



OWNERS MANUAL

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RMTAQUATICS

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INTRODUCTION

The purpose of this document is to provide information relating to the operation, care, and maintenance of the **PAL-Portable Aquatic Lift**.

Our goal is to provide our customers with the most advanced and innovative designs that offer exceptional quality at affordable prices. We design and manufacture our products so that all individuals with disabilities and mobility impairments can have access to, and enjoyment from the recreation activity of their choice. All of our lifts meet the specifications set forth by the Access Board and are 100% ADA compliant. Please feel free to contact us directly if you have any questions about our current product line or have needs that we may be able to assist you in meeting in the future.



US Patent No. 5,790,995

***PAL-Portable Aquatic Lift** and the **PAL** logo
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THE **PAL**-PORTABLE AQUATIC LIFT

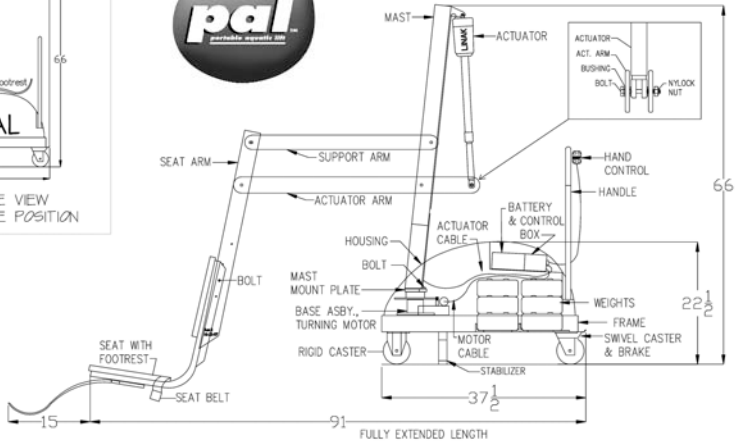
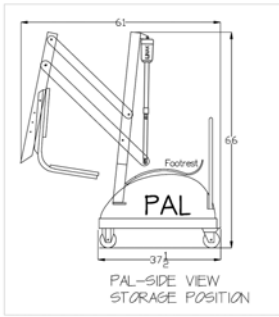


Product Overview

The PAL-Portable Aquatic Lift is designed to provide the greatest flexibility for swimming facilities seeking to provide access to more than one pool or spa, or to accommodate a user's desire to enter a single pool in multiple locations. The PAL is completely portable, is battery powered, and is operated by a screw driven actuator. This design insures consistent operation and elimination of service problems that occur with water powered pool lifts. The PAL is available in a Hi-Lo version to accommodate facilities with both in-ground pools and above-ground spas, as well as a Spa version used for above-ground pools and spas.

The PAL can be adapted to virtually any pool configuration. A poolside configuration worksheet is requested with each order prior to shipping so the lift is configured to match customer's specifications. If you have questions regarding the PAL's adaptability to pool's configurations, please contact either your vendor or RehaMed directly.

PAL PRODUCT COMPONENTS



Component Description

The Base Assembly is made up of several components as described below:

Casters. These are the wheels on which the PAL moves. The front wheels are rigid and the back wheels are swivel and locking casters to facilitate movement of unit.

Main Frame. This is the rectangular piece that is fixed to the casters. The main frame is made up of several components:

Stabilizing Arms. These arms pull out to level the unit and should always be engaged when the unit is in use.

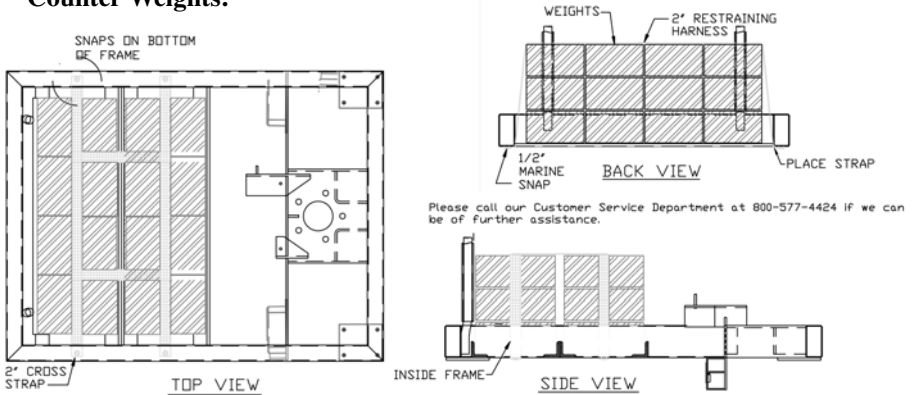
Housing. ABS Plastic covering to cover main frame components from weather. Needs to be in place prior to installing the mast assembly.

Handle. Connects to the Main Frame through openings in the housing.

Control Box. Forms the bottom of the control console; this unit controls the mechanical operations of the lift. Three wire leads connect to the rear of the Control Box. The largest receptacle is the connection for the Hand Control. The connector next to the hand control connector, marked number 1, is the receptacle for the Actuator lead. The connector next to the actuator connector, marked number 2, is the receptacle for the 24-volt motor lead.

Component Description- continued

Counter Weights:



The weights for your PAL lift are located in the bottom of the pallet. Remove the restraining planks with a screwdriver to gain access to the weights.

The weight block is approximately 30 pounds. Use caution when lifting and be careful not to drop the weights on your fingers. The finger holds on each end facilitate handling.

The weights leave the factory in good condition, however, they may have shifted during shipping. Inspect the weights prior to installation be sure the acrylic paint surface is intact. If there are any scratches in the paint surface, use the touch-up paint supplied with the lift to cover scratches. The weights are made from cast iron. If the raw surface of the cast iron is exposed to the elements, it will develop surface rust which could drip onto the pool deck. Use the touch-up paint to cover any areas where the raw cast is exposed.

Once the weights pass your inspection, place them onto the PAL frame as shown in the diagrams. Stack the weights so that the feet on the bottom of the weights nest into the indentation on the top of the weights. There are three layers of weights, eight per layer.

Once the weights are in the place, attach the restraining harness as shown in the diagrams, snapping onto the snaps underneath the frame. Then assemble the rest of the PAL according to the instructions in the User's Manual.

You should inspect your weight stack at least twice a year to check for any scratches in the acrylic surface. Use the supplied touch-up paint to cover any area of raw cast iron that is showing through the surface. You can also use any acrylic spray paint for this purpose

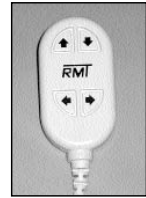
Please call our Customer Service Department at 800-577-4424 if we can be of further assistance.

Battery. The removable battery is located on top of the control box. The battery should be charged daily. **Do not allow battery to fully discharge, as this would shorten the life of the battery.**



Battery Cover. The included nylon battery cover should be placed over the battery to protect the components from the elements.

Hand Control. Controls the actions of the lift. The two top buttons control the lifting actions of the unit. The bottom pair of buttons controls the side to side movement of the lift. The right button turns the main mast to the right, and the left button turns the main mast to the left.



Mast. This vertical piece is bolted to the base assembly.

Actuator. Attached to the top of the mast, this part powers the up and down movements of the lift.

Rotation Motor Assembly. Consists of mounting plate, 24-volt motor, and small gear.

Hub Assembly. Consists of hub, bearings, shaft, large gear and mast mounting plate.

Horizontal Support Arms. These two support arms connect the mast to the chair support arm. The longer horizontal support arm (actuator arm) connects to the actuator and initiates the lifting movements.

Chair Support Arm. Connects the chair to the horizontal support arms.

Seating System. The seating system used with all RMT aquatic lifts is the product of years of feedback from our customers and information gathered from focus groups comprised of users of our lifts. Unlike most seats that are standard “life guard type” plastic shells, this is the first such system that is designed specifically for disabled swimmers.

The seat itself is both deeper and higher to both provide a more stable platform for sitting, as well as being able to better accommodate swimmers with reduced trunk stability. The seat has been flattened considerably to eliminate any ridge that would hamper transferring. The sections of the seat have attachment points for both the standard seat belt assembly as well as our optional stability vest. The standard, molded plastic footrest is removable and will float upwards to prevent damage if the user lowers the chair too low impacting the deck.

The optional armrests have been significantly improved and strengthened, which will allow them to be used for support when transferring onto the seat. They can be rotated out of the way during a transfer and can now be added to a seat after the fact, without the need to purchase an entire new seat assembly.

UNPACKING & ASSEMBLY INSTRUCTIONS

REFER TO THE DIAGRAM (page 5) FOR PARTS IDENTIFICATION.

READ THESE INSTRUCTIONS IN THEIR ENTIRETY BEFORE UNCRATING PAL.

Prior to opening the pallet, inspect the external condition for any visible damage. It is important that any damage be noted on the Bill of Lading. Contact RMT Aquatics or your dealer immediately to notify of missing or damaged parts.

The **PAL** is shipped on a covered pallet. This pallet is **VERY HEAVY**. You will need to gather the following tools to begin the unpacking and assembly of your unit:

- a 3/4" socket wrench
- a small flat blade screwdriver
- a knife or cutters to cut the shrink-wrap and bands.



Unpacking Procedure for the PAL

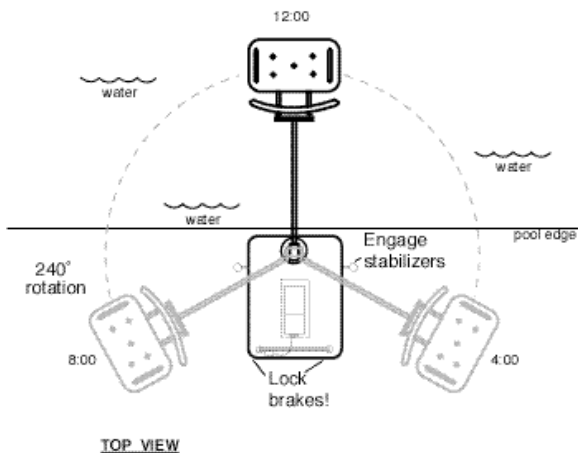
1. Cut open the enclosure bag at the base of the unit and gently remove plastic from unit.
2. Cut internal bands and remove chair assembly and housing.
3. Remove the accessory box and counterweight plate from the plate enclosure.
4. Remove the handle from the frame.
5. Remove the main frame from the pallet. Position the main frame close to the pallet and lock the wheels.
6. Carefully transfer the 24 counterweights from the pallet following the instructions on page 6.
7. Place housing on frame.
8. Remove 2 lock nuts and washers from mast mounting hub on base assembly.
9. Position mast assembly thru housing and attach to studs located on base assembly with lock nuts and washers. Fully tighten with 3/4" socket wrench.
10. Remove twist-tie and uncoil actuator cable at bottom of mast.
11. Lift and slide the housing part way up the mast to gain access to frame area under housing.
12. Run actuator cable along with the 24v motor cable across the top of the weights and insert through the hole in the rear of the housing near the control box.
13. Insert actuator cable (with the "o" ring) into receptacle #1 on the control box.
14. Insert 24v motor cable into receptacle #2 on control box. Make sure both plugs are pushed in all the way.
15. Return housing to normal position and insert handle over attachments.
16. Remove and unwrap hand control from accessory carton. Insert connector into large receptacle on control unit and hang hand control on handle.
17. Attach battery to control unit mounted on housing.

18. Cover battery with nylon battery cover to protect battery from moisture.
19. Lock wheels to prevent movement.
20. Check up and down controls for proper operation.
21. Check the side to side controls for proper operation.
22. Attach chair assembly with lock pin into the appropriate hole. To facilitate storage, chair can be attached facing inward, which will require less space.
23. Attach foot rest to seat using pins.

POSITIONING

Four things to REMEMBER when positioning PAL for use.

- The PAL is Heavy. It is easy to roll, but DO NOT roll too fast or it may be hard to stop.
- Position the PAL in an area that allows plenty of room for transferring to and from a wheelchair.
- Make sure that both of the stabilizing arms are deployed.
- Make sure to engage the locks on the rear wheels.



PAL Positioning Diagram

TRANSFERRING

Once the unit is positioned for use, use the following procedure to transfer to the seat and into the water for desired aquatic activity:

- Rotate the seat to either side of the lift that is the most comfortable position for transfer. The unit can be rotated to allow plenty of room for those who may assist with the transfer.
- Raise or lower the seat to proper transfer height.
- Transfer onto the seat, insuring that the user's weight is centered on the seat. If the user is in a wheelchair, keep the wheelchair close by for easy retrieval.
- Attach seat belt or stability vest, if needed.
- Raise the seat so there is ample legroom for travel.
- Rotate seat to the 12:00 position, over the water.
- Lower the seat into the pool. The hand control is submersible, so leave it connected to the seat while swimming.
- When finished in the pool, return to the seat, insuring that the user's weight is centered on the seat.
- Re-Attach seat belt or stability vest, if needed.
- Raise the seat high enough so there is ample legroom for travel.
- Rotate the seat to the original transfer position.
- Raise or lower the seat to proper transfer height.
- Remove seat belt or vest.
- Transfer off of the seat.

*Please call RMT Aquatics at 800-577-4424
if you have any problems or questions with assembly.*

BATTERY CHARGING

The rechargeable battery should be connected to the charging unit when the lift is not in use. A fully charged battery will provide approximately 30 lifting cycles, depending on the weight of the users. The battery has no memory, so it is not necessary to fully discharge the battery prior to charging. Allowing the battery to fully discharge could damage the battery, or reduce its charging capacity.



The Battery is fully charged prior to shipping, but should be checked by observing the LCD indicator, which is located on the Control Unit, prior to use to insure sufficient charge level.



Connect the charging unit to the charging port located on the contact side of the battery. Leaving the battery connected to the charger when the lift is not in use will help to insure sufficient charge for operation.



STANDARD ACCESSORIES/ OPTIONAL ACCESSORIES

The following items are included with all Pool lift models:

Console Cover: Protects battery and control unit from exposure to water.

Seat Belt Assembly: Nylon, water resistant belt for added security.

Battery/Charger: 24 volt rechargeable battery.

Additional Accessories may be purchased for your Unit

Stability Vest: Five point restraint for individuals who need higher degree of stability than provided with standard seat belt.

Total Cover: Made of weather resistant nylon material to keep unit protected from elements when not in use. Available for all units.

Arm Rests: Powder coated stainless steel arm rests for increased sense of security.

Spine Board Attachment: Can be used to convert lift for use with any standard spine board. (Spine Board not included)

Seat Pad: Waterproof seat pad designed to enhance comfort and minimize potential skin damage that could occur during transfer.



MAINTENANCE

Minimal maintenance will prolong the life of your lift. All electronic components should be kept clean and dry. The control box and battery should be protected from exposure to water. A small waterproof cover is provided with each lift to cover the control box when in use. This cover must be used to protect electronic components from sudden rainstorms or dousing with pool water. If the lift is used outdoors, an optional full cover is available and should be considered.

The following schedule should be performed to insure proper operation:

Maintenance Performed	Daily	Weekly	Monthly
Rinse seat with fresh water and dry entire lift	✓		
Charge the battery	✓		
Wipe control box and battery connection with a clean, dry rag	✓		
Examine the lift for any damage	✓		
Test for normal operation	✓		
Spray gear assembly with LPS3 Heavy-Duty Inhibitor™ or other anti-corrosion product		✓	
Clean all connection areas with Scotch Brite™ pad			✓
Clean all metal surfaces with a cleaner wax to maintain the finish of the lift			✓
Make sure that all nuts and bolts on the unit are secure			✓

LONG-TERM STORAGE

The following should be performed when storing the lift for an extended period of time:

- Rinse seat with fresh water and dry entire lift
- Spray gear assembly with LPS3 Heavy-Duty Inhibitor or other anti-corrosion product
- Keep the battery on the charger in a dry area
- Cover unit and store in a dry location

TROUBLE SHOOTING

Be sure the battery is fully charged before troubleshooting.

Unit does not rotate

Does unit raise or lower?

Yes.

1. Check connection to Control Box. Be sure plug is pushed in all the way.
2. Check hand control connection to Control Unit for damaged pins.
3. Check connections on terminal block located on frame for loose wires.
4. Check connection cable for damage.
5. Reverse the motor cables as follows: Locate the area on the control box where the cables are attached. Remove the actuator cable from receptacle #1 and replace it with the 24v motor cable from receptacle #2. Activate the up and down buttons on the hand control. If the unit rotates, the problem is likely the hand control. If the unit does not rotate, the problem is likely the 24v motor.

No.

1. Check battery charge level.
2. Check battery connection.
3. Use another fully charged battery. If unit continues to not function, replace the control unit.

Unit does not Raise or Lower

Does unit rotate?

Yes.

1. Check connection to Control Box. Be sure plug is pushed in all the way.
2. Check hand control connection to Control Unit for damaged pins.
3. Check connection cable for damage.
4. Locate Emergency Buttons on top of Control Unit. Activate these buttons using a ball point pen. If unit operates properly, the problem is likely the hand control. If unit does not operate properly, the problem is likely the actuator.

No.

1. Check battery charge level.
2. Check battery connection.
3. Use another fully charged battery. If unit continues not to function, replace the control unit.

If these steps have not corrected your problem, call us at 800-577-4424.

WARRANTY INFORMATION

All RMT Aquatic Lifting Systems have a Lifetime Warranty on the frame, excluding the powder coated paint finish, which may become scratched with normal use. All electronic and motor components, with the exception of batteries, have a full two-year warranty. Within the warranty period, we will repair or replace any part found to be defective upon our examination, but will not pay shipping costs or other expenses. To obtain warranty service, call or write to us at the address provided. This warranty is an exclusive remedy and we are not responsible for any consequential or incidental damages or injury to person or property. This warranty shall not apply to any product which has been subject to misuse, negligence, or accident, or has been damaged in shipment, or misapplied, or which has modified or repaired by an unauthorized person. This warranty only applies to products owned by persons purchasing directly from the manufacturer or from our approved dealers or distributors.

Warranty Procedures

To initiate a warranty claim, contact our customer service department. Once the nature of the problem has been determined the following procedure will be followed:

Within the first 90 days following delivery of the Product

1. A Return Merchandise Authorization (RMA) will be issued for the return of the defective component. This RMA number should be clearly displayed on the outside of the package containing the returned part.
2. RMT will pay all freight charges for any component that fails within the first 90 days.
3. The defective component will be inspected by our technical staff to determine if the product can be repaired. If the component cannot be repaired it will be replaced with a new component.

After the 90 days

1. A Return Merchandise Authorization (RMA) will be issued for the return of the defective component. This RMA number should be clearly displayed on the outside of the package containing the returned part.
2. The customer is responsible for all freight costs after 90 days.
3. The defective component will be inspected by our technical staff to determine if the product can be repaired. If the component cannot be repaired it will be replaced with a remanufactured component.

Batteries

Batteries have a normal lifespan of between 2-3 years, depending on their use and care. Batteries should be left on the charger when not in use and should never be allowed to fully discharge. Allowing the battery to fully discharge can damage the battery.

The battery has contacts located on the bottom of the battery housing. The battery should never be placed on a conductive surface that would cause a short. If this occurs, it is likely that the fuse located inside the housing would break. This fuse can be replaced and should be changed prior to submitting a warranty claim.

All batteries are inspected prior to shipment, and, as such, should be free from any manufacturing defect. That being said, the following is the warranty policy for batteries:

1. If the battery fails during the first 90 days following purchase, it will be replaced using the same guidelines for any warranty part.
2. If the battery fails during the first year following purchase, a new battery will be provided at a charge of 50% of the prevailing cost of a new battery.
3. The warranty policy on batteries expires after one year following purchase.

What if I can't wait for the defective component to be inspected?

If the customer desires that a replacement component be sent out immediately, the following procedures will be followed:

1. Once the problem component has been identified, a remanufactured component will be sent to the customer immediately.
2. The customer will be invoiced for the cost of a remanufactured component, generally 75% of the full price.
3. A Return Merchandise Authorization (RMA) will be issued for the return of the defective component. This RMA number should be clearly displayed on the outside of the package containing the returned part. The customer can use the same box that was used to ship the remanufactured component.
4. The customer will promptly return the defective component.
5. After inspection by our technical staff, if the defective component is covered under the terms of the warranty, a credit will be issued to cancel out the invoice issued for the component.
6. If the component is not covered under warranty, the invoice is payable by the customer.
7. RMT will pay all freight charges for components less than 90 days old. After 90 days, the customer pays all freight charges.

All returns will be processed promptly in our factory.

For further information, please contact our Customer Service Department at 305-247-8300.

SPECIFICATIONS

PAL/PAL-Hi-Lo

1. Dimensions/Capacity

Overall Height	66 inches
Base Dimensions	Height. 22.5", length. 37.5", width 27.5" (inches)
Overall Length with Footrest	106" (fully extended)
Overall Length without Footrest	91" (fully extended)
Overall Length in Stored position	61" (fully raised)
Total Weight	885 pounds
Power	24v DC
Battery Life (Charged)	30 cycles (approximate)
Lifting Capacity	300 pounds

2. Actuator

Lifting:	Linak LA34 Mechanical Actuator
Max. Thrust:	1680 lb.
Voltage:	24 VDC
Max. Amp:	9
Max. Speed:	0.59 inch/sec.

3. Motor

Rotation:	ITT SWMK 403.033 24 VDC 13 RMP
Gearing Ratio:	9:1

4. Battery

Power:	Linak Battery Pack BAJ1 24 VDC, IP65 Gel Lead Acid
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5. Range of Motion:

Lifting: Variable to configure to each pool.
44"- 58" total travel from highest to lowest point w/
standard actuator.

Seat Depth: 18-20" below water line.
Rotation: 240°

6. Materials and Finish

Frame: Powder Coated Stainless Steel
Handle: Powder Coated Aluminum
Housing: Vacuum Formed ABS Plastic
Casters: Front Tente 8477 Precision Ball Bearing, Stainless Steel,
5" total lock swivel
Rear: Tente 5328 Precision Ball Bearing, Stainless Steel, 5"
fixed Polyurethane Tread
Arms: Powder Coated Aluminum
Mast: Powder Coated, Stainless Steel

Seat Assembly: Seat: Blow Molded Plastic
Frame: Powder Coated Stainless Steel

PART LIST

Part Number	Description
100-5000	LA34 Actuator
100-1000	Control Unit
100-2000	Battery
100-3500	Battery Charger
100-4000	Hand Control
120-1100	24v Motor
120-1600	Small Gear
130-1000	Hub Assembly
120-1000	Motor Mount Assembly
150-1000	Mast Assembly
150-1200	Actuator Arm
150-1300	Support Arm
150-1400	Seat Arm
160-1000	Seat Assembly
160-1300	Foot Rest
200-1000	PAL Main Frame
200-2000	Rigid Caster
200-3000	Swivel Caster
110-3100	Counter Weight Plates
200-5000	Housing Assembly
200-4100	Stabilizer Tube
150-2100	Hi/Lo Mast Assembly
160-2000	Hi/Lo Seat Assembly
150-2200	H/L Actuator Arm
150-2300	H/L Tension Arm