelchair seat, it is important to take note of this increased length - otherwise, injury and/or damage to the surrounding property may result.

**Installing**

1. Install the bracket into the accessory tube located on the back of the seat.
2. Install mounting screw to secure the bracket in place. Securely tighten.
3. Install safety flag into bracket.

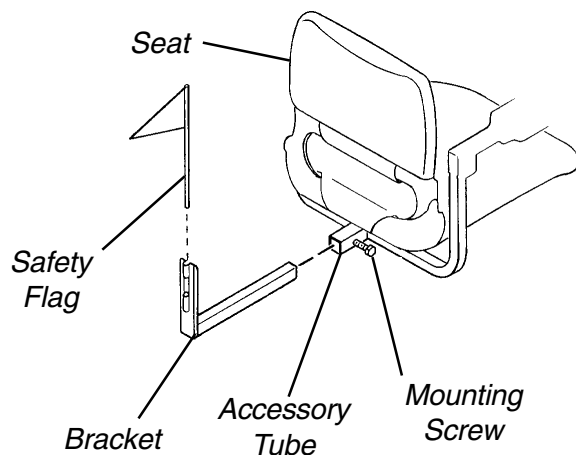


FIGURE 2 - REMOVING/INSTALLING THE SAFETY FLAG

**NOTES**

Lined area for writing notes.





## LIMITED WARRANTY

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

With regards to the original purchaser/user only, Invacare warrants the front and rear frames to be free from defects in materials and workmanship for a period of three (3) years from date of purchase; seat frame for a period of three (3) years from the date of purchase; electronics, motors and gearboxes for a period of one (1) year from the date of purchase; all remaining components for one (1) year from the date of purchase except upholstered materials, padded materials and tires/wheels. If within such warranty period any product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the bottom of the back cover. Provide dealer's name address, date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number. Do not return products to our factory without our prior consent.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECT TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, COMMERCIAL OR INSTITUTIONAL USE, PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY INVACARE. THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THESE INSTRUCTIONS. A CHANGE IN OPERATING NOISE, PARTICULARLY RELATIVE TO MOTORS AND GEARBOXES DOES NOT CONSTITUTE A FAILURE. ALL SUCH DEVICES WILL EXHIBIT A CHANGE IN OPERATING NOISE DUE TO AGING.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, IF ANY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESSED WARRANTY PROVIDED HEREIN AND THE REMEDY FOR VIOLATIONS OF ANY IMPLIED WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. INVACARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.

THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE/PROVINCIAL LAWS AND REQUIREMENTS.



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