

# Model H Hybrid Manual and Power Chair in One

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# Table of contents

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<a href="#"><u>Introduction</u></a>	4
<a href="#"><u>Disclaimer</u></a>	4
<a href="#"><u>Product Specifications</u></a>	5
<a href="#"><u>Safety, Operation &amp; Setup</u></a>	6
<a href="#"><u>Introduction</u></a>	6
<a href="#"><u>Safety</u></a>	6
<a href="#"><u>Startup</u></a>	6
<a href="#"><u>Notice to Caretakers</u></a>	6
<a href="#"><u>Weight Limit</u></a>	6
<a href="#"><u>Tie Down System</u></a>	7
<a href="#"><u>Maintenance</u></a>	7
<a href="#"><u>Operation</u></a>	7
<a href="#"><u>Controller Settings</u></a>	7
<a href="#"><u>Power down when not in use</u></a>	7
<a href="#"><u>Reaching or Lean</u></a>	8
<a href="#"><u>Cornering Information</u></a>	8
<a href="#"><u>Obstacles</u></a>	8
<a href="#"><u>Curbs, Ramps, Slopes &amp; Sidehills</u></a>	9
<a href="#"><u>Environment &amp; Everyday Use</u></a>	9
<a href="#"><u>Controller</u></a>	10
<a href="#"><u>Braking System</u></a>	10
<a href="#"><u>Armrests</u></a>	11

<b><u>Setting up your Model H/X</u></b>	<b>11</b>
<b><u>Unboxing the Model H/X</u></b>	<b>11</b>
<b><u>Installing the Controller</u></b>	<b>16</b>
<b><u>Batteries &amp; Charging</u></b>	<b>18</b>
<b><u>Charging</u></b>	<b>18</b>
<b><u>Charging Tips &amp; Notes</u></b>	<b>19</b>
<b><u>Operation and Installation</u></b>	<b>20</b>
<b><u>Controller</u></b>	<b>21</b>
<b><u>Controller &amp; Driving Tips</u></b>	<b>22</b>
<b><u>Batteries</u></b>	<b>23</b>
<b>Anti Tippers</b>	<b>26</b>
<b><u>Seat Design &amp; Materials</u></b>	<b>26</b>
<b><u>Fasteners</u></b>	<b>26</b>
<b><u>Change &amp; Adjustments</u></b>	<b>27</b>
<b><u>Electromagnetic Interference (EMI)</u></b>	<b>27</b>
<b><u>Limited Warranty</u></b>	<b>27</b>

# Introduction

Congratulations on your purchase of the Model H Hybrid Manual and Power Chair in One. It is important that you read through this manual entirely before operating your chair. You will find instructions and recommendations for easy operation of your Model H Hybrid Manual and Power Chair in One.

## **Disclaimer**

JYD Imports, HOVER, 1800 Wheelchair or Model H, its affiliates, and partners, cannot be held responsible for personal injury or property damage that results from the unsafe or improper operation or maintenance of the Model H Hybrid Manual and Power Chair in One, and/or other JYD Imports, HOVER, 1800 Wheelchair products purchased.

From time to time, our product development and engineering team will make design recommendations for this product. So we reserve the right to make such changes when deemed necessary to improve on the design or to add value. As a result, there could be minor differences between the product that you have purchased and the photos, illustrations and instructions in this manual.

## Product Specifications

Product Weight (With Battery)	39 lbs.
Product Weight (Without Battery)	35 lbs.
Maximum Weight Capacity	260 lbs.
Unfolded Size (L x W x H)	30" x 27.5" x 35" W/ Footrest on Length is 42.5"
Folded Size w/ cushion removed (L x W x H)	35" x 17" x 28" W/ Footrest on Length is 42.5"
Frame Material	Aluminum
Travel Distance	8 Miles Standard, 13 Miles (with HD battery)
Maximum Speed (Adjustable)	5 MPH
Seat Size (W x L)	18" x 16"
Seat to Floor Height w/ cushion	19.5"
Seat to Floor Height w/o cushion	18"
Armrest Height	27.5"
Turn Radius	31.5"
Ground clearance to foot rest	2.5"
Model H Front wheel size	6"
Model H Rear wheel size	22"
Wheel Material - Model H	Solid, Polyurethane
Incline/Slope Capability	8 Degrees
Motor	(2) 250W Brushless Motors
Brakes	Electromagnetic
Battery	(1) Lithium Ion/24V 6ah /10ah /HD
Battery Weight	3.5 lbs

# Safety, Operation & Setup

## Introduction

Please take the time and read through all the documentation below. It is important that the primary user and his/her caregiver understand all the safety instructions before operating this product.

## Safety

- The Model H should be adjusted to fit your needs.
- Make sure to take your time to learn how the Model H works before you begin operating.
- Practice bending, reaching and transferring in and out of the Model H.
- Always be aware of your surroundings when in operations.
- Take it easy. If you're not sure the Model H and surpass an obstacle, try to find another way around.
- The Model H is designed for a single user. More than one users may result in personal injury to you and others.

## Startup

When first powering on the Model H the chair will beep, this beep signifies that the chair is connected to the control box and connection is good. Do not move the joystick before this beep or the chair will start flashing and not move. Initial operation must wait until after the beep to first move the chair at startup.

## Notice to Caretakers

Make sure that you pay careful attention to all warnings and follow all instructions in each section of this manual. (Be aware that warnings that apply to the rider will also apply to you).

**It is important that you pay close attention to all warnings in this section. If you fail to do so, you may fall, tip-over or lose control resulting in severe injury to you or others.**

## Weight Limit

- Never exceed a total weight of 260 lbs for rider plus items carried
  - You should not attempt to perform weight training on your Model H if the total weight (rider plus additional weights) exceeds 260 lbs.
  - Exceeding the weight limit is likely to damage the seat, frame, or fasteners and may cause severe injury to you or others
  - Exceeding the weight limit will void the warranty
-

## Tie Down System

The Model H is not approved to be used with any tie down system, generally used to transport a seated user and power chair in a motor vehicle.

- Never sit in the Model H while in a moving vehicle. In an accident or sudden stop you may be forced out of the Power Chair from the impact.
- Never transport the Model H to the front seat of a vehicle. It may shift and interfere with the driver.
- Always secure the Model H so that it cannot roll or shift.

## Maintenance

To maintain performance, we recommend you check the Model H two to three times per year. Check the following areas.

- Frame: Loose screws and tighten as necessary
- Wheels: make sure they rotate easily. Significant resistance may require new bearings.
- Armrests: look for excessive wear
- Work: Replacement parts and more major maintenance issues should be done by a professional. We recommend you do not do this work on your own.

## Operation

### Controller Settings

Make sure to get familiar with the controller settings (see below Page 19) and touch sensitivity of the joystick. The joystick controls speed, braking, and direction while you are travelling.

### Power down when not in use

Always power-down your Model H when you are parked - even for a short moment. This will prevent:

- Accidental movement from contact with the joystick
- Unintended brake release or movement from EMI sources
- Save the battery life

Make sure that people around your area are aware of the joystick, unintended contact can cause movement and injury to unsuspecting bystanders.

## Reaching or Lean

Be cautious when reaching or leaning out from the Model H. Reaching or leaning can affect your center of balance, and if done improperly can cause a fall or tip-over.

**When in doubt, ask for help or use a device to extend your reach.** To reduce the risk of injury and/or damage to the Model H:

- Never reach or lean if you are required to shift your weight sideways or rise up off the seat
- Never reach or lean if you must move forward in your seat to do so
- Never reach with both hands (you may not be able to catch yourself to prevent a fall if you lose your balance)
- Never try to pick up an object from the floor by reaching down between your knees or from the side of the chair.

### Reaching Tips:

- Move yourself as close as you can to the object you wish to reach
- Turn off all power to the Model H before reaching
- Firmly grasp an armrest with one hand. This will help to prevent a fall if the Model H/X tips

## Cornering Information

Always slow down while moving through a corner. Tipping over is a major concern while turning through a corner.

### Turning Tips:

- Take the turn slowly. High speed will increase the possibility of tipping
- Keep your eyes open for objects that may be obstructed by the turn
- Move around the corner a gentle radius as opposed to making a sharp turn

## Obstacles

Obstacles come in many shapes and sizes, they include: door thresholds, ramps, potholes, curbs, glass, broken pavement and more. It's important to take care and avoid these obstacles as you can damage your Model H. Further, these obstacles could cause you a fall, tip-over or loss of control.

## Curbs, Ramps, Slopes & Side Hills

The terrain has an effect on you and your power chair. Any sort of slope will change your center of balance. Always use your best judgement and if ever in doubt, have someone help you.

- Steep slopes pose a danger The ADA suggests ramps should offer 12 inches of length for every 1 inch in rise
- Wet or slippery surfaces - such as when ice, snow, water or oil - can cause a loss of traction which could result in a fall or tip-over
- A change in grade on a slope (or a lip, bump or depression). These may cause a fall or tip-over
- A drop-off at the bottom of a slope of as little as 3/4 inch can stop a front caster and cause the Model H to tip forward
- Be mindful of any side hills as tipping may be an issue
- Your Model H is not designed to drive up or down a curb or step more than 1/2 inch high
  - To prevent a fall or tip-over, use ramps or have someone help you
  - If you must climb or descend a curb/step alone, please do so with extreme care. Go as straight up or straight down as you can. Never turn or climb or descend at an angle as a fall or tip-over is likely. Proceed slowly, at a steady speed.
- Stairs: Never use your Model H to go up or down stairs, even with an attendant. Doing so is likely to cause a fall or tip-over as well as damage to the Power Chair.
- Escalators: Never take your Model H on an escalator, even with an attendant. Doing so is likely to cause a fall or tip-over as well as damage to the Power Chair.

## Environment & Everyday Use

Your Model H is not designed for use in rain, snow, or icy conditions.

- Contact with water or excessive moisture can cause an electrical malfunction. The frame, motors and other Model H parts are not waterproof and can rust or corrode from the inside. To avoid issues, we suggest:
  - Minimize exposure to a rain or wet conditions
  - Never take your Model H into a shower, tub, pool or sauna.
  - Do not use your Model H in fresh or saltwater (such as at the edge of a stream, lake, or ocean)
  - Make sure shroud cover and deck lid are secure
  - Make sure all electrical connections are secure. Dry the Model H as soon as you can if it gets wet, or if you use water to clean it
  - Make sure the battery area is kept dry
- Proceed slowly and use extra care if you must operate your Model H on a wet or slick surface
  - Do so only if you are sure it is safe

- Stop if one or both main wheels lose traction
- Never operate your Model H on a slope or ramp if there is snow, ice, water or oil film present. When in doubt, have someone help
- When not in use, keep your Model H in a clean, dry place

## Controller

The controller includes: (see more detail on page 19) speed control buttons, speed indicator lights, and joystick. The controller receives a signal from the joystick and transfers those signals to the motor and brakes. Please make sure to limit any exposure to moisture, as this may cause damage.

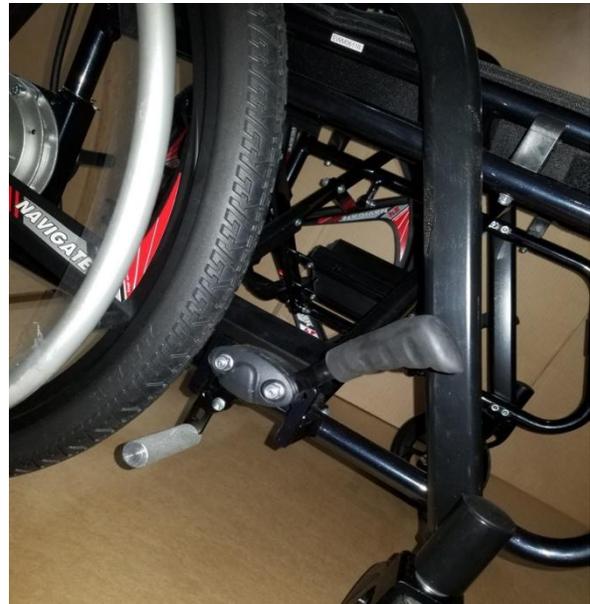
## Braking System

The Model H is equipped with electromagnetic regenerative brakes. This means that the Model H will stop when the joystick is back at the default position (center/stop position).

**WARNING:** Before standing up or sitting down from the Model H chair you must manually engage both breaks. The breaks can be found above and to the side of the rear tires (See image below) Not engaging the breaks may cause the Model H roll from under you.

Model H Hybrid Manual and Power Chair in One

The hand breaks can be found on the side of the rear tires (at the 3 o'clock mark)



## Armrests

The Model H armrests are designed to flip up. **Never** lift the Model H by its armrests.

Flip Back arms Feature



## Setting up your Model H Hybrid Manual and Power Chair in One

### Unboxing the Model H

Given the size and weight of the box, we recommend two people work on unboxing this item.

Step #1. Open the top of the box.

Step #2. Carefully tip the box over on it's side.



Step #3. Carefully remove the protective packing material and remove all the contents of the box.



With the box open, you should have the following items.

#4. Main unit which includes the seat and motor assembly

#5. Seat and back cushions

#6. Batteries

#7 Charger

#8 Anti Tippers (recommended upgrade)

\*Note: Most Model H ship with the batteries installed. However, some Model H will ship in two boxes: main unit/ cushions/ charger and batteries .



#9.

1. Lift up the back handles Before Unfolding the chair.
2. Pull down the footrest.
3. Unfold your chair by pressing down on the outside seat rails. Flip up the seat back



#10. your chair should be fully open

#11. Slip on the seat and back and secure it with the velcro underneath the cushions



Slip in the battery underneath the seat

Make sure to Firmly press down the battery all the way.



Make Sure The wires under the seat are connected properly.

1. 2 wires attaches to the wheel motors, make sure the Arrows are aligned
2. The 3rd wire attaches to the battery



The Levers located near motors towards the back of the chair work as follows.

When the Levers are positioned towards the inside of the chair, the chair is ready to be powered.

When the Levers are positioned towards the outside of the chair, the chair is ready for manual self propelling.

When you are ready to switch gears, please make sure that the Joystick controller is turned off completely.

**\*Please do not engage levers from Powered to Manual without the chair being shut off.**



## The Controller

The main unit controller comes ready for a right-handed user. With a little rearranging, the Model H can be setup for a left-handed user as well.

#1. From the factory, Joystick is arranged for right-handed users.

#2. Available option for left-handed setup.

#3. Seat Belt is attached to the chair.



#4. Untighten the knob that secures the joystick



#5. Then slip it on to the left armrest



Attach the Cord into the Clips running to the back of the chair



Before folding the chair make sure to release the back handleBar

You can also remove the handleBar with a simple screw driver.



## Batteries & Charging

### Charging

The cord to charge the batteries comes in three parts.

#1. Wire which connects the electric outlet into the power supply brick

#2. Power supply brick/Plug adapter



## Charging method

Charging the battery directly:

Make sure you remove the battery from the chair while charging.

Attached the first two parts of the cord (#1 and #2), then insert into the battery.



## Charging Tips & Notes

- The Model H comes with one (1) 24V 6Ah / 10Ah lithium ion batteries. They are partially charged.
- Initial charge: close to home, ride the Model H until it loses complete charge. Then charge the batteries for 8 hours straight. Using this method will maximize the overall life-cycle of the batteries.
- Turn the main unit's (Controller) power off while charging.
- Do not leave children unsupervised near the Model H while it is charging
- Do not attempt to open the battery housing
- Red means the power is on and the unit is charging. Green means the unit is fully charged.
- When the battery is fully charged, remove the cable. Then take out the DC charging connector and AC input power socket.
- The average time taken to recharge workable batteries will vary from 2 to 8 hours depending on the level of usage.
- Do not charge more than 6 hours to 8 hours at any given time.
- If you do not operate the Model H for two months, we recommend that you charge the battery for 6-8 hours before use.

- If the chair is not being used on a monthly basis, we recommend still charging the battery once a month to prevent the battery from becoming stall.
- Overcurrent Protection: this will shut off the current thus shutting the motor down to ensure that the motor and battery do not experience any damage.
- The lifecycle of a lithium battery is measured in “Charge Cycles”, and will charge for around 500 charge cycles.
- If you use the Model H daily, check the battery light indicator to see how much charge you have left. The Model H is equipped with one (1) lithium batteries and will go up to ~7 miles per battery, for a total of ~15 mile.
- Do not attempt to charge your battery if the Model H and battery have been frozen
- Do not use any third-party battery chargers unless certified by our company.
- Do a periodic check of the battery casing for damage and corrosion to the Red (Positive) and Black (Negative) battery connectors.
- If for some unexpected reason if the battery gets damaged, make sure you do not touch it without the proper gloves.
- If the battery needs to be disposed of, locate the nearest “Hazardous Materials” disposal facility, and call them for instructions. In many cases the local city or municipality will have a program for “Hazardous Materials” disposal.
- Maximize operating time per charge is affected by:
  - Terrain: avoid hills and uneven or soft surfaces
  - Limit total weight
  - Fully charge your battery prior to your trip
  - Try to maintain a constant speed when possible
  - Avoid intermittent driving when possible
- Storing your Model H Battery
  - Fully charged before storing the unit
  - Remove the battery
  - Store the battery in a dry and warm place
  - Avoid temperature variation
- Do not attempt to charge your battery if it is frozen from extreme weather conditions

## **Operation and Installation**

Your Model H/X comes with one battery.

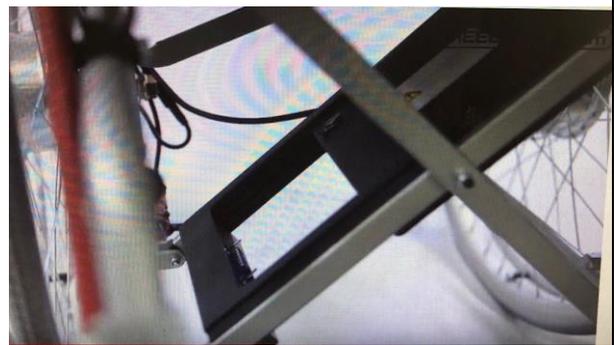
Several things to note:

- Battery may be installed upon delivery or they may arrive in a separate box.
- Replacement batteries are available. Please call for more details.

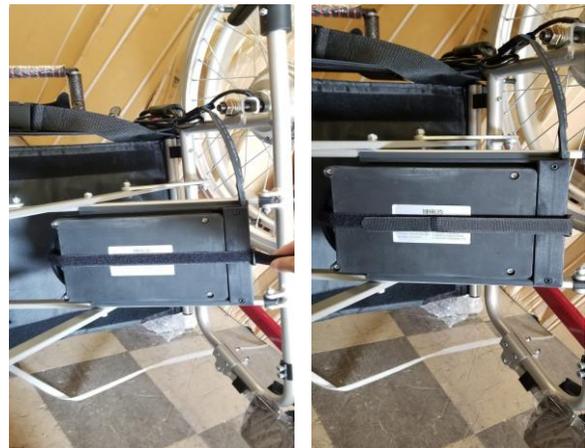
Gently slide the battery into the slots underneath the seat (Silver tag facing up)



Slide it all the way in



Take the strap and make sure its tightly secure



## Controller

- #1. Power Button - powers on/off chair
- #2. Speed Control Buttons - two buttons (plus & minus) allow the user to control max speed
- #3. Speed Indication Lights - five lights indication relative max speed
- #4. Battery Power Indicator Lights - shows the user how much power is available

#6. Joystick - controls speed and direction of the chair



### Controller & Driving Tips

- Take some time in a safe/controlled environment to learn operation
- Slow down to turn. Slower speeds will help you avoid any potential tilting/tipping of the Model H
- Speed control buttons (#3) allows you to adjust the maximum speed
- Be sure to adjust the speed depending on your environment
- To slow down, slowly bring the joystick back toward the initial position
- To stop, just bring the joystick back to the initial position
- Getting into the Model H
  - Before sitting, make sure the Model H is **powered off**, this will ensure the Model H will not move upon touching the joystick
  - Make sure the foot rest is down

- Once onboard, make sure your feet are safely on the footrest
- Use your best judgement while driving
  - Alert yourself to the danger of motor vehicles on roads or in parking lots
  - At night, or when it is hard to see, use reflective tape on your Model H
- The Model H is designed for use on firm, even surfaces such as concrete, asphalt and indoor flooring
- Do not operate the Model H in sand, loose soil or over rough terrain. Doing so may damage wheels, bearings, axles or motors, or loosen fasteners
- Use extra care when you drive the Model H in reverse. You may lose control or fall if one of the rear wheels hits an object.
  - Operate the Model H slowly and at an even speed.
  - Stop often and check to make sure your path is clear of obstacles.
- Getting Off Your Model H
  - Make sure to bring the Model H to a complete stop.
  - Power down the unit. This way you can avoid accidentally touching the joystick, thus causing the Model H to unexpectedly move while you are exiting.
  - Raise the armrest so that you can conveniently exit the unit.
  - Carefully and safely get out of the seat.
- Make sure that electronic components such as the control panel, battery charger, and other electronic controlled components avoid moisture. If these components come into contact with moisture, dry before use.

## Batteries

- Only use batteries approved and supplied by our company. Our batteries are special lithium batteries designed specifically for use with the Model H.
- You must charge the battery for 6 to 8 hours before attempting to operate your Model H for the first time. Failure to do so will result in damage to the battery.
- Read all battery instructions before attempting to change or charge batteries.
- To remove the batteries, pull out evenly while depressing the plastic clasp on each side (under the battery's face). See page 22.

*NOTE: Do not use any parts or components unless they have been authorized in writing by a representative of our company.*

Battery Installation

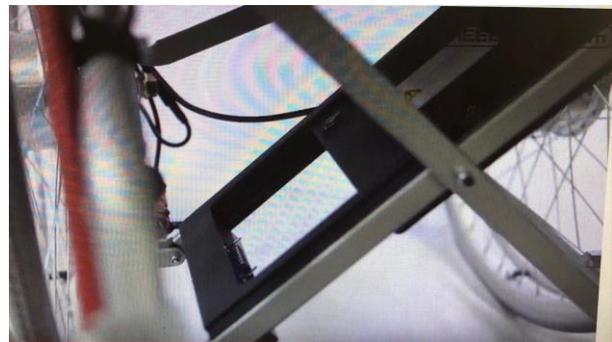
The Model H comes with a V6 Battery Standard as well as an upgraded option V10 battery ( costs extra)



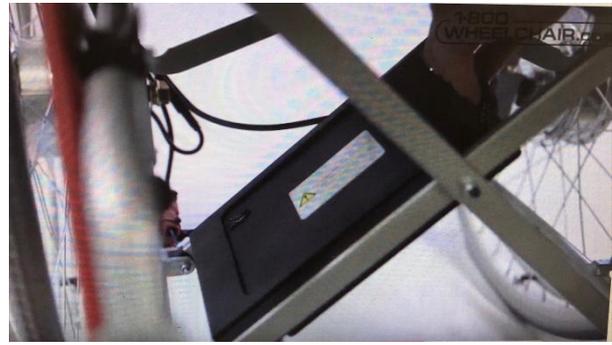
Gently slide the battery into the slots underneath the seat



It should slide in



Until it's fully in



Take the strap and make sure its tightly secure



Final outcome once the battery is fully placed properly in the allowed slot.



## Anti Tippers

Both the model H and the Model X have optional anti tippers. Anti tippers help the chair from falling backwards- *we highly recommend that you buy anti tippers for the Model H/X*

Anti tipper on the Model H - are adjustable in height



## Seat Design & Materials

- We have used durable synthetic nylon mesh materials
- The Model H seat is designed for comfort, not specifically for pressure relief
- If you suffer from pressure sores, or if you are at risk that they will occur, please consult your doctor

## Fasteners

Many of the screws, bolts and nuts on the Model H/X are special high-strength fasteners. Replacing these fasteners with non-approved parts may cause your Model H/X to result in faulty operation and may cause harm to you or other people, therefore:

1. Only use fasteners provided our company
2. If fasteners become loose, tighten them as soon as you can
3. Over or under-tightened fasteners may fail or cause damage to the Model H/X parts

## Change & Adjustments

Never use non-Model H/X parts or make changes to your Model H/X unless authorized in writing by a representative from our company. Doing so will void the Warranty and may create a safety hazard.

Before each use of the Model H/X :

- Make sure the Model H/X is operating smoothly
- Check for noise, vibration, or a change in ease of use.
- If you detect a problem, make sure to fix the problem and/or make the proper adjustments.
- Deferring repair or adjustment could increase the risk for injury. Our customer care representatives can help you find and correct the problem.

## Electromagnetic Interference (EMI)

Powered vehicles 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 vehicle to release its brakes, move by itself, or move in unintended directions.

## Limited Warranty

The Model H/X comes with a limited warranty and the following coverage:

- Frame: JYD Imports warrants the frame of its mobility chair under normal use for a period of 1 Year (12 months). JYD Imports will at its sole discretion, repair, replace, any warrantable frame that fails within the warranty period.
- Wearable Parts: 6 months motor, transaxle, brake assembly, & electrical components: JYD Imports warrants the Motor/Transaxle/Brake and Electronics of the mobility chair, under normal use for a period of 1 Year (12 months). JYD Imports will at its sole discretion, repair or replace any warrantable Motor/Transaxle/Brake and Electronics components that fail within the warranty period.
- 3 months lithium batteries (purchased with units): JYD Imports warrants the lithium batteries of the mobility chair, under normal use for the period of 3 months. JYD Imports will at its sole discretion, repair or replace any warrantable lithium battery that fails within the warranty period.