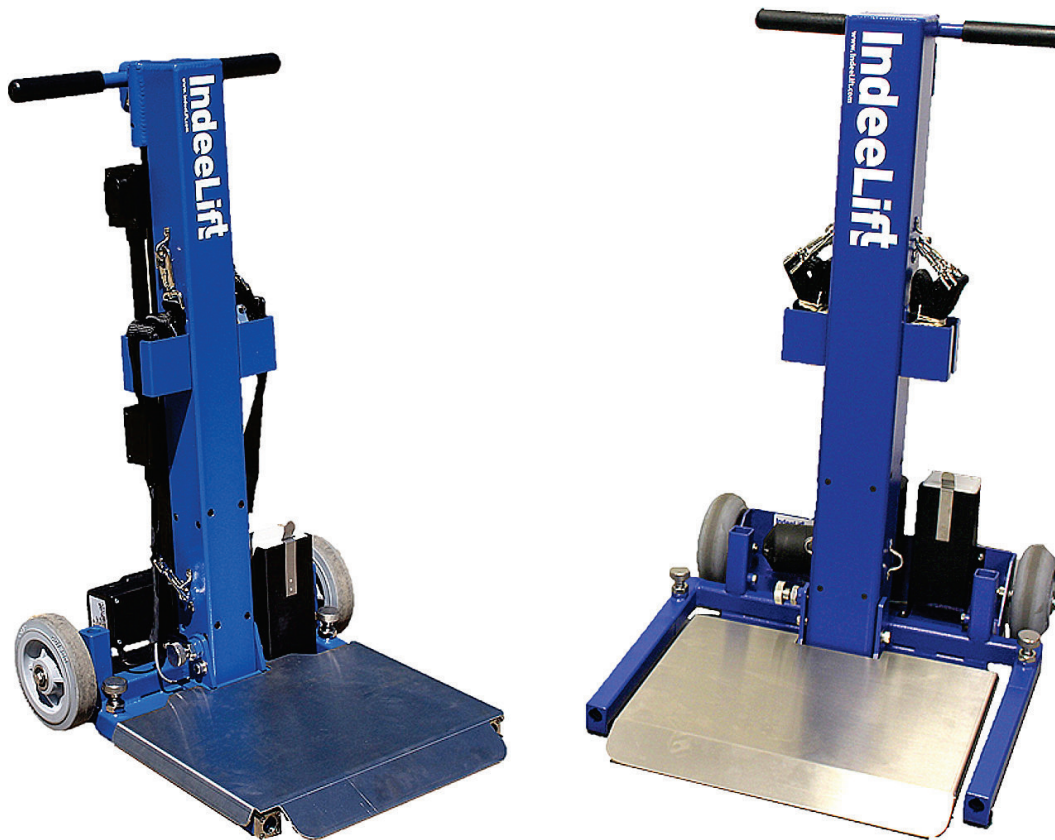


IndeeLift®
The Human Floor Lift



HFL-500-E / HFL-550-E USER'S MANUAL

"From the Ground to the Gurney!"
Lift and Transport

INDEELIFT INC.
5143 Tesla Road
Livermore, CA 94550 USA
844-700-5438
www.indeelift.com

HLF-500-E/HFL-550-E User's Manual



Please read this entire manual **before** using the product and retain for future reference.

TABLE OF CONTENTS

HLF-500-E / HFL- 550-E

Introduction	2
Overview	2
Features/Functionality	3
Component Identification	4
Preparing the HFL for use	5
Operation	6
Deploying the HFL	6
Belt Assemblies	7
Standard Lift Procedure	9
Mount Assist Procedure	10
Patient Transport Procedure	11-12
Backboard Lift Procedure	12-13
Optional Stair Handle Set Accessory Procedures	14-19
Optional IndeeChuck Patient Maneuvering Tool Procedure	20-21
Maintenance	22
Troubleshooting/Service	22
Warranty Information	22
Specifications	23
APPENDIX A: HFL-500-E Stair Tread System User's Manual	24-34

HLF-500-E/HFL-550-E User's Manual

Introduction:

IndeeLift's patented line of Human Floor Lifts (HFLs) are a class of human lifts unlike any other. This family of products has been designed to lift individuals who are on the floor or ground and are unable to get up without assistance. The rugged and reliable IndeeLift HFLs are purpose-built appliances, built in the USA and are available in home, professional/commercial and emergency medical services (EMS) models.

HFLs for EMS are industrial grade tools designed for emergency responders. These tools were developed to safely lift and transport patients. They lift a patient from the floor, seated or on a backboard, without causing injury to either the emergency services personnel or the patient. As a fall recovery appliance, the HFLs are extremely maneuverable. The small footprint allows fall recovery to occur in much smaller spaces than other mechanical lift devices. These tools eliminate manual lifting of patients from the floor on medical-emergency and lift-assist calls. Additionally, the HFLs for EMS are designed to transport the patient from the incident site to the gurney when required.

Overview:

This manual covers both the HFL-500-E and HFL-550-E for emergency medical services. The HFL-500-E is the standard EMS model and is engineered to lift a person of up to 500 lbs. or 227 kg from the floor. The HFL-550-E is the bariatric model and is engineered to lift a person of up to 750 lbs. or 249 kg from the floor. Both models have the same basic features and functions, (any differences are noted in this manual).

The operating mechanism is a linear actuator powered by a 24V DC rechargeable battery pack which is charged from any standard AC wall outlet using the included battery charger. The device is designed in a portable "roll-around" configuration utilizing six inch all-terrain wheels and is operated using a sealed and simple up/down rocker switch.

IndeeLift's HFL-500-E and 550-E are designed for EMS personnel, (including firefighters, paramedics, public servants and security personnel). These rugged, state-of-the-art products were developed specifically to eliminate lift-related injuries to first responders and their fallen patients. Once up from the floor, the patient can take a deep breath and rest comfortably until they are ready to stand up and walk away, or they can easily be transported and transferred to a gurney. Alternately, the patient can be lifted on a backboard then transferred directly to a gurney, without *any* bending, stooping over, or manual lifting by the provider.

HFL-500-Es and 550-Es also double as a dolly for equipment transport, and can be used to transport the patient to a waiting gurney. The optional Stair Handle Set quickly assembles and deploys when needed, allowing emergency responders the additional flexibility of maneuvering patients already secured to the HFL up and down stairs or through uneven terrain or obstructions. The optional IndeeChuck Patient Maneuvering Tool makes it easy to recover a patient from even the tightest of spaces, where they can safely be moved to a more open space, positioned on the IndeeLift, and raised from the floor. Additionally, the optional Stair Tread System quickly attaches to the HFL-500-E, allowing it to be used as a Stair Chair with a patient secured to the lift. *The Stair Tread System is only for use with the HFL-500-E.*

Simply put, IndeeLift is revolutionizing emergency medical-assist calls involving patient lifts by doing the heavy lifting ...without risk of injury to the first responders or their patients!

HLF-500-E/HFL-550-E User's Manual

HFL Features/Functionality:

The HFLs for EMS are designed to lift patients from the ground or floor without the risk of injury associated with manual lifting. Once the patient is properly positioned on the HFL's seat, the first responder presses upward on the sealed up/down rocker switch which engages the linear actuator. In approximately one minute, the patient is safely raised to a height of 21 inches. The raised-seat height was designed to allow the patient to stand with minimal effort after being raised from the floor in a seated position or transfer to any ADA compliant bed, wheelchair or scooter.

Small Footprint and Easy Portability

HFLs for EMS are portable lifts that are rolled around on wheels like a traditional dolly. Their small footprint allows them to access many places gurneys and other lifts simply cannot go. With a turning radius of 36" for the HFL-500-E, and 30" for the HFL-550-E, these HFLs can go operate in the tightest of spaces, including most small bathrooms.

Mounting Ramp Seat

The patented design includes a mounting ramp seat that eliminates the need to manually "lift" a patient. With no complex cradles or harnesses to configure, the HFL allows fall recovery to be simple and quick. A person who has fallen can easily slide onto the mounting ramp seat and be off the floor in a normal seated position within one minute.

Sealed Up/Down Rocker Switch

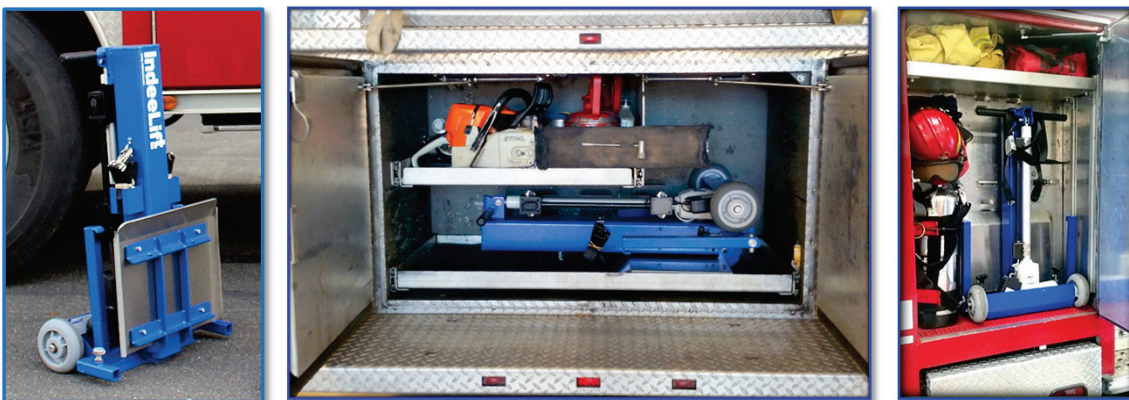
HFLs for EMS incorporate a sealed up/down rocker switch to operate the lift. The potted enclosure protects the switch from moisture and contamination.

Rechargeable Battery

The HFLs for EMS come standard with two 5-7 year rechargeable 4 amp-hour Lithium-ION battery packs and charging system. Each charge is good for approximately 30 lifts.

Folding/Stowable Design

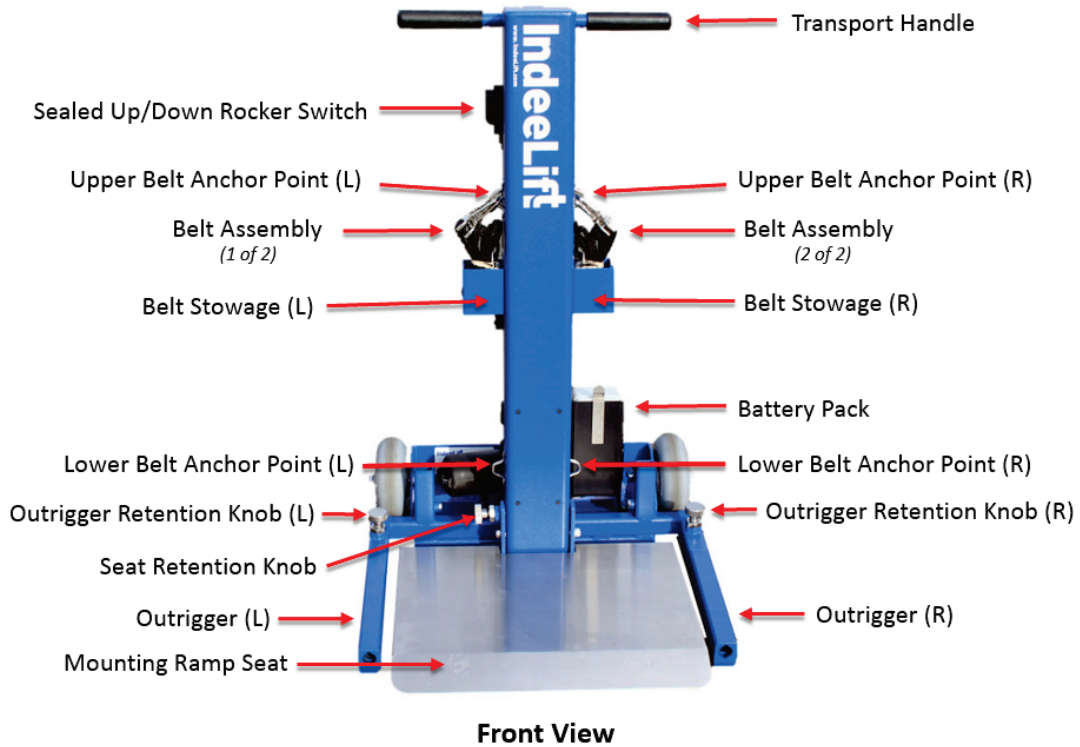
Both HFLs for EMS feature stowable outriggers and a folding seat, making them ideal for stowing on emergency services apparatus. The stowed dimensions for the HFL-500-E are 8" D x 20" W x 33" H and the stowed dimensions for the HFL-550-E are 12" D x 22" W x 36" allowing the HFLs to be stowed in multiple locations on most apparatus.



HLF-500-E/HFL-550-E User's Manual

HFL-500-E/HFL-550-E Component Identification:

Major Components

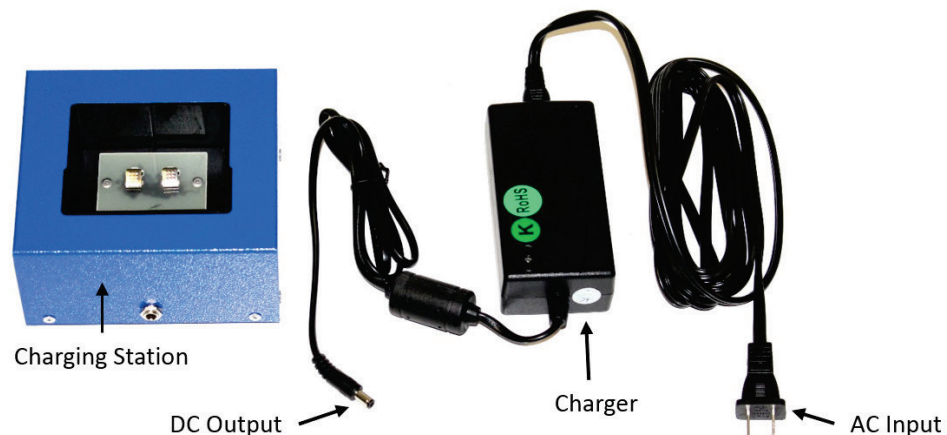


Controls:

Up/Down Rocker Switch

The Sealed Up/Down Rocker Switch is used to raise and lower the seat. Pressing the rocker switch towards the top of the unit raises the seat, and pressing the rocker switch towards the bottom of the unit lowers the seat. *Raising or lowering the seat takes approximately 60 seconds.*

Battery Charger:



HLF-500-E/HFL-550-E User's Manual

Preparing the HFL for use:

Unpacking the HFL:

The HFL comes packaged for shipment in a carton. Packed inside a box in the shipping carton will be the battery pack, battery charger, charging station and two sets of safety belt assemblies.

- 1) Remove the box cap and sides.
- 2) Roll the unit onto the floor.
- 3) Deploy the outriggers and seat as described in Steps 1 - 4 on page 6.
- 4) Install the battery pack as described in step 6, below.
- 5) Test the unit by raising and lowering the seat using the up/down rocker switch.

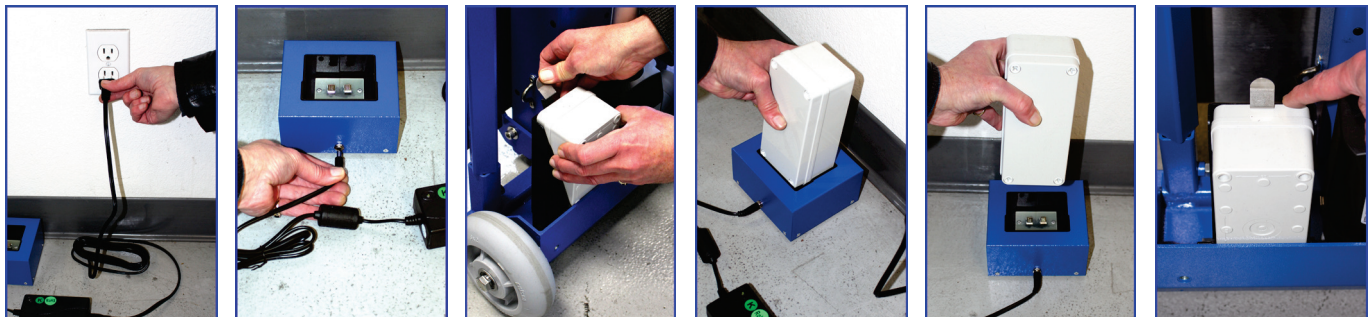
Charging the Battery Pack



It is recommended that the HFL's battery pack be charged for eight hours prior to its first use in the field.

1. Attach the male end of the charger power supply's input power cord to any standard 110/120 VAC grounded wall power outlet.
2. Attach the round end of the charger's output power cord to the battery pack charging station.
3. Remove the battery pack from the HFL by pressing on the battery retention latch and lifting the battery pack from the device.
4. Place the battery pack in the charging station and allow approximately eight hours for the battery to fully charge. *Note: The battery pack, charging station and the HFL are all keyed so the battery pack cannot be installed into the charging station or the HFL incorrectly.*
5. After approximately eight hours, remove the battery pack from the charging station. *NOTE: The LED indicator on the charger does not turn off when the battery is charged.*
6. Install the battery into the HFL, ensuring the retention latch snaps into place.

NOTE: Keep the charger and charging station in a safe place where you can easily locate them the next time the battery requires charging.



NOTE: When used for EMS, it is recommended that an additional battery pack be purchased for each HFL. This enables the HFL's battery to be swapped out at weekly intervals, or as described in the department's standard operating procedure for portable tools that utilize rechargeable batteries.

HLF-500-E/HFL-550-E User's Manual

Operation:

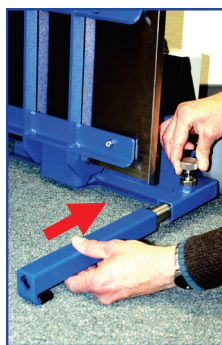
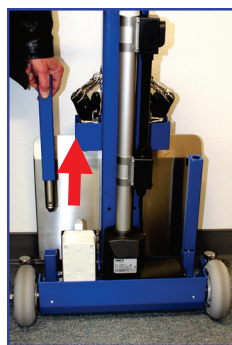
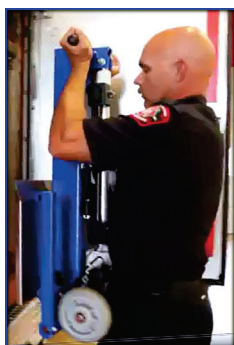


Practice these procedures several times with a colleague playing the role of a fallen patient.

Ensure that any users are thoroughly familiar with the correct operation of the HFL **before** they use it to assist an actual patient.

Deploying the HFL:

1. Remove the HFL from its stowed position on the emergency services apparatus and place it on the ground.
2. One at a time, remove the two outriggers (left and right) from their vertical stowed position by grasping them firmly and lifting them upward (as indicated by the red arrow in the below image). NOTE: The outriggers are held in the stowed position by a spring-ball mechanism requiring slight pressure to be applied to remove them from or return them to their stowed position. **Always ensure that the outriggers snap back into place when returning them to their stowed position.**
3. One at a time, push the outriggers (left and right) into their operational position until the spring-loaded retention knob locks. *Note: Ensure the black 'feet' are facing downward, as shown in the below photo. Always confirm the outriggers are locked by attempting to pull them out.*
4. With one hand, pull the seat's spring-loaded retention knob outward while using your other hand to lower the seat. The spring-loaded retention knob will lock into place when the seat has been fully lowered. *Note: The HFL-500-E's seat covers the outriggers when lowered to the operational position.*
5. Optional: The HFLs for EMS were designed to be used as a dolly to carry the emergency responder's EMS equipment or other cargo as necessary. This is accomplished by loading the equipment/cargo on the HFL's seat and using the Up/Down Rocker Switch to raise the seat by approximately 6-12" for a good balance (see Step 7 on page 9 for more details).



NOTE: Move the unit to the location of the patient by placing one foot on the back of the HFL and slightly tilting the unit backwards by slowly pulling the handles towards you. The HFL can be pulled or pushed to the location of the patient. *Note: Some manual doors dictate the need to pull the HFL through from behind.*



As you stop at the desired location, ensure there are no foreign objects beneath the seat **before** tilting the unit back to the upright (operational) position.

HLF-500-E/HFL-550-E User's Manual

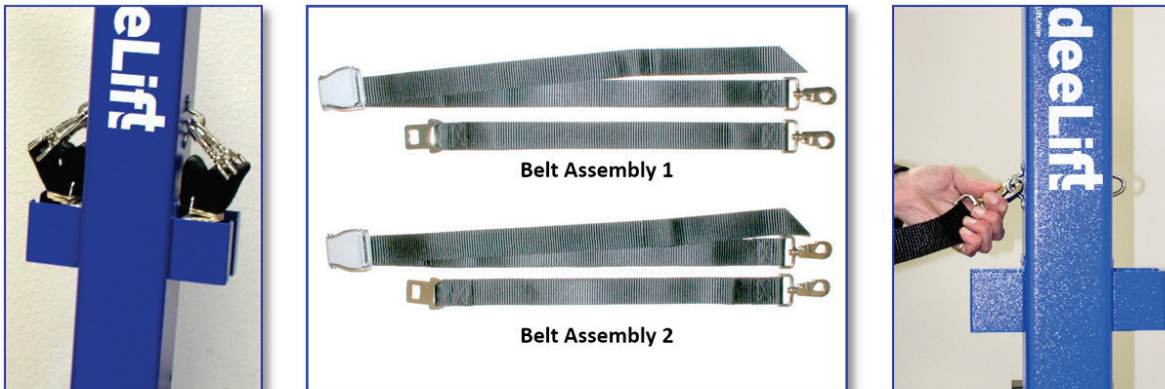
Belt Assemblies:

The HFL-500-E and 550-E come standard with two safety-belt assemblies which are used to secure the patient to the lift.



Overview:

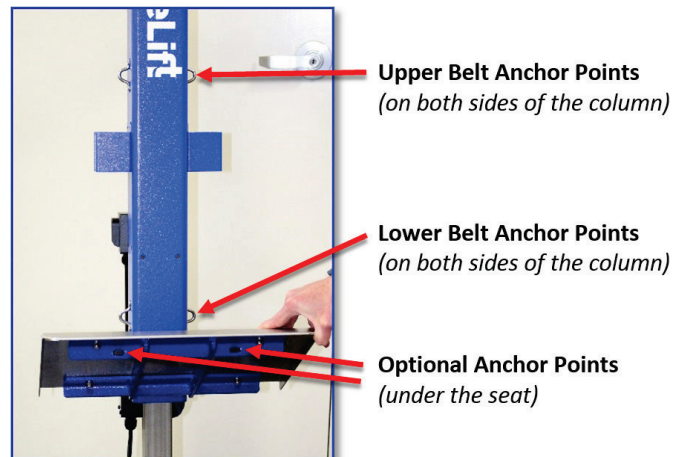
The belt assemblies are stowed on the lift when not in use. Each belt assembly includes two straps; the longer strap has a seatbelt style *buckle* with a snap hook at the end, the shorter strap has a seatbelt style *clasp* with a snap hook at the end. Each of the two straps form a single belt assembly. In use, they are secured to the HFL's belt anchor points using the snap hooks at the end of each belt assembly.



Belt Anchor Points:

There are three sets of anchor points on the HFL for the belt assemblies (six in total). Two sets (upper and lower) are located on either side of the HFL's main column and are the most commonly used.

There are two additional anchor points on the forward frame underneath the seat which provide additional strapping options for unique situations, (e.g., patient's size, weight or condition).



HLF-500-E/HFL-550-E User's Manual

Belt Assemblies (continued):

Standard Belt Configurations:

In many cases, only one of the belt assemblies is required and it is typically secured to the lower anchor points as a waist belt. This is the normal configuration for a standard patient lift, (where the patient is able to sit upright by their own control), and the belt is used as a safety precaution while the patient is being lifted.

Only one belt assembly is needed when lifting a patient secured to a backboard. Using the upper belt anchor points, route the belt assembly over the patient and loop it through the center handle of the backboard, (on the opposite side of the HFL), then buckle the seat belt and remove the slack.

Typically, the upper anchor points are used with the additional belt assembly when needed as a chest belt. The chest belt is used along with the waist belt when a patient is to be transported on the lift. *The standard use of the belt assemblies as waist belts, chest belts, and for a backboard lift are covered in more detail in the **Operation** section of this manual.*



Standard Patient Lift:
One Belt Required



Backboard Lift:
One Belt Required



Patient Lift & Transport:
Two Belts Required

Optional Belt Configurations:

While the standard configurations described above will work well for most situations, the IndeeLift HFLs for EMS have six anchor points which provide emergency responders with many different belt options, (depending on the circumstances). These options include, but are not limited to, those shown below.



HLF-500-E/HFL-550-E User's Manual

Standard Lift Procedure:

This procedure is used for a standard lift-assist where the patient is conscious and simply needs assistance being lifted from the floor. *NOTE: It is recommended that you view the HFL-550-E training video as you learn this procedure.*

1. Position the HFL directly behind the fallen patient, with the seat positioned as close to the fallen patient's buttocks as possible.
2. Have the patient scoot themselves backwards onto the seat, until their back is resting on the HFL's vertical frame. *NOTE: If the fallen patient has difficulty scooting backwards onto the seat, use the **Mount Assist Procedure** starting on page 10.*
3. Once the patient is fully seated to the rear of the HFL's seat, ask the patient to lift their arms slightly and, using one of the belt assemblies as a waist belt (i.e., secured to the lower anchor points), position the belt around the patient's waist, buckle the seat belt and remove any slack.
4. Position yourself behind the HFL and ask the patient if they are ready to be lifted. Once they are ready, press the up/down rocker switch upward and hold the switch in the up position. *The seat will rise for approximately sixty seconds and then stop.*
5. Once the lift has stopped, allow the patient to rest if needed, ensure the patient's feet are positioned properly for standing, unbuckle the seat belt then offer to assist the patient as they stand up from the seat, (as they would from any chair).



6. Once the fallen patient has been recovered, return the seat to the fully downward (home) position before rolling the HFL back to the apparatus. **NOTE: Always ensure there are no foreign objects below the seat before returning it to the home position.**
7. If desired, the HFL can be used as a dolly to transport equipment/cargo or tools back to the emergency apparatus. Load the gear on the HFL then raise the seat by approximately 6" for proper balance, place one foot on the stainless-steel footrest on the back of the HFL. Slightly tilt the unit backwards by slowly pulling the handles towards you. The HFL can now be pulled or pushed back to the emergency apparatus. *Note: Some manual doors dictate the need to pull the HFL through from behind.*



Before stowing the HFL on the apparatus, stow the belt assemblies and return the HFL to its fully stowed configuration by reversing the procedures for **Deploying the HFL** on page 6.

HFL-500-E/HFL-550-E User's Manual

Mount Assist Procedure:

This procedure is used for medical-assist calls and lift-assists where the patient is unable to mount the device themselves. *NOTE: It is recommended that you view the HFL-550-E training video as you learn this procedure.*

1. With the patient laying down on the floor, position the HFL behind them and position the patient's legs as far forward as possible, (to form an "L" shape).
2. Adjust the positioning of the HFL to have one edge of the seat as close to the patient's buttocks as possible.
3. Offer the patient your hand and gently tilt them up to a seated position on the center of the HFL's seat. *If needed, assist the patient to be positioned in the center of the seat, as far back on the seat as possible, (so their back is resting on the HFL's vertical frame).*
9. Once the patient is fully seated to the rear of the HFL's seat, ask the patient to lift their arms slightly and, using one of the belt assemblies as a waist belt (i.e., secured to the lower anchor points), position the belt around the patient's waist, buckle the seat belt and remove any slack.
4. Position yourself behind the HFL and ask the patient if they are ready to be lifted. Once they are ready, press the up/down rocker switch upward and hold the switch in the up position. *The seat will rise for approximately sixty seconds and then stop.*
5. Once the lift has stopped, allow the patient to rest if needed, ensure the patient's feet are positioned properly for standing, unbuckle the seat belt then offer to assist the patient as they stand up from the seat, (as they would from any chair). *NOTE: If the patient requires transport (e.g., to a waiting gurney), utilize the **Patient Transport Procedure** starting on page 11.*



6. Once the fallen patient has been recovered, return the seat to the fully downward (home) position before rolling the HFL back to the fire apparatus. **NOTE: Always ensure there are no foreign objects below the seat before returning it to the home position.**
7. If desired, the HFL can be used as a dolly to transport equipment/cargo or tools back to the emergency apparatus. Load the gear on the HFL then raise the seat by approximately 6" for proper balance, place one foot on the stainless-steel footrest on the back of the HFL. Slightly tilt the unit backwards by slowly pulling the handles towards you. The HFL can now be pulled or pushed to back to the apparatus. *Note: Some manual doors dictate the need to pull the HFL through from behind.*
8. Before stowing the HFL on the apparatus, stow the belt assemblies and return the HFL to its fully stowed configuration by reversing the procedures for **Deploying the HFL** on page 6.

HLF-500-E/HFL-550-E User's Manual

Patient Transport Procedure:

This procedure is used to secure and transport a patient using the HFL. Once the patient is secured, a single operator can transport even the largest of patients safely down hallways, around corners and through doorways that are inaccessible to any gurney. *NOTE: It is recommended that you view the HFL-550-E training video as you learn this procedure.*

1. Position the HFL directly behind the fallen patient, with the seat positioned as close to the fallen patient's buttocks as possible then have the patient scoot themselves backwards onto the seat, until their back is resting on the HFL's vertical frame. *NOTE: If the fallen patient has difficulty scooting backwards onto the seat, use the **Mount Assist Procedure starting** on page 10.*
2. Once the patient is fully seated in the center and to the rear of the HFL's seat, ask the patient to lift their arms slightly and, using one of the belt assemblies as a waist belt (i.e., secured to the lower anchor points), position the belt around the patient's waist, buckle the seat belt and remove any slack.
3. With the patient's arms still raised, use the second belt assembly as a chest belt (i.e., secured to the *upper* anchor points) and position the chest belt above the patient's waist and below their armpits, buckle the seat belt and remove any slack. *NOTE: Typically, the second belt assembly (i.e., chest belt), is only required when using the HFL to transport a patient that is unable to sit up under their own power.*
4. Ask the patient if they are ready to be lifted. Once they are ready, press the up/down rocker switch upward and hold the switch in the up position until the seat has raised 10 to 12 inches from the floor. This allows the weight to be transferred to the wheels. At this point, release the up/down rocker switch. *NOTE: This positioning of the patient achieves a good balance point, making for a safe and easy roll to the desired location.*
5. While standing behind the patient, have them cross their arms and ask if they are ready to be moved. When they are ready, place one foot on the stainless-steel footrest on the back of the HFL, firmly grasp the handles, and slowly pull back on the handles to tilt the HFL backwards, just enough to achieve balance.
6. You can now transport the patient to the desired location. *NOTE: You can either transport the patient by pushing the HFL forward, or pulling the HFL backwards. Recommended procedure is to push the patient forward while another leads the way and assists by opening doors and ensuring the path of travel is clear.*



HLF-500-E/HFL-550-E User's Manual

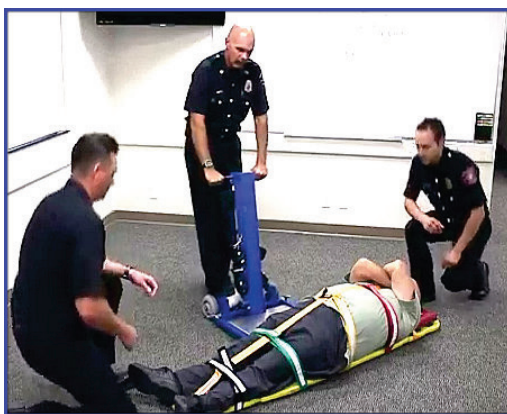
Patient Transport Procedure (continued):

7. Once arriving at the destination, remain positioned behind the HFL and allow the HFL and the patient to tilt forward until the patient and the HFL are in the fixed position.
8. Ask the patient if they are ready to be lifted. When they are ready, press the Up/Down Rocker Switch upward and hold the switch in the up position until it reaches the full height and automatically stops.
9. Once the lift has stopped, ensure the patient's feet are positioned properly for standing, unbuckle both seat belts then offer to assist the patient as they stand up from the seat, (as they would from any chair). **NOTE: If transferring the patient to a gurney, adjust the height of the gurney to be slightly lower than the height of the HFL's raised seat, then assist the patient from the HFL onto the gurney.**
10. When done, return the seat to the fully downward (home) position before rolling the HFL back to the emergency apparatus. **NOTE: Always ensure there are no foreign objects below the seat before returning it to the home position.**
11. Before stowing the HFL on the emergency apparatus, stow the belt assemblies and return the HFL to its stowed configuration by reversing the procedures for **Deploying the HFL** on page 6.

Backboard Lift Procedure:

This procedure requires at least two participants and is used to lift a patient that has been properly secured to a backboard for transfer to a gurney without any manual lifting. *NOTE: It is recommended that you view the HFL-550-E training video as you learn this procedure.*

1. Position the HFL centered as close to the backboard as possible. *This will achieve a proper balance when lifting the patient secured to the backboard.*
2. One participant performs a slight log-roll of the backboard (away from the HFL) as the other participant positions the HFL's seat under the backboard.

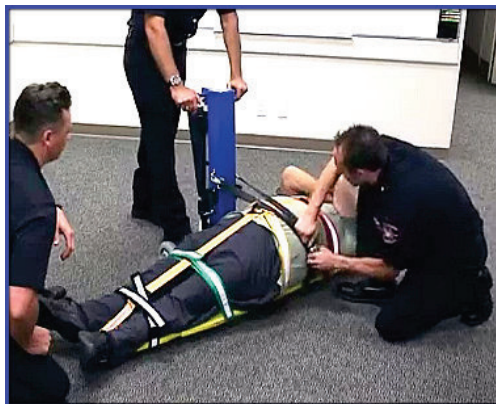


3. Once the HFL is properly positioned, the two participants log-roll the backboard onto the HFL.

HLF-500-E/HFL-550-E User's Manual

Backboard Lift Procedure (continued):

4. Deploy one of the belt assemblies, secure it to the upper anchor points, then route the belt over the patient and loop it through the center handle of the backboard (on the opposite side of the HFL). Then buckle the seat belt and remove the slack. *NOTE: Tighten the safety strap snug to ensure the patients weight is shifted slightly toward the lift column of the HFL.*



5. With the patient and backboard secured on the HFL, ask the patient if they are ready to be lifted. Once they are ready, press the up/down rocker switch upward and hold the switch in the up position. The seat will rise for approximately sixty seconds and then stop.
6. You can now move the gurney alongside the raised backboard, (with the gurney's height slightly lower than the backboard's), unbuckle to seat belt and, using two of the emergency responders at both ends of the backboard, and simply slide the backboard onto the gurney!



NOTES:

- Once the patient and backboard are on the gurney and the patient has been transported as required, follow the previously described procedures for returning the seat to the fully downward (home) position before rolling the HFL back to the emergency apparatus. **NOTE: Always ensure there are no foreign objects below the seat before returning it to the home position.**
- Before stowing the HFL on the fire emergency apparatus, stow the belt assembly and return the HFL to its stowed configuration by reversing the procedures for **Deploying the HFL** on page 6.

HLF-500-E/HFL-550-E User's Manual

Optional Stair Handle Set Accessory:

The IndeeLift HFLs for EMS were designed to allow emergency responders to easily transport patients secured to the HFL on level ground. The optional stair handle set quickly assembles and deploys when needed, allowing emergency responders the additional flexibility of maneuvering patients already secured to the HFL up and down stairs or through uneven terrain or obstructions. NOTE: At least two emergency responders are needed when using the stair handle set.



Overview:

The HFL easily transports patients on level ground. The stair handle set also allows emergency responders to safely guide the HFL over steps and through rough terrain or obstructions. However, they are not designed for lifting the HFL off the ground when transporting patients secured to the HFL.

IMPORTANT: When using the stair handle set while transporting a patient, always ensure the wheels of the HFL bear the majority of the patient's weight (as covered in this section's procedures).

Depending on the size and weight of the patient, up to four emergency responders can be used when transporting a patient using the stair handle set, (with two responders using the upper handles and two responders using the lower handles to guide the HFL as needed).

NOTE: In an emergency situation, (such as transporting a patient through rough terrain or obstacles during an evacuation), the stair handle set *can* be used to lift and carry the HFL off the ground. **However, we do not recommend lifting the HFL off the ground with more than 200 lbs. secured to the lift.**



Always follow safe lifting procedures when lifting *any* weight!

HLF-500-E/HFL-550-E User's Manual

Optional Stair Handle Set Accessory:

Overview (continued):

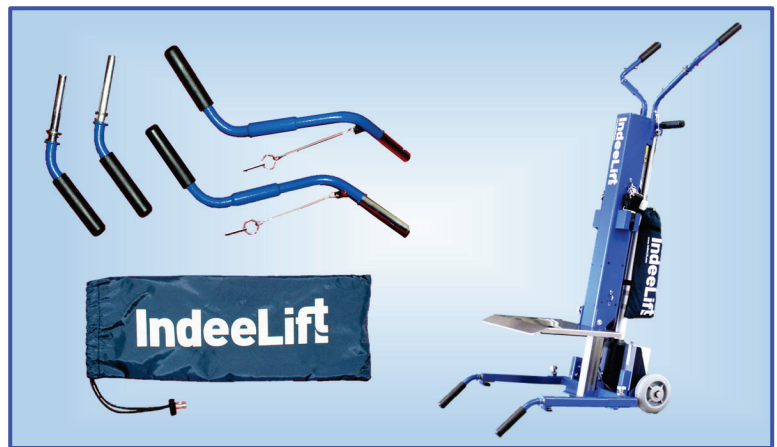
When traversing stairs with a patient on the HFL, the emergency responders should determine the best way to face, based on the actual circumstances, (responders typically face each other when transporting a patient via stairs). However, when going up stairs, the emergency responder using the upper handles has the option of facing away from the lift, if they deem that to be more appropriate to the specific situation, (i.e., so they can look forward in the direction of travel).

Stair Handle Set Components:

There are four components in the stair handle set; two upper handles (left and right), and two lower handles (left and right). Note: The upper handles are longer than the lower handles, as shown.

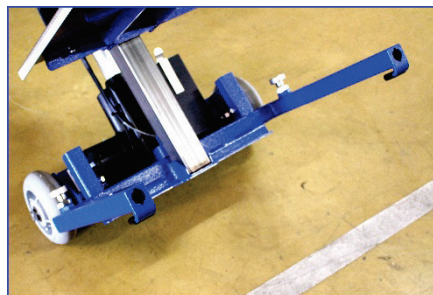
Also included is a storage bag that mounts on the back of the lift's main column.

NOTE: The Stair Handle Set accessory and the IndeeChuck accessory can both be secured to the HFL in their separate storage bags at the same time.



Mounting Points:

The left and right upper handles are affixed to the HFL in the two round mounting points on the top of the lift, (*they are left/right specific*). The lower handles affix directly to the left and right outriggers on the bottom of the HFL, (*they are not left/right specific*).



HLF-500-E/HFL-550-E User's Manual

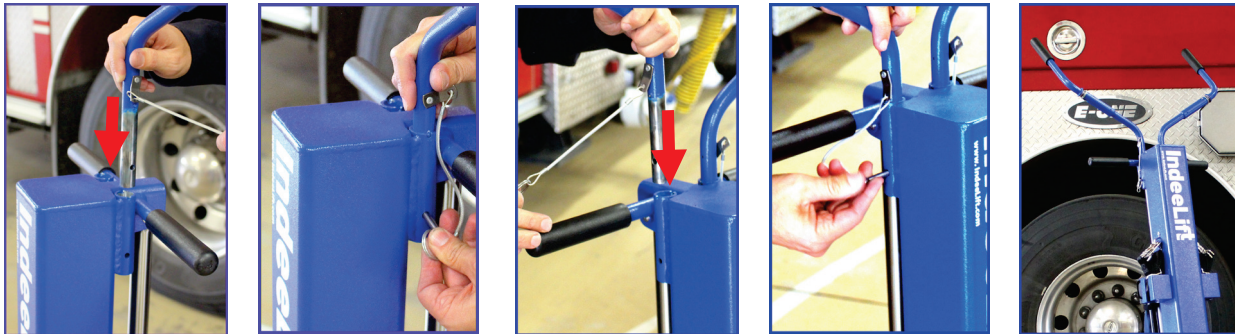
Optional Stair Handle Set Accessory:

Deploying the Upper Handles:

The upper pair of handles are the longer of the two handle sets with the rubber grips. Install the upper handles (left & right) by standing behind the lift. *NOTE: The upper handles are different for the left and right sides (as shown in the fifth picture below).*

1. Insert the left upper handle into the HFL's left upper mounting point.
2. Secure it in place using the locking pin.
3. Insert the right upper handle into the HFL's right upper mounting point.
4. Secure it in place using the locking pin.

NOTE: The fifth image below shows both upper stair handles in their deployed configuration.



Deploying the Lower Handles:

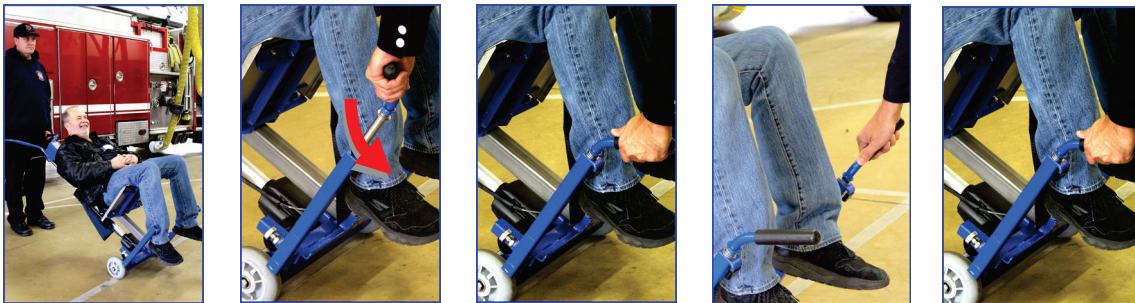
The lower pair of handles are the shorter of the two handle sets with the rubber grips, and affix directly to the left and right outriggers on the bottom of the HFL (*they are not left/right specific*). NOTE: When transporting a patient on the HFL using the stair handle set, it is recommended that the lower handles be installed *after* the patient has been properly secured to the lift. Therefore, to affix the lower handles, follow the **Patient Transport Procedure**, steps 1 – 5 (on page 11) then proceed as follows on the next page.

HLF-500-E/HFL-550-E User's Manual

Optional Stair Handle Set Accessory:

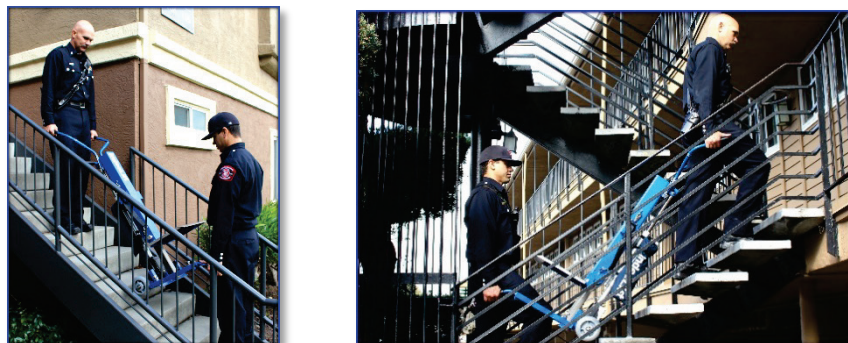
Deploying the Lower Handles (continued):

1. Once the patient is properly secured to the lift and balanced for transport, have one emergency responder stand behind the HFL and tilt the lift backward.
2. Standing in front of the HFL, a second emergency responder installs one of the lower handles (under spring tension) into one of the outriggers by positioning the handle so it faces away from the lift. *Reminder: The lower handles are not left/right specific.*
3. While pushing against the spring tension, the second emergency responder turns the lower handle downward, (as indicated by the red arrow in the second image below), until it locks into place.
4. The second emergency responder repeats the above steps for the second lower handle.
5. Once the lower handles are installed, give them a slight tug to ensure they are properly secured.



Transporting the HFL Up or Down Stairs Without a Patient:

When the HFL needs to be transported up or down stairs without a patient (e.g., to the location of a fallen patient), first install the upper and lower handles using the previous steps in this section. NOTE: To transport the HFL up a stairwell, the emergency responder using the upper handles may choose to face away from the HFL to allow better visibility of the path of travel (as shown in the second picture below).



IMPORTANT: Once you have arrived at the location of the fallen patient, remove both lower handles *before* using the HFL to recover the fallen patient.

HLF-500-E/HFL-550-E User's Manual

Optional Stair Handle Set Accessory:

Transporting a Patient Down Stairs:

Once the patient has been properly secured to the lift using the waist and chest belt configurations and has been raised to the proper height for a good balance point (as described previously), they are ready to be transported down stairs. Using the wheels of the HFL to bear the majority of the weight, both emergency responders keep their backs straight as they use the stair handles to guide the HFL's wheels down each stair step, one-at-a-time (as described in the following procedure).

1. With the patient properly secured and balanced for transport, ask the patient to cross their arms over their chest and move their feet inward as the emergency responder positioned behind the lift uses the upper handles to tilt the HFL slightly backward.
2. Another emergency responder installs both lower handles (left & right) into their mounting position on the outriggers and ensures they are properly secured in place.
3. Both emergency responders coordinate their actions as they position the HFL's wheels to be evenly aligned with the first step (at the top of the stairwell).
4. Working together (e.g., saying "one, two, three, ... down"), the emergency responder at the bottom of the HFL uses the lower handles to guide the wheels over the edge of the first step, *allowing the wheels to bear the majority of the weight as they roll off the edge of the first step and onto the next step.*
5. Repeat Step 4 (above) for the remaining stair-steps involved.
6. Once the final stair-step has been traversed, the emergency responder using the upper handles keeps the HFL tilted slightly backward while the emergency responder using the lower handles removes them from the HFL.



7. When the patient has been successfully transported down the stairs, the emergency responder behind the patient tilts the HFL forward into its normal upright position and raises the HFL's seat to its full height. The responders ensure the patient's feet are properly positioned for standing, then unbuckle the chest and waist belts and assist the patient as they stand from the lift or are transferred to a waiting gurney.



HLF-500-E/HFL-550-E User's Manual

Optional Stair Handle Set Accessory:

Transporting a Patient Up Stairs:

Once the patient has been properly secured to the lift and has been raised to the proper height for a good balance (as previously described), the patient is ready to be transported up stairs. Using the wheels to bear most of the weight, the responders keep their backs straight as they use the stair handles to guide the HFL's wheels up each stair step, one-at-a-time.

1. With the patient properly secured and balanced for transport, position the back of the HFL's wheels to be evenly aligned with the first step (at the bottom of the stairwell). NOTE: The emergency responder using the upper handles will be on the stairs behind the patient, (approximately three to four steps up, as shown below).
2. Ensure the patient's arms are crossed over their chest and their feet are positioned inward as the responder positioned behind the HFL on the stairs uses the upper handles to tilt the lift slightly backward while another emergency responder installs both lower handles (left & right) into their mounting positions on the outriggers and ensures they are properly secured in place.
3. Both emergency responders position the HFL to where its wheels are contacting the rise of the first step. The responder at the bottom of the lift properly positions themselves to utilize standard safe lifting techniques (bending at the knees, lifting with the legs, etc.).
4. The responders verbally coordinate their actions, (e.g., saying "one, two, three, ... up"), as they use the stair handles to apply upward lift while guiding the wheels up the rise and onto the step, *allowing the wheels to bear the majority of the weight as they roll up the edge of the first step and onto the next step.*
5. Repeat Step 4 (above) for the remaining stair-steps involved.
6. Once the final stair-step has been traversed, the emergency responder using the upper handles keeps the HFL tilted slightly backward while the emergency responder using the lower handles removes them from the HFL.



7. When the patient has been successfully transported up the stairs, the responder behind the patient tilts the HFL forward into its normal upright position and raises the HFL's to its full height. The responders ensure the patient's feet are properly positioned for standing, unbuckle the chest and waist belts and assist the patient as they stand from the lift or are transferred to a waiting gurney.



HLF-500-E/HFL-550-E User's Manual

Optional "IndeeChuck" Patient Maneuvering Tool Accessory:

"IndeeChuck" Patient Maneuvering Tool Procedure:

This procedure utilizes the optional "IndeeChuck" Patient Maneuvering Tool to retrieve a patient from an inaccessible area and move them to an accessible area, where they can easily be lifted using the HFL. Typically, only two emergency responders are required when using this procedure. *NOTE: It is recommended that you view the HFL-550-E training video as you learn this procedure.*

1. Position the HFL in an easily accessible location, remove the IndeeChuck from its stored location on the HFL and proceed to the location of the patient.
2. Unfold and position the IndeeChuck to one side of the patient, then deploy the maneuvering strap loops (two away from you and two towards you).
3. Assist the patient as they lean away from the IndeeChuck then position it underneath the patient.
4. Have the patient lean to the other side, fully deploy the IndeeChuck, and then assist the patient to a seated position directly in the center of the IndeeChuck.
5. With one emergency responder behind the patient and the other in front, pick up the maneuvering straps and slide the patient to the waiting HFL. *NOTE: Remain in a fully standing position while sliding the patient, (to avoid any bending or back strain).*
6. While remaining fully upright, one emergency responder stands behind the HFL with one foot on the back of the HFL, then both responders lift slightly while sliding the patient to the center of the HFL's seat. *NOTE: Remain in a fully standing position while sliding the patient, (to avoid any bending or back strain).*



*The remaining steps on the next page are very similar to those covered in the **Standard Lift Procedure** and **Mount Assist Procedure**.*

HLF-500-E/HFL-550-E User's Manual

Optional “IndeeChuck” Patient Maneuvering Tool Accessory:

“IndeeChuck” Patient Maneuvering Tool Procedure (continued):

7. Once the patient is properly positioned in the center of the HFL's seat as far back on the seat as possible, (where their back is resting on the HFL's vertical frame), set the carrying straps to either side of the HFL and ask the patient to lift their arms slightly and, using one of the belt assemblies as a waist belt (i.e., secured to the lower anchor points), position the belt around the patient's waist, buckle the seat belt and remove any slack.
8. With one emergency responder positioned behind the HFL, ask the patient if they are ready to be lifted. Once they are ready, press the up/down rocker switch upward and hold the switch in the up position. The seat will rise for approximately sixty seconds and then stop.
9. When the lift has stopped, allow the patient to rest if needed, ensure the patient's feet are positioned properly for standing, unbuckle the seat belt then offer to assist the patient as they stand up from the seat, (as they would from any chair). **NOTE:** If the patient requires transport (e.g., to a waiting gurney), utilize the **Patient Transport Procedure** starting on page 11.
10. Once the fallen patient has been recovered, fold then roll the IndeeChuck back to its stowable configuration, place it back in the storage bag on the HFL and return the seat to the fully downward (home) position before rolling the HFL back to the emergency apparatus. **NOTE: Always ensure there are no foreign objects below the seat before returning it to the home position.**



11. If desired, the HFL can be used as a dolly to transport equipment/cargo or tools back to the apparatus. Load the gear on the HFL then raise the seat by approximately 6" for proper balance, place one foot on the stainless-steel footrest on the back of the HFL. Slightly tilt the unit backwards by slowly pulling the handles towards you. The HFL can now be pulled or pushed to back to the apparatus. *Note: Some manual doors dictate the need to pull the HFL through from behind.*
12. Before stowing the HFL on the apparatus, stow the belt assemblies and return the HFL to its fully stowed configuration by reversing the procedures for **Deploying the HFL** on page 6.

HLF-500-E/HFL-550-E User's Manual

Maintenance:

IndeeLift's HFLs for EMS require no regular maintenance. All exposed surfaces can be cleaned with standard cleaning products. Keeping the battery charged helps improve battery life.

Note: While the HFLs are extremely durable and will perform well indoors or outdoors, it is recommended that they be stored indoors when not in use.

Troubleshooting / Service:

The HFL- 500-E and 550-E were designed to provide years of trouble-free performance. There are no user serviceable parts. However, should you encounter a situation where the unit is not operating properly, please ensure you have correctly followed the procedures for recharging the unit (covered in the **Preparing the HFL for use** section of this guide on page 5).

If charging the unit does not resolve the problem, or if you encounter any other operational issues with this unit, please contact IndeeLift Customer Care at the number below. Our knowledgeable associates will help to diagnose the problem and present a plan for swift resolution.

IMPORTANT: When contacting IndeeLift Customer Care, please be prepared with your model number, serial number, purchase date and a detailed description of the problem.

**Contact IndeeLift Customer Care toll-free at
844-700-LIFT (5438)**

Warranty Information:

IndeeLift Inc. warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of one year from the original date of purchase. Optional extended three-year warranties are available at the time of purchase. *NOTE: The three-year warranty is included in bundle purchases.* IndeeLift Inc. will, without charge, repair or replace at its discretion, any defective components or the whole product if necessary. Shipping charges may apply. If a total replacement is necessary, IndeeLift Inc. may, upon its discretion, provide the latest model, which meets or exceeds the specifications of the product to be replaced.

Exclusions:

This warranty does not apply in the event of misuse or abuse of the product or because of unauthorized alterations or repairs.

IndeeLift Inc. shall not be liable for any consequential damages including, without limitations, damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. The warranty gives you specific rights and you may have other rights, which vary from state to state.

HLF-500-E/HFL-550-E User's Manual

Product Specifications:

Physical Specifications

	HFL-500-E	HFL-550-E
Safe Working Load.....	500lbs..... 227kg	550lbs..... 249kg
Maximum Overall Length.....	23.2"..... 589mm	24.2"..... 615mm
Maximum Overall Height.....	54"..... 1371mm	53.8"..... 1367mm
Minimum Overall Height.....	33"..... 838mm	36"..... 914mm
Maximum Seat Height.....	21"..... 533mm	21"..... 533mm
Turning Radius.....	24"..... 610mm	30"..... 762mm
External Width	20"..... 508mm	24.2"..... 615mm
Overall Height of Legs.....	1.5"..... 38mm	2"..... 51mm
Wheels.....	6"..... 152mm	6"..... 152mm
Power Pack.....	2 lbs..... .9kg	2 lbs..... .9kg
Total Weight.....	50lbs..... 23kg	79lbs..... 36kg
Stowed Dimensions	8" D x 20" W x 33" H (203mm x 508mm x 838mm)	12" D x 22" W x 36" H (305mm x 559mm x 914mm)

All measurements are within a +5/-5% tolerance.

Electrical Specifications

Battery – 24 volt rechargeable Lithium Ion
Battery Capacity – 4 Ampere Hours
Charger Rated Input – 14.4V DC
Charger Rated Output – 25.9 VDC @ 2A
Operating environment: >+5°C <+40°C



APPENDIX A:
HFL-500-E STAIR TREAD SYSTEM

“From the Ground to the Gurney!”
Lift and Transport

INDEELIFT INC.
5143 Tesla Road
Livermore, CA 94550 USA
844-700-5438
www.indeelift.com

APPENDIX A: HFL-500-E Stair Tread System



Please read this entire manual **before** using the product and retain for future reference.

TABLE OF CONTENTS

HFL-500-E STAIR TREAD SYSTEM

Introduction	26
Product Overview	26
Important Notes	26
Major Components	27
Overview of Stair Tread System Procedures	28
Deploying the Stair Tread System:	
Handle Mounting Points	28
Attaching the Upper Handles	29
Attaching the Stair Tread Adapter	30
Attaching the Lower Handles	31
Transporting the Patient Down Stairs	32
Removing the Stair Tread System Components	33
Specifications	34

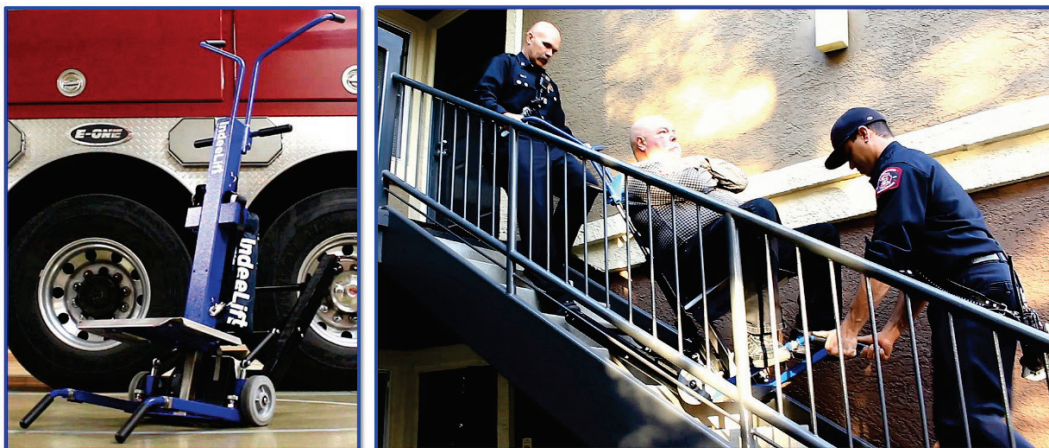
APPENDIX A: HFL-500-E Stair Tread System

Introduction:

This appendix covers the Stair Tread System accessory for IndeeLift's patented HFL-500-E for Emergency Medical Services. For detailed information on using IndeeLift's HFL-500-E, please refer to the related procedures covered earlier in this User's Manual, as well as the "IndeeLift HFL for EMS Training" video.

Product Overview:

The IndeeLift HFL-500-E was designed to allow emergency responders to safely lift and transport patients weighing up to 500 lbs. on level ground. The optional Stair Tread System quickly attaches to the HFL-500-E when needed, allowing responders the additional flexibility of maneuvering patients weighing up to 380 lbs. down flights of stairs. *NOTE: At least two emergency responders are needed when using the Stair Tread System.*



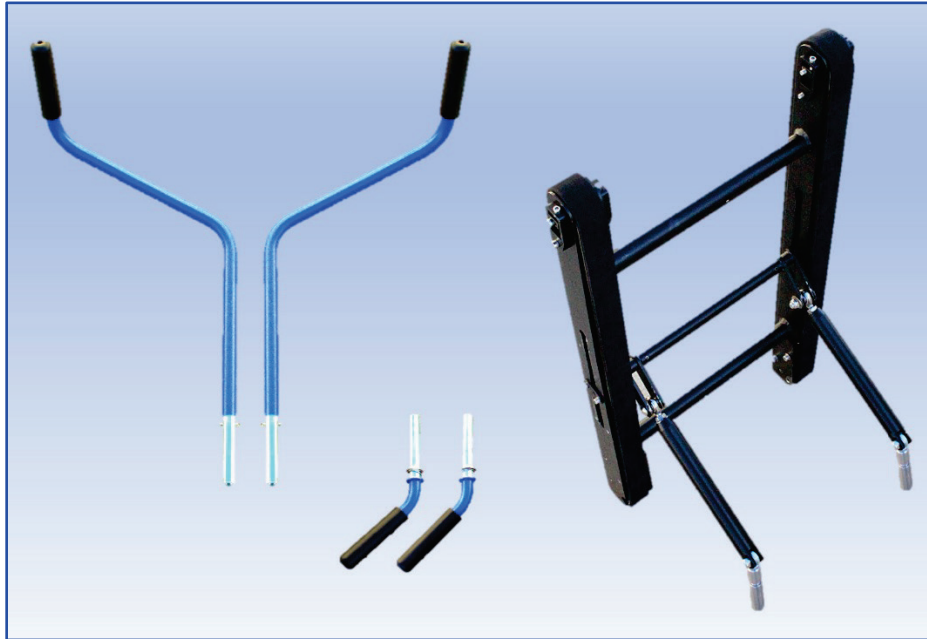
IMPORTANT NOTES:

- Ensure that all involved EMS personnel are thoroughly familiar with the proper procedures for using IndeeLift's HFLs for EMS before performing any of the procedures covered in this Stair Tread System appendix.
- It is also recommended that users view the "IndeeLift Stair Tread System for EMS" video as they learn the procedures covered in this appendix.
- Additionally, it is highly recommended that all involved EMS personnel practice installing and using the Stair Tread System, utilizing colleagues as patients and responders, before using the product in the field.

APPENDIX A: HFL-500-E Stair Tread System

Major Components:

Each IndeeLift HFL-500-E Stair Tread System comes complete with two Upper Handles, two Lower Handles and the Stair Tread Adapter. *The two upper handles are left / right specific, the two lower handles are not.*



NOTE: The Stair Tread Adapter consists of the Stair Treads, left and right Support Struts, two Velcro straps that secure the Support Struts in place when in the stowed configuration, and a Storage Plate with four clips that secure the Stair Handles to the Stair Tread Adapter when not in use.

APPENDIX A: HFL-500-E Stair Tread System

Overview of Stair Tread System Procedures:

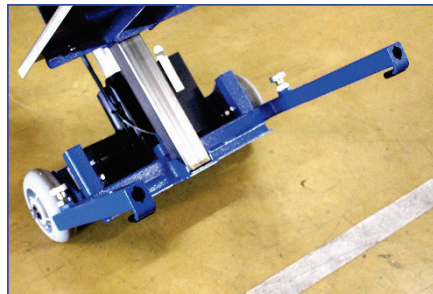
1. When stair transport *is* required, the emergency responders carry the IndeeLift Human Floor Lift and the Stair Tread System components up the stairs to the location of the incident.
2. Following the **Standard Lift Procedure** or **Mount Assist Procedure**, (as detailed earlier in this manual), the patient is assisted onto the seat and secured to the lift using the waist and chest belts.
3. Following the **Patient Transport Procedure**, (as detailed earlier in this manual), one responder positions themselves behind the lift and uses the up/down rocker switch to raise the seat to a height of approximately 12 to 14 inches, then tilts the HFL slightly rearward and uses the lift like a dolly to wheel the lift and patient to the top of the stairwell.
4. The responder in front of the lift positions themselves on the stairs facing towards the top of the stairs, while the responder behind the lift gently tilts the lift back to its normal upright position.
5. The responder behind the lift follows the procedures for installing the Upper Handles and Stair Tread Adapter, then verifies they are properly installed and secured in place.
6. The responder behind the lift tilts the lift slightly rearward, allowing the responder in front of the lift to install the Lower Handles.
7. The two responders ensure the stair treads conform to angle of the stairs, (allowing the treads to bear the load), as they work together to safely transport the patient down the stairs.

NOTE: For details on each of the steps covered above, please see the following descriptions.

Deploying the Stair Tread System:

Handle Mounting Points

The Upper Handles are affixed to the HFL in the two round mounting points on the top of the lift, *(they are left/right specific)*. The Lower Handles affix directly to the left and right outriggers on the bottom of the HFL, *(they are not left/right specific)*.



APPENDIX A: HFL-500-E Stair Tread System

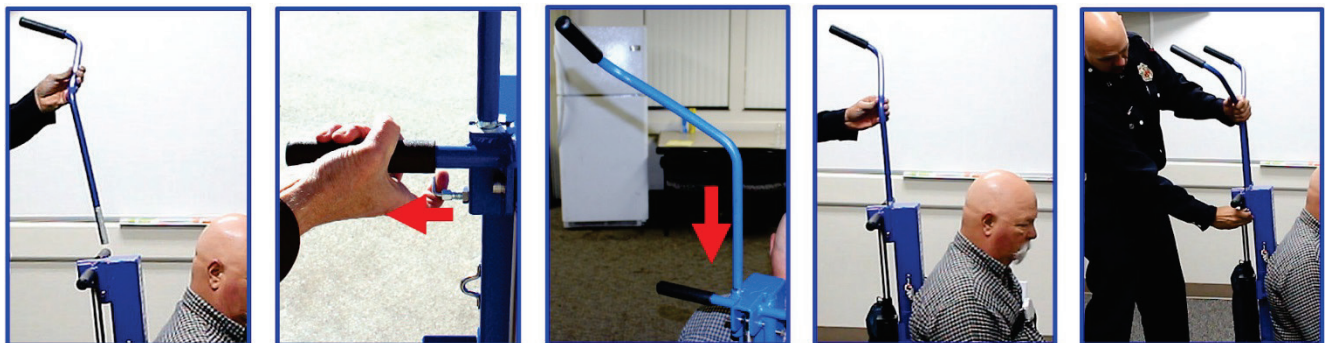
Attaching the Upper Handles

The upper pair of handles are the longer of the two sets of handles and attach into the mounting points on the top of the lift. They are different for the left and right sides, (as shown below). NOTE: The upper handles are installed by the responder standing behind the lift, (i.e., all left/right references below relate to the components *as viewed from behind the lift*).



Installation and removal of the Stair Tread System components should only be performed when a patient is seated and secured to the lift. *Installing or removing the Stair Treads without a patient on the lift will cause the lift to fall rearward.*

5. With one hand, position the upper left handle above the upper left mounting point, *with the rubber grip facing away from the lift.*
6. Using your other hand, pull outward on the upper left mounting point's spring-loaded handle locking pin.
7. Insert the upper left handle as far as it will go into the upper left mounting point, then release the spring-loaded handle locking pin, which will snap into the locked position under spring tension.
8. Pull upward on the handle to ensure that it is properly locked into position.
9. Repeat the above procedures for installing the upper right handle, *being sure to verify that it is properly secured in the locked position.*

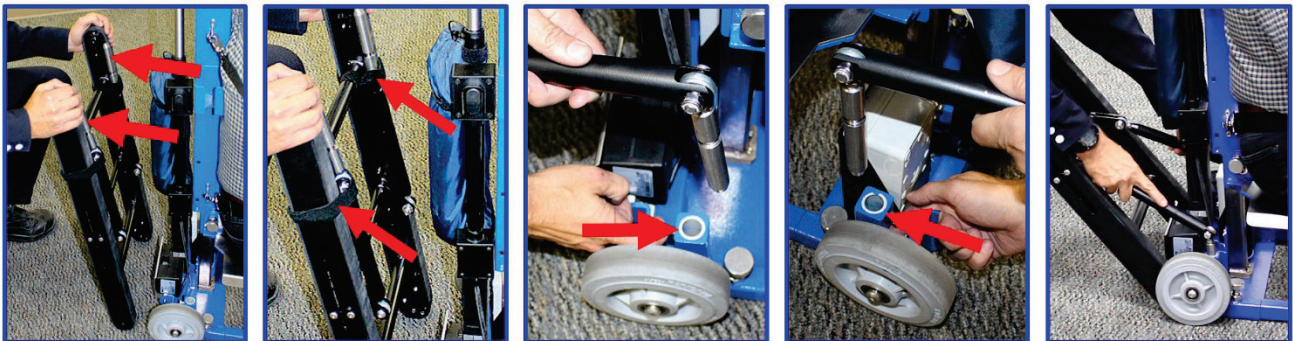


APPENDIX A: HFL-500-E Stair Tread System

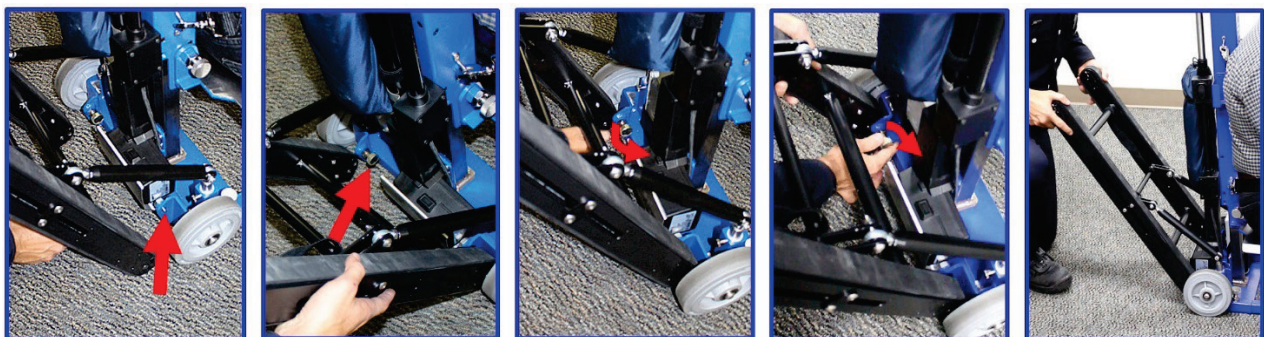
Attaching the Stair Tread Adapter

As with the upper handles, the Stair Tread Adapter is installed by the responder positioned behind the lift, (i.e., all left/right references below relate to the components *as viewed from behind the lift*).

1. Position the Stair Tread Adapter behind the lift with the silver portions of the Stair Tread Support Struts facing upward as shown.
2. Release the two Velcro straps that hold the Stair Tread Support Struts in their stowed position.
3. Insert the right Stair Tread Support Strut into the corresponding mounting point on the lower right side of the lift. *You will hear a click as it locks into position.*
4. Insert the left Stair Tread Support Strut into the corresponding mounting point on the lower left side of the lift. *You will hear a click as it locks into position.*
5. Pull upward on both Stair Tread Support Struts to ensure they are firmly locked into position.



6. Position the lower right side of the Stair Tread Adapter over the Stair Tread Fixed Pin, as shown. *This secures the right side of the Stair Tread Adapter into position.*
7. Locate the spring-loaded Left Side Locking Pin and pull it inward, (toward the center of the lift).
8. Give the spring-loaded Left Side Locking Pin a quarter turn in either direction to lock it into the open position.
9. Position the lower left side Stair Tread Adapter in place, then release the spring-loaded Left Side Locking Pin by giving it a quarter turn in either direction. *This allows the locking pin to secure the left side of the Stair Tread Adapter into position.*
10. Pull on the Stair Tread Adapter to ensure that it is properly locked into position.

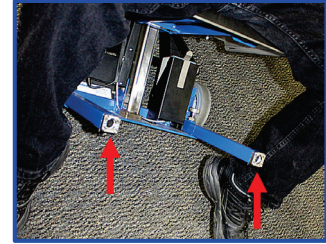


APPENDIX A: HFL-500-E Stair Tread System

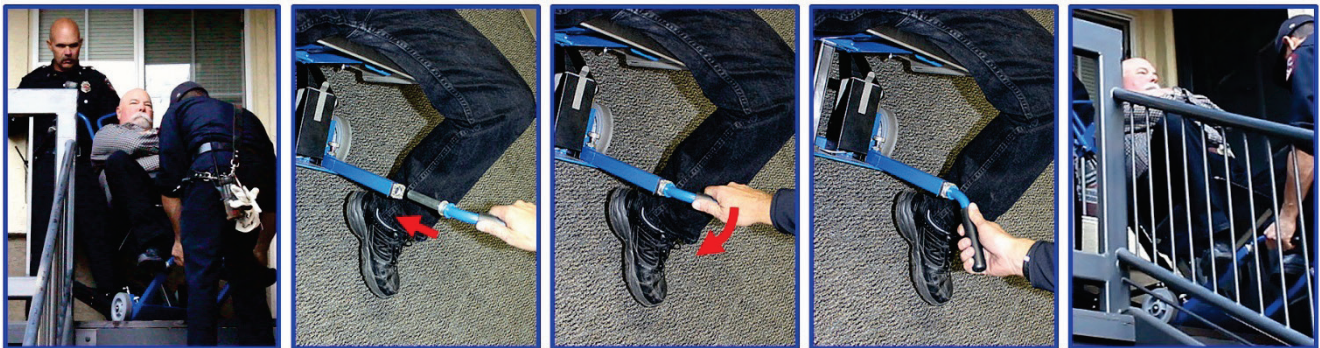
Attaching the Lower Handles

With the Upper Handles and Stair Tread Adapter properly locked into position and the patient secured to the lift with the waist and chest belts, the responder in front of the lift now installs the pair of Lower Handles.

NOTE: The Lower Handles are spring-loaded and affix directly to the left and right outriggers at the lower front of the HFL, (as shown on the right). *The Lower Handles are not left/right specific, (you can install either Lower Handle in either lower mounting point).*



1. At the top of the stairwell, the responder behind the lift tilts the lift rearward, allowing the responder positioned in front of the lift to attach the Lower Handles.
2. Starting with either Lower Handle, the responder in front of the lift inserts the handle into the mounting point at the front of the outrigger, with the rubber grip facing *away* from the lift.
3. While pushing against the spring tension, the responder rotates the lower handle downward until it locks into the operational position.
4. The responder then gives the handle a pull outward to verify that it is secured in the locked position before proceeding.
5. The responder follows the same procedures for attaching the second Lower Handle.



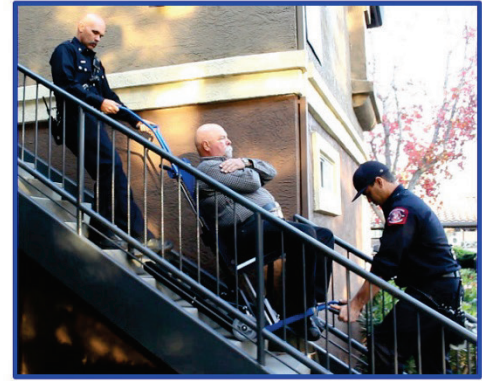
NOTE: Once you are familiar with the procedures, both Lower Handles can be installed at the same time, (*i.e., by having a lower handle in each hand*).



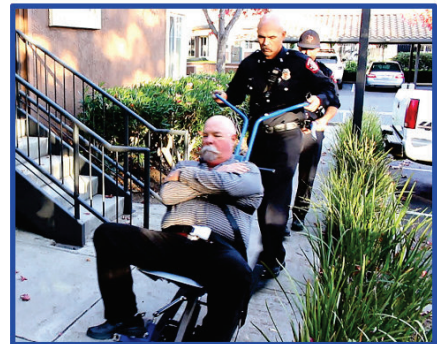
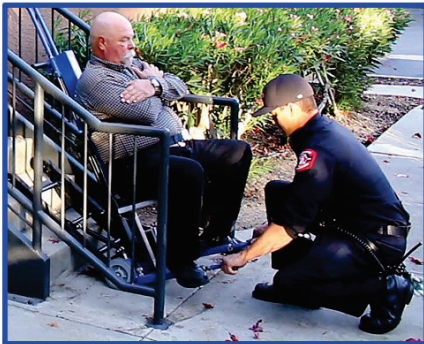
APPENDIX A: HFL-500-E Stair Tread System

Transporting the Patient Down Stairs:

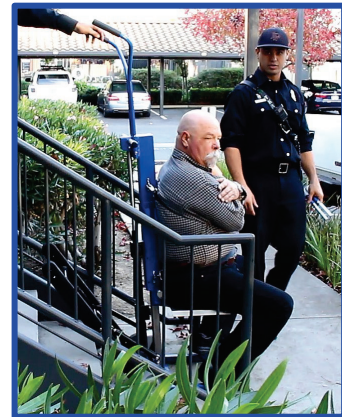
Once all the Stair Tread System components have been installed and locked into position, the responders ask the patient to cross their arms over their chest before proceeding. The responder behind the lift ensures that the angle of the stair treads conform to angle of the stairs, allowing the stair treads to bear the load. Then the two responders work together to safely transport the patient down the stairs.



At the bottom of the stairs, the responder in front of the lift removes the two Lower Handles by pushing them inward and rotating them away from the lift. If there are no obstructions at the bottom of the stairs, the responder behind the lift can simply transport the patient to an awaiting gurney, *(with the Stair Tread Adapter and Upper Handles still attached to the lift)*.



NOTE: If there is limited space at the bottom of the stairs, it is recommended that the responder behind the lift tilt the unit back to the upright position, then detach the Stair Treads Adapter and Upper Handles *before* transporting the patient to an awaiting gurney. This allows for maximum maneuverability.



APPENDIX A: HFL-500-E Stair Tread System

Removing the Stair Tread System Components:

Removing the Lower Handles

The Lower Handles are detached by reversing the procedures for **Attaching the Lower Handles** on Page 33.

Removing the Stair Tread Adapter

The Stair Tread Adapter is detached by reversing the procedures for **Attaching the Stair Tread Adapter** on Page 34.

NOTE: When attaching the Stair Tread Adapter, the spring-loaded Locking Pins *automatically* click into the locked position once the Support Struts are fully inserted into the mounting points. To remove the Stair Tread Adapter's Support Struts, pull outward on the spring loaded Locking Pins while pulling upward on the Support Struts, as shown.



Removing the Upper Handles

The Upper Handles are detached by reversing the procedures for **Attaching the Upper Handles** on Page 31.

APPENDIX A: HFL-500-E Stair Tread System

Specifications:

- The maximum recommended patient weight when using the HFL-500-E and Stair Tread System to transport a patient downstairs is **380 lbs.**
- The combined weight of the Stair Tread System components, (including the Stair Tread Adapter, Upper Handles, Lower Handles and Storage Plate), is **22.75 lbs.**
- The stowed dimensions of the Stair Tread System components are **10 ½" D x 17" W x 30" H.**
- The deployed dimensions of the Stair Tread Adapter when attached to the HFL-500-E are indicated below.

