

REVISION 06-26-2006

PROJACK M1
Mov-A-Load Corporation
www.movaload.com
1-866-668-3257

Owner's Manual

(Draft Copy)

IMPORTANT: Read this manual before using this unit. Retain this manual for future reference. Carefully follow all instructions in this manual. Failure to follow all instructions in this manual will reduce the safety and performance of the unit. This manual contains important information on Safety, Training and Operation of the PROJACK M1 unit.

IMPORTANT: Keep all PROJACKM1 literature with the unit for quick reference.

Diagram OM1 (Picture of Complete Unit)

Trailer Mobility
by Remote Control

Model # PROJACK M1

Small to Medium Gross Weight Trailers (GWT not to exceed 8,000 pounds and tongue weight not to exceed 800 pounds)

Recreational, Utility, Commercial, Horse, and Specialty Bumper Pull Trailers

www.movaload.com

THANK YOU

Thank you for purchasing a Movaload product. The Owner's Manual provides you with basic operating instructions and very important safety reminders. Please read the entire manual before installation or operating the unit. The knowledge, skill and training from reading the Owner's manual is important in keeping the product in top operational condition and operating the unit safely.

PRODUCT REFERENCES, ILLUSTRATIONS AND SPECIFICATIONS.

All information, illustrations, and specifications in this manual are based on the latest product information available at the time of printing. Movaload reserves the right to change or improve the design of any Movaload Product at any time without notice and without obligation to modify products previously manufactured. Copyright©2005 Movaload Corporation. All Rights Reserved. This product is covered by one or more U.S. Patents. Other Patents pending.

SERVICE INFORMATION

Service on the Movaload unit within the warranty period should be performed only by an authorized and approved service dealer or certified Movaload Installation representative. In order to obtain a list of service dealers, please call 1-866-668-3257 For more details about your unit, visit our website at

www.movaload.com

DO NOT RETURN THE UNIT TO THE SELLER WITHOUT PROOF OF PURCHASE.

Please make note of the following information before having your product installed.

Serial Number _____
Model Number _____

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MOVALOAD CORPORATION

LIMITED ONE-YEAR WARRANTY

For one (1) year from the date of original purchase, when this MOVALOAD CORPORATION product is properly maintained and operated according to the Owner's Manual, MOVALOAD CORPORATION will repair, free of charge, any defect in material or workmanship. If this product is used for commercial or rental purposes, this limited warranty applies for ninety (90) days from the date of original purchase.

This warranty does not apply in the following cases:

- Items which become worn during normal use, such as Tires. Normal Wear Parts are warranted to be free from defect in material and workmanship as delivered with the product. Any claim for repair or replacement of Normal Wear Parts must be made within thirty (90) days of the date of purchase.
- Repair necessary because of operator abuse, tampering with or altering the product or negligence, including bent shafts or steering devices and the failure to maintain the equipment according to the instructions contained in the Owner's Manual.
- Minor mechanical adjustments which are not due to any defect in material or workmanship. For assistance in making such adjustments, consult your Maintenance manual.

WARRANTY SERVICE IS AVAILABLE BY RETURNING THE PRODUCT TO THE NEAREST CERTIFIED MOVALOAD SERVICE CENTER. To make a claim under this MOVALOAD CORPORATION one (1) year Limited Warranty, return the unit along with your proof of purchase to an Authorized Service Center near you. To locate the nearest Authorized Service Center, call MOVALOAD CORPORATION directly at 1-800-866-3257 or visit us online (refer to contact information below).

This Limited Warranty is made in lieu of all other warranties, expressed or implied. Seller's and manufacturer's only obligation under this Limited Warranty shall be to repair or replace such parts and components of the product proved to be defective in accordance with published Warranty Policy. Neither Seller or manufacturer shall be liable for any injury, loss, or damage direct, indirect or consequential arising out of the use of or inability to use the product. Before using, the owner shall determine the stability of the product and it's suitable for the intended use and user assumes all risk and liability in connection therewith.

Except as provided herein, MOVALOAD CORPORATION makes no express warranties or any implied warranties of merchantability or fitness for a particular purpose and all warranties of any type is limited to the duration of the written limited warranty set forth herein. There will be charges rendered for repairs to the product made after the expiration of the aforesaid one year Warranty Period. All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. This Limited Warranty contains the complete text of the warranty and may not be modified either orally or in writing. If you have questions or require assistance please contact Movaload Customer Service Department.

MOVALOAD CORPORATION

Customer Service Department
2245 Industrial Drive
Dyersburg, TN 38024
866-668-3257
www.movaload.com

FCC STATEMENT

Model # M1 RECEIVER
FCC ID: TGTPJCKM1R

Model # M1 TRANSMITTER
FCC ID: TGTPJCKM1T

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesirable operation.

The equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio or TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

CANADA (DIGITAL APPARATUS INTERFERENCE-CAUSING EQUIPMENT STANDARD ICES-003)

Model # M1 RECEIVER
IC: 5889A-PJCKM1R

Model # M1 TRANSMITTER
IC: 5889A-PJCKM1T

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

SAFETY INFORMATION

This product is designed and intended for application on small to medium sized trailers (GWT less than 8,000 pounds and Tongue Weight less than 800 pounds) commonly towed by automobile and light duty truck. Use on trailers in excess of this weight or configuration will damage the product and void the warranty. When installed and operated properly, you will enjoy the benefit of moving your trailer independent of your vehicle. The product is designed to lift the tongue of your trailer, move the trailer short distances for storage and then to move the trailer back to the vehicle and lift and facilitate connection of the tongue of your trailer to your vehicle by Remote Control.

To ensure your Movaload product operates efficiently and safely, operate your Movaload Product following these important reminders:

1. The PROJACKM1 is designed, intended and warranted to move standard trailers at their rated Gross Trailer Weight WITHOUT LOADS. Under some circumstances it may be necessary to move the trailer with a load in place, UNDER NO CIRCUMSTANCES should the gross trailer weight and load exceed the specified maximum limit of 8,000 pounds and 800 pounds tongue weight, the load must be properly secured and the load must be well and evenly distributed. THE TRAILER MUST NOT HAVE ANY LIVE LOADS (PEOPLE OR ANIMALS) WHEN BEING MOVED BY USE OF THE PROJACKM1. (Diagram OM1A – Never Move with Live Loads)
2. The PROJACKM1 is designed, intended and warranted for use on smooth and LEVEL surfaces. Under some circumstances it may be necessary for the operator to travel over a slight incline or decline while moving the trailer with the PROJACKM1. UNDER NO CIRCUMSTANCE should the unit be operated on an incline or decline greater than 2 degrees (2°), which is a rise or drop of 1 foot over a distance of 30 feet. In addition, UNDER NO CIRCUMSTANCES should the operator travel on a side slope or attempt to turn the trailer in either direction while traveling the incline or decline. THE TRAILER MUST NOT HAVE ANY LIVE LOADS (PEOPLE OR ANIMALS) WHEN BEING MOVED BY USE OF THE PROJACKM1. (Diagram OM2, OM2C & 2B– Incline w/ “X” and 2 degree incline)
3. The PROJACKM1 is designed for use for reasonably short distance movement of your trailer. Less than eighty (80) feet of travel should be the limit for mount and disconnect activities.
4. The product is mechanical and should be operated only after thorough understanding of the Owner’s Manual.

WARNING! Movaload products are designed to assist in moving small to medium sized trailers only. It is important to remember that the Movaload product is not designed as a brake or parking device. Extreme caution should be used since your trailer is subject to movement as would be the case any time the trailer is removed from a vehicle, transported and secured in a stationary position. Always use an independent braking or scotch device when your trailer has been disconnected from your vehicle. Do not use the Movaload product for any use other than intended and illustrated in the Owner’s Manual.

SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, mandate your careful attention. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures or the common sense of the operator.

SYMBOL	MEANING	
!Δ	DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Always follow the safety precautions to reduce the risk of personal injury.	result in minor or moderate injury. Always follow the safety precautions to reduce the risk of personal injury.
!Δ	WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. Always follow the safety precautions to reduce the risk of personal injury.	IMPORTANT: Indicates that equipment or property damage could result if instructions are not followed.
!Δ	CAUTION: Indicates a potentially hazardous situation which, if not avoided, may	NOTE: Gives helpful information

READ THE OWNER'S MANUAL AND FOLLOW ALL WARNINGS AND SAFETY INSTRUCTIONS. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY TO THE OPERATOR AND/OR BYSTANDER. FOR QUESTIONS, CALL 1-866-668-3257

IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE OPERATING – FOLLOW ALL INSTRUCTIONS WHEN OPERATING THE PROJACK M1.

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| <p>!Δ WARNING: When using the unit, you must follow the safety rules. Read these instructions before operating the unit in order to ensure the safety of the operator and any bystanders. Please keep these instructions for later review and use.</p> <ul style="list-style-type: none"> • Read and follow the instructions carefully. Be familiar with the controls and how they work as well as the proper use of the unit. • Do not operate this unit when tired, ill, or under the influence of alcohol, drugs, or medication. • Children under the age of 18 must not use the unit. Teens age 16 and over | <p>may use the unit if supervised by an adult.</p> <ul style="list-style-type: none"> • All guards and safety attachments must be installed and working properly before operating the unit. • Inspect the unit before use. Replace damaged parts. Check for leaks. Make sure all fasteners are in place and secure. Replace parts that are cracked, chipped, or damaged in any way. Do not operate the unit with loose or damaged parts. • Carefully inspect the area before starting and operating the unit. Remove |
|---|---|

all debris and objects that could cause the unit not to work properly including areas under and around the trailer.

operates in the UP and DOWN mode and both wheels operate in the FORWARD and REVERSE modes.

- Clear the area of children, bystanders, and animals. At a minimum, keep all children, bystanders, and animals outside a 25 feet radius; there still may be a risk at that distance.
- Before attempting the first use of the unit, a practice or trial run is recommended. Select a large open area that is level and free of most surface debris. Practice moving the trailer forward, backward, left, right, up and down.
- Before disconnecting the trailer from your vehicle or moving the trailer to a different location from a secured stationary position, BEFORE EVERY USE, check the unit to ensure that your battery is fully charged and that the unit
- Check the area where the unit will be used if any slope is present. A carpenter's level or dial reading slope indicator can be used if available. Remember the unit is designed, intended and warranted to be operated on smooth and level surfaces.
- In the unlikely event the unit will not operate and you must raise or lower the trailer tongue, the unit can be raised or lowered manually by unscrewing the plastic plug on top of the unit and using a 9/16 inch socket, extension and ratchet. IMPORTANT: Always ensure the plastic plug is replaced and properly tightened immediately after finishing the manual crank operation.

!Δ WARNING: Remember that the manufacturer of the battery provides information on the proper installation and use of the battery you purchased separately from this unit. Always use extreme caution in connecting the battery to avoid electric shock. Extreme caution is always required since the battery does emit toxic fumes and may be subject to explosion if not correctly connected.

The battery installed in your PROJACK M1 unit was purchased separately and may be one of several types and manufacture. Please refer to the battery manufacturer's recommended maintenance intervals and charging procedures.

!Δ WARNING: Whenever servicing the battery, always follow all safety warnings and precautions provided by the battery manufacturer.

The battery must be recharged after several uses depending on length of time run and weight of loads being pulled and lifted. Gain access to the battery as described below and recharge with an appropriate battery charger. Note: Most lead-acid type batteries perform better and last longer when charged with a trickle type battery charger. Avoid high amperage quick chargers.

If the PROJACK M1 unit needs frequent charging, Movaload recommends the use of an automatic battery charge maintainer. This type of charger is available at most automotive supply retailers. It is designed to be mounted directly on a vehicle and wired permanently to the battery terminals. When the unit and trailer are not being used, this charger has a cord which can be plugged into any standard 110V AC outlet. These chargers automatically monitor the battery voltage and charge when needed.

!⚠ WARNING: The battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harms. WASH HANDS AFTER HANDLING.

!⚠ WARNING: Where safety glasses and work gloves when servicing or handling batteries.

BATTERY TYPE & RECOMMENDATIONS:

The PROJACK M1 is designed to operate using a 12Volt DC battery with a **35+ Amp-Hour** rating. The higher the Amp-Hour rating the longer the unit will operate between required charging. A Deep Cycle, Jell Filled type battery is recommended. If your trailer is already equipped with a 12 Volt, 35+ Amp-Hour battery, the unit can be operated using that battery. The unit is also equipped with an 8.5 inch (length) by 7.75 inch (depth) by 8.5 inch (height) battery box to house a battery to operate the unit (Refer to the Battery Care & Maintenance section of the enclosed Maintenance Manual for installation guidelines).

Please ask your authorized Movaload Dealer or contact Movaload Customer Service (1-866-668-3257) directly for further information regarding battery selection. The higher the quality of the 12 Volt battery used, the longer the PROJACKM1 will operate between charges.

The Remote Control Transmitter is powered by a CR2450, 3Volt, 575mAh coin cell battery. The positive side of the battery will be facing out (toward the back side of the transmitter) when installed. This is a common coin cell battery that can be purchased at numerous locations across the country. **(DIAGRAM MM5: SHOWING COIN CELL BATTERY PROPERLY INSTALLED)**

SAFETY LABELS

(Diagram OM2D showing location of safety labels & FCC label)

!⚠ DANGER

(DIAGRAM OM2B: TRAILER ON SIDE SLOPE WITH “X”) / (DIAGRAM OM2: TRAILER ON INCLINE) (DIAGRAM OM3A: PEOPLE/ANIMALS ON AND NEAR TRAILER W/ “X”)

1. READ AND FOLLOW OWNERS MANUAL
2. THIS UNIT SHOULD BE OPERATED ON SMOOTH, LEVEL SURFACES. **UNDER NO CIRCUMSTANCES** SHOULD THIS UNIT BE OPERATED ON SLOPES GREATER THAN 2 DEGREES.
3. **DO NOT** OPERATE THIS UNIT ON SIDE SLOPES OR WHERE TRACTION IS UNCERTAIN.
4. USE ONLY FOR MOVING TRAILERS WITHOUT LOADS. **UNDER NO CIRCUMSTANCES** SHOULD THE TOTAL GROSS TRAILER WEIGHT EXCEED 8000 LBS AND TONGUE WEIGHT EXCEED 800 LBS.
5. **DO NOT** OPERATE THIS UNIT WITH LIVE LOADS (PEOPLE OR ANIMALS).
6. **ENSURE** ALL CHILDREN, BYSTANDERS OR ANIMALS ARE AT LEAST 25 FEET FROM TRAILER BEFORE OPERATING.

!⚠WARNING

1. ALL SCREWS, NUTS AND BOLTS MUST BE PROPERLY TIGHTENED BEFORE OPERATING – (SEE INSTALLATION AND MAINTENANCE FOR TORQUE REQUIREMENTS).
2. **ALWAYS** FOLLOW ALL SAFETY INSTRUCTIONS PROVIDED BY THE BATTERY MANUFACTURER WHEN SERVICING OR CHARGING THE BATTERY.
3. BATTERY MUST BE FULLY CHARGED BEFORE OPERATING.

!⚠WARNING

(DIAGRAM OM6 – WHEELS EXTENDED HITTING LOG W/ “X”)

1. **ALWAYS** ENSURE THE PROJACK M1 WHEELS ARE IN THE FULLY RETRACTED POSITION AND UNIT IS TURNED OFF WHEN TRAILER IS MOUNTED TO VEHICLE
2. **ALWAYS** ENSURE TRAILER WHEELS ARE SCOTCHED WHEN TRAILER IS UNHOOKED FROM VEHICLE AND UNIT IS NOT BEING OPERATED

!⚠CAUTION

(DIAGRAM OM7A - PLUG BEING TIGHTENED)

ALWAYS ENSURE PLASTIC PLUG IS IN PLACE AND PROPERLY TIGHTENED – (WATER SENSITIVE ELECTRONICS INSIDE UNIT).

IMPORTANT

DO NOT STORE THE REMOTE CONTROL TRANSMITTER IN DIRECT SUNLIGHT OR ON THE DASHBOARD OF YOUR VEHICLE TO PREVENT DAMAGE TO ELECTRONIC COMPONENTS

PREPARATION & TRAINING

PREPARATION

1. Read this entire Owner’s Manual and Service Instruction section carefully before attempting to operate this unit. Be thoroughly familiar with the controls and the proper use of the Movaload product.
2. Never allow children under the age of 16 to operate this product and children age 16 to 18 should use only under adult supervision. Never allow adults to operate the product without proper instruction.
3. Keep the area of operation clear (minimum of 25 feet) of all persons, particularly small children and animals. **Diagram OM3 (Diagram of Trailer with “X” over people, animals, bike w/n 25 feet)**
4. Exercise caution to avoid slipping or falling when operating the unit. Work from a level area with secure footing. Stop the unit if you need to move to a new location for a better view.
5. The trailer should only be parked on level ground in an area free of obstructions.
6. It is important that you walk around the trailer and take note of the area and terrain where the unit will be operating and moving the trailer BEFORE YOU BEGIN OPERATION.

7. Confirm that the terrain for the trailers location and intended operation path has sufficient traction to operate the unit safely. Avoid rain slick, smooth concrete surfaces and other similar areas where the unit might lose traction. **WARNING! NEVER OPERATE THE MOVALOAD UNIT ON ANY UP OR DOWN SLOPE WHEN THERE IS A POSSIBILITY OF INSUFFICIENT TRACTION!**
8. Confirm that the intended operating path of the units **DOES NOT** have an up or down slope.
9. Thoroughly inspect the immediate area where the unit and trailer are to be used. Remove all objects that could cause the unit or trailer not to move smoothly and operate freely.
10. “Scotch” or brace the front and rear of the trailer wheels prior to unhitching the trailer from the vehicle. It is a good idea to carry wedges or wood blocks for this purpose rather than to rely on what may be present at the site. **Diagram OM5 (Scotched trailer wheels)**
11. The PROJACK M1 is designed, intended and warranted to move standard trailers at their rated Gross Trailer Weight **WITHOUT LOADS**. The manufacturer acknowledges that under some circumstances it may be necessary to move the trailer with a load in place, **UNDER NO CIRCUMSTANCES** should the gross trailer weight and load exceed the specified maximum limit of 8,000 pounds and 800 pounds tongue weight, the load must be properly secured and the load must be well and evenly distributed. **THE TRAILER MUST NOT HAVE ANY LIVE LOADS (PEOPLE OR ANIMALS) WHEN OPERATED.**
12. **WARNING! Inspect the unit and trailer thoroughly BEFORE EACH OPERATION.**
 - a. Ensure that the Movaload unit is properly attached to the trailer frame as indicated in the Owner’s Installation Manual.
 - b. Carefully examine the unit to ensure that fasteners are properly secured, covers attached properly, wheels secured, and the overall unit is in proper operating condition.
 - c. Ensure plastic plug on top of unit is properly tightened.
 - d. Be sure that the battery is fully charged, securely in place, and connected to the unit properly.
 - e. Ask bystanders and children to step away at least twenty-five (25) feet trailer during use.
 - f. Inspect the trailer to ensure it is in good operating condition. No obstructions should be hanging from the trailer, tires should be properly inflated and in good condition, and wheels moving freely.
13. Do not operate this unit if you are taking drugs or other medication which can cause drowsiness or affect your ability to operate the unit.
14. Do not place hands or feet near or under moving parts or near the trailer while in motion.
15. Be very careful when operating on or crossing broken pavement, pavement with holes, gravel, walkways, grass, and dirt. Use extreme caution if you must to operate the unit where the ground may be wet, soaked, snow covered, or covered by any substance that may lessen traction. Traction will be lessened whenever moisture, leaves or debris is present.

Do NOT operate the unit if there is any question about ground conditions. Personal injury or property damage could result.

IMPORTANT: NEVER DRIVE A VEHICLE WITH TRAILER ATTACHED OVER CURBS OR OBSTACLES TALLER THAN 4 INCHES IN HEIGHT. THIS COULD RESULT IN DAMAGE TO YOUR PROJACK M1 UNIT, **Diagram OM6 (Vehicle with trailer driving rear wheel over a block getting ready to impact the unit wheels – “x out”)**

16. Use the Movaload unit for movement of the trailer during daylight or in areas where good artificial lighting is available.
17. Remember the PROJACKM1 is designed, intended and warranted for use on smooth and LEVEL surfaces. The manufacturer acknowledges that under some circumstances it may be necessary for the operator to traverse over a slight incline or decline while moving the unit. UNDER NO CIRCUMSTANCE should the unit be operated on an incline or decline greater than 2 degrees, which is a rise or drop of 1 foot over a distance of 30 feet. In addition, UNDER NO CIRCUMSTANCES should the operator attempt to turn the trailer in either direction while traversing the incline or decline. (Diagram OM2, OM2A AND OM2B– Incline w/ “X” and 2 degree incline)
18. In the unlikely event the unit will not operate and you must raise or lower the trailer tongue, the unit can be raised or lowered manually. To manually raise or lower the unit you will need a standard socket (9/16 inch), extension and ratchet. Remove the plastic Plug on the top of the unit using a large coin. Lower 9/16 inch socket/extension into the hole in the top of the unit securing the socket to the top of the screw shaft. Using the ratchet, rotate the screw to raise or lower the trailer to the desired position. IMPORTANT! ALWAYS REPLACE AND PROPERLY TIGHTEN THE PLASTIC PLUG AFTER USING THE MANUAL CRANK OPTION. Diagram OM7 (Manual crank) Diagram OM7A (Plug being tightened)
19. The Movaload unit should be in the fully retracted position after the trailer is attached to your vehicle and before travel on the roadway commences. Diagram OM8 (Unit in fully retracted position)

IMPORTANT: Wheels on the unit should always be facing forward when moving the wheels to there fully retracted position. Diagram OM9 (Wheels facing forward when moving to fully retracted position)

LEARNING TO USE THE UNIT (TRAINING SECTION FOR FIRST-TIME USERS)

Before attempting to use to use your unit for the first time a practice run is in order. Select a large open, paved area that is level as possible. Use boxes or cones to create obstacles such doors or narrow driveways. Once the practice area is ready proceed as suggested below:

1. Verify that the front and rear trailer wheels have been “Scotched” or braced.
2. Using the conventional trailer jack, disconnect the trailer from the vehicle.

NOTE: Once you have read the entire operating manual, practiced operating the unit and become very comfortable with the operating system of the Movaload unit, you can then use the Movaload unit to disconnect the trailer directly from the vehicle, leaving the conventional jack in the fully retracted position. Diagram OM10 (conventional jack)

3. Move the vehicle well away (at least 25 feet away) from the trailer while learning to operate the Movaload unit.

!⚠CAUTION: READ THE ENTIRE OPERATING MANUAL AT LEAST ONCE BEFORE PHYSICALLY OPERATING THE UNIT AS DESCRIBED IN THE FOLLOWING STEPS.

4. Practice operating the unit by following the Operating Instruction below.

5. Controls and Lights on the Upper Front Housing of the unit. **Diagram OM11 (Front Cover with Button/LED configuration)**

- a. To begin operating the unit press the black Power (ON) button located on the front of the unit.
- b. To confirm the unit is ON, verify that the Operating Condition LED located directly above the black (ON) and red (OFF) button is illuminated green. Note: If this LED is illuminated red, then an error condition has occurred. Turn the unit off and the back on and confirm that the LED is illuminated green. If the LED is still red, then please contact your nearest Movaload Service Center.
- c. If the LED is flashing red, then your 12Volt DC battery is extremely low and needs to be charged before operating the unit.
- d. The Operating Condition LED will flash green when any button on the Remote Control Transmitter is pushed.
- e. The Operating Condition LED will flash red when the 12 Volt DC battery is fully depleted and must be charged.
- f. Note: For safety reasons, the unit will turn off automatically after the unit has been idle for 90 seconds. If further operation of the unit is desired, then the (ON) button will need to be pressed again.
- g. The red (OFF) is pressed to turn the unit off. All control functions will cease after this button has been pressed. You must press the black (ON) button to begin operating the unit again.
- h. This unit is equipped with a bank of 6 LED for illumination when more light is needed. Refer to section 6c directly below for operation of unit lights.

6. Remote Control Transmitter Push buttons and LED **Diagram OM12 (Front and Back of the Remote Control Transmitter)**

WARNING! YOU MUST STAND AT A SAFE DISTANCE (MINIMUM OF 6 FEET) AWAY FROM AND TO THE SIDE OF THE TRAILER WHEN USING THE REMOTE CONTROL TRANSMITTER TO MANEUVER THE UNIT.

WARNING! THE TRAILER MUST NOT HAVE ANY LIVE LOADS (PEOPLE OR ANIMALS) WHEN OPERATED.

- a. Please note that the Movaload unit must be turned on by pressing the black (ON) button for the Remote Control to operate the unit.
- b. The Remote Control has a green LED in the upper right hand corner. The green LED should illuminate when any button on the Remote Control Transmitter is pushed. If the LED indicator light does not illuminate, then open the back cover of the Remote Control and replace the 3V, 575 mAh, CR2450 Coin Cell Battery. If the Indicator Light still does not illuminate then consult your nearest Movaload Service Center.
- c. Press the (LIGHTS) button in the upper left hand corner to turn the bank of 6 lights on the unit on and off, if required, based on time of day or weather conditions.
- d. Press the Lift (U) button located in the upper center of the Remote Control and lower the wheels on the unit to the ground until the conventional jack on the tongue of the trailer has been lifted off the ground.
- e. Fully retract the conventional trailer jack.
- f. With the unit motionless, remove the "Scotches" from the front and rear of the trailer wheels exercising care to insure feet and arms remain away from the trailer.
- g. The Lift (D) button located in the lower center of the Remote Control Transmitter is used to:
 - i. lower the trailers tongue toward the ground.
 - ii. to raise the wheels on the lift unit to the fully retracted position when the trailer is attached to hitch or resting on the conventional jack. **Diagram OM13 (Unit on conventional jack or vehicle raising the wheels up)**

- h. Use the Lift (U) and Lift (D) to adjust the trailer frame until it is level with the ground.
 - i. Please note that the Left Wheel and Right Wheel of the Movaload unit operate independently of one another. Each wheel has its own Forward (F) and Reverse (R) button on the Remote Control.
 - j. Please note that in these and all other instructions throughout this manual, the left and right are relative to the operator standing beside the unit and facing the same direction that the trailer tongue is pointing. **Diagram OM14 (Top view of trailer showing forward, reverse, left and right with diagram of the transmitter overlay)**
 - k. Pressing both the Left Wheel (F) and Right Wheel (F) at the same time will drive the unit in a forward direction toward the direction indicated by the tongue of the trailer.
 - l. Pressing both the Left Wheel (R) and Right Wheel (R) at the same time will drive the unit in a reverse direction away from the direction indicated by the tongue of the trailer.
 - m. Pressing the Left Wheel (F) button to rotate the left wheel only in a forward direction and observe what happens.
 - n. Pressing the Left Wheel (R) button to rotate the left wheel only in a reverse direction and observe what happens.
 - o. Pressing the Right Wheel (F) button to rotate the right wheel only in a forward direction and observe what happens.
 - p. Pressing the Right Wheel (R) button to rotate the right wheel only in a reverse direction and observe what happens.
 - q. To steer the trailer to the left while traveling forward, momentarily release and then re-engage the Left Wheel (F) while continuing to press the Right Wheel (F) button. This allows the right wheel to travel farther than the left wheel, resulting in a left hand turn. When traveling forward, a left hand turn can also be accomplished by pushing the Left Wheel (R) and the Right Wheel (F) button, simultaneously.
 - r. To steer the trailer to the right while traveling forward, momentarily release and then re-engage the Right Wheel (F) while continuing to press the Left Wheel (F) button. This allows the left wheel to travel farther than the right wheel, resulting in a right hand turn. When traveling forward, a right hand turn can also be accomplished by pushing the Right Wheel (R) and the Left Wheel (F) button simultaneously.
 - s. To steer the trailer to the right while traveling in a reverse direction, momentarily release and then re-engage the Left Wheel (R) while continuing to press the Right Wheel (R) button. This allows the left wheel to travel farther than the right wheel, resulting in a right hand turn. Please note the left and right are relative to the operator standing beside the unit and facing the same direction that the trailer tongue is pointing.
 - t. To steer the trailer to the left while traveling in a reverse direction, momentarily release and then re-engage the Right Wheel (R) while continuing to press the Left Wheel (R) button. This allows the right wheel to travel farther than the left wheel, resulting in a left hand turn. Please note the left and right are relative to the operator standing beside the unit and facing the same direction that the trailer tongue is pointing.
7. Practice maneuvering the unit until completely comfortable with moving the unit in the up, down, forward, reverse, left and right direction. **CAUTION!** Do not attempt to reconnect the trailer to the vehicle until you have become very familiar and completely comfortable maneuvering the unit.
 8. Observe and become familiar with the travel speed of the unit. In order to gain comfort with the speed it is recommended the operator(s) walk alongside the unit while in operation in both forward and reverse mode.
 9. Releasing all buttons on the transmitter will stop the unit from moving. Learn to quickly disengage the controls to stop the unit in event of an emergency. The OFF button located on the upper right-hand corner of the transmitter can also be used to shut-off the unit in case of an emergency. Once the OFF button on the transmitter has been pushed, you must push the black (ON) button on the unit to begin operating the unit again.

10. Observe and become familiar with the amount of time and distance that is needed for the unit to come to a complete stop.
11. When you have become completely comfortable with all aspects of safely operating and maneuvering the unit, you will be ready to operate the PROJACK M1 unit to connect the trailer to the vehicle. Section 15 – 17 in the below Operations section will guide you through connecting the trailer back to the vehicle.
12. CAUTION! Always scotch the front and rear of the trailer wheels when the trailer is not attached to the vehicle or when not operating the unit. It is recommended that you buy commercially available hardware (Scotches) for this and keep with the unit at all times.

OPERATION

1. Before you begin operation, be sure the trailer is secured to your vehicle. In preparation to begin, press the black (ON) button located on the unit. The Green operating LED will illuminate letting you know the unit is ON. Clear any obstacles in your immediate area. **Diagram OM15 (Front cover of the unit with ON, OFF & Lights)**
2. Press the Lift (U) button on the Remote Control. Lower the Movaload Drive unit to near ground level. “Scotch” the trailer wheels as previously described in **Section xx above**. Only then do you loosen the trailer hitch, safety chain, and light connection from the vehicle or stationary position. **Diagram OM16 (Remote Control)**
3. Stand at a safe distance (minimum of 6 feet) away from and to the side of the trailer before beginning operation.
4. With the trailer hitch and safety chain disconnected, press the Lift (U) button on the Remote Control. The wheels on the unit should touch the ground and begin to lift the trailer tongue until the trailer has cleared the trailer hitch. With the trailer secure, remove the “Scotch” from the rear of the trailer tire. **Diagram OM17 (Unit lifting trailer hitch coupler off the vehicle hitch ball with arrows pointing up)** **Diagram OM18 (Removing the rear scotch leaving the front scotch)**
5. Once the height of the trailer tongue is clearly above the hitch, then proceed in backing the trailer away from the vehicle by pushing both Left Wheel (R) and Right Wheel (R) buttons at the same time. Once clear of the vehicle hitch, remove the “Scotch” that was located in front of the trailer wheel and then continue moving the trailer as desired. **Diagram OM19 (removing the front scotch)**
6. Always use extreme caution during operation of the Movaload unit. Since visibility around the trailer is limited, it is recommended that a second person be located at a place around the trailer that provides the operator with extended visibility. When the second individual provides the ‘all clear’, the operator can begin to move the trailer. It is important that the second person move to a safe distance from the trailer, while unit is in operation, always keeping the operator in view.
7. Immediately check the response and traction of the tires to the pavement, gravel, or ground area. Be sure that solid traction occurs without any slipping before continuing operation. If traction is not solid and secure or if the unit seems to slip, stop operation of the unit immediately.
8. If at any time the operator becomes aware of a reason to stop the trailer or shut the unit off, immediately stop pressing any of the buttons on the Remote Control or press the OFF button on the remote control transmitter. The Red (OFF) button located on the upper face of the top of the lift unit can also be pressed to stop the unit, if necessary.
9. Once the trailer is located in the correct position by the operator or in the event of any emergency stop, discontinue operation of the Remote Control. Immediately place scotches in front of and behind the trailer wheel. Push the red (OFF) button to turn the unit off.

CAUTION! It is very important that the PROJACK M1 unit be turned off immediately after use to avoid the risk of accidentally engaging the unit.

10. As a safety measure, the PROJACK M1 unit will automatically shut-off within ninety (90) seconds after operation of the Remote Control has ceased.
11. Place the Remote Control unit out of reach of children or bystanders and in an area where it is not likely to be hit or dropped accidentally.

IMPORTANT! DO NOT STORE THE REMOTE CONTROL TRANSMITTER IN DIRECT SUNLIGHT OR ON THE DASHBOARD OF A VEHICLE.

12. Since the trailer is located in a parked position by the operator, the unit will need to be switched ON at the top of the unit to begin operation again. Before beginning operation, it will be important to review and go back through the safety checks listed above.
13. Once the safety checks are in place, stand away from the unit and press the FORWARD or REVERSE buttons on the Remote Control as previously described to begin operation.
14. If placing the trailer in a new location, simply use the Remote Control directing the trailer until moved to the designated location.
15. If connecting the trailer to a vehicle, use the Remote Control directing the trailer tongue to the mounting hitch on the vehicle. For your safety, use extreme caution. Operate the Movaload unit very carefully to avoid damage to the unit, trailer, or vehicle and to avoid the possibility of personal injury. Stop the trailer several times as you approach the vehicle hitch. Check to ensure the trailer tongue is even with the location of the vehicle hitch. Guide the trailer hitch coupler, using the Remote Control, to a location directly behind the vehicle's hitch ball (Refer to Diagram **XX** below). Stop the unit, raise the trailer coupler by pushing the Lift (U) button until it is just over the height of the vehicle ball, then move the trailer coupler until it is directly over the vehicle ball (Refer to Diagram **XX** below). Lower the unit by pressing the Lift (D) button on the Remote Control until the trailer coupler and hitch are firmly in place. Continue pressing the Lift (D) until the wheels of the PROJACK M1 unit have arrived in the fully retracted position (Refer to Diagram **XX** below). Push the Red (OFF) button located on the upper face of the top of the lift unit. **Diagram OM20 (showing the trailer hitch coupler directly behind the hitch ball) Diagram OM21 (showing the trailer coupler directly over the vehicle hitch ball with arrows pointing down) Diagram OM22 (wheels in the fully retracted position)**
16. Immediately secure the trailer hitch, safety chain, and trailer light connector to the vehicle. Make a second check to be sure the trailer hitch is securely in place and locked down.
17. Recheck to ensure that the wheels on the Movaload lift unit are in the fully retracted position and the unit is turned OFF.

IMPORTANT: NEVER CONTINUE PUSHING THE LIFT (D) OR (U) BUTTON WHEN THE WHEELS OF THE UNIT REACH THE FULLY RETRACTED OR FULLY EXTENDED POSITION, RESPECTIVELY. THIS COULD RESULT IN DAMAGE TO THE UNIT.

!⚠CAUTION! TOWING THE TRAILER WITH THE WHEEL OF THE PROJACK M1 UNIT IN ANY OTHER POSITION THAN FULL RETRACTED POSITION COULD RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE.

PROJACK M1 MAINTENANCE

!⚠WARNING: Wear safety glasses and work gloves while servicing the PROJACK M1.

!⚠WARNING: When servicing, use only identical PROJACK M1 replacement parts. Use of any other part may create a hazard or cause product damage.

!⚠WARNING: When servicing the PROJACK M1 unit, always disconnect the negative battery cable and secure the negative cable terminal safely away from the battery to prevent accidental starting.

!⚠WARNING: When servicing the battery, always follow all safety warnings and precautions provided by the battery manufacturer.

!⚠CAUTION: Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, and etc. contact plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

!⚠WARNING: If any wire(s) or battery cable(s) are worn, cut, or damaged in any way, have it (them) replaced immediately by the nearest certified Movaload Service Center. Failure to do so could result in serious personal injury or property damage.

Periodically clean the PROJACK M1 unit with clean water and a soft brush or sponge. Do not clean the unit with any type of high pressure washer and/or strong detergents. The unit contains sensitive electronics and electric motors that could be damaged by water penetration.

BATTERY CARE AND MAINTENANCE

The PROJACK M1 unit requires a 12V DC power source. This power source, in the form of a 12V lead acid battery, should be housed in the optional direct mount battery box or be mounted somewhere nearby on the trailer tongue frame rails using appropriate mounting hardware.

The battery installed in or connected to your PROJACK M1 unit was purchased separately and may be one of several types and manufacture. Please refer to the battery manufacturer's recommended maintenance intervals and charging procedures.

The PROJACK M1 is designed to operate using a 12Volt DC battery with a **35+ Amp-Hour** rating. The higher the Amp-Hour rating the longer the unit will operate between required charging. A Deep Cycle, Jelly Filled type battery is recommended. If your trailer is already equipped with a 12 Volt, 35+ Amp-Hour battery, the unit can be operated using that battery. The unit is also equipped with an 8.5 inch (length) by 7.75 inch (depth) by 8.5 inch (height) battery box to house a battery to operate the unit (Refer to the Battery Care & Maintenance section of the enclosed Maintenance Manual for installation guidelines).

Please ask your authorized Movaload Dealer or contact Movaload Customer Service (1-866-668-3257) directly for further information regarding battery selection. The higher the quality of the 12 Volt battery used, the longer the PROJACK M1 will operate between charges.

!⚠ WARNING: When servicing the battery, always follow all safety warnings and precautions provided by the battery manufacturer.

The battery must be recharged after several uses; depending on battery type & size, length of time run, and weight of loads being pulled and lifted. Gain access to the battery and recharge with an appropriate battery charger. Note: Most lead-acid type batteries perform better and last longer when charged with a trickle type battery charger. Avoid high amperage quick chargers. Refer to battery manufacturer's recommendations.

If the PROJACK M1 unit needs frequent charging, Movaload recommends the use of an automatic battery charge maintainer. This type of charger is available at most automotive supply retailers. It is designed to be mounted directly on a vehicle and wired permanently to the battery terminals. When the unit and trailer are not being used, this charger has a cord that can be plugged into any standard 110V AC outlet. These chargers automatically monitor the battery voltage and charge when needed.

On applications with frequent and/or heavy use, the user is advised to mount a large capacity "deep cycle" marine battery in a convenient location near the PROJACK M1 unit.

Battery access and/or removal with the optional direct mount battery box:

Diagram MM 1 (show complete unit with battery box mounted, identify optional battery box)

1. Locate the upper battery box mounting bolt.

Diagram MM 2 (show left-rear view of battery box on unit, identify upper and lower battery box mounting bolts and nuts)

2. Remove the 1/4-inch wing nut from the upper battery box mounting bolt.
3. Support the battery box with one hand and remove upper battery box mounting bolt.
4. Tilt the battery box forward.
5. Lift off the battery box cover and set aside.
6. Disconnect the negative battery cable.
7. Disconnect the positive battery cable.
8. Lift the battery from the battery box. NOTE: Notice the spacer placed in front of the battery.

Battery replacement:

1. Insert the battery into the battery box with the terminals toward the front of the unit. Make sure that the spacer block is positioned in front of the battery.

Diagram MM 3 (show battery box, with cover removed for clarity, and battery with battery cables coiled in box)

2. Connect the positive (red) battery cable to the positive (+) battery terminal.
3. Connect the negative (black) battery cable to the negative (-) battery terminal.
4. Coil the battery cables and place them in the battery box in front of the battery.
5. Place the battery box cover onto the battery box.
6. Locate the metal sleeve that is welded to the front of the outer lift tube. The upper battery box mounting bolt must pass through the hole in this sleeve when reassembling.

Diagram MM 4 (show metal sleeve on front of upper lift tube, holes in lower rear of lift motor cover, and holes in battery box tabs)

7. Tilt the battery box to the upright position. The two (2) mounting tabs on the upper rear of the battery box should enter inside of the lower end of the lift motor cover.
8. Align the holes in the battery box mounting tabs with the holes in the lower rear of the lift motor cover and the metal sleeve. NOTE: Ensure that the battery cables are not kinked or pinched between the battery box and the outer lift tube assembly. Push any excess battery cable into the battery box.
9. Insert the battery box retaining bolt through the square hole in the left side of the lift motor cover. (Determine the left side of the unit by facing the same direction that the trailer tongue is pointing.)
10. Secure with wing nut. Do not tighten excessively as the plastic parts could be broken by over tightening.

!Δ WARNING: If the battery box retaining wing nut is lost, it must be replaced with a nylon inserted locknut type wing nut. A standard type wing nut may loosen and fall off due to vibration. This could lead to the battery box opening up and dumping the battery onto the ground or roadway.

From time to time, it may be necessary to clean the battery terminals due to corrosive buildup. If this becomes necessary, disconnect the battery cables and clean the battery terminals and cable ends with a suitable fine wire brush. In extreme cases, the terminals and cable ends may need to be washed with a solution of baking soda and water.

TRANSMITTER BATTERY REPLACEMENT

A CR 2450 coin battery powers the remote control transmitter. To replace the battery slide the battery door from the back of the transmitter. The battery simply snaps in place. To remove the battery, simply lift one side of the battery with a fingertip and pop it out. When replacing the battery, ensure that the (-) side of the battery faces the battery holder (the (+) side will be showing when properly installed).

Diagram MM 5 (show back of transmitter with battery door open to side, identify (+) battery terminal)

FUSE

The PROJACK M1 utilizes a 60-amp time delay fuse. This fuse and its holder are located inline with the positive (red) battery cable. On installations that utilize the optional direct mount battery box, gain access to the fuse and its holder by opening up the battery box. Refer to the instructions in the BATTERY section. On other installations simply find the fuse and its holder, near the battery, inline with the positive (red) battery cable. After the fuse holder has been located, remove the protective rubber cover. If the fuse has been blown, remove it and replace it with a *9312 Maxi Plug-in Fuse* (60-amp, color code blue).

!Δ CAUTION! A blown fuse is a probable sign of an electrical overload. Before replacing a blown fuse, determine the cause for the electrical overload and correct it. Never try to defeat the function of the fuse by installing a higher amperage rated fuse or by shorting the fuse holder terminals.

Diagram MM 6 (show positive battery cable with fuse holder cover removed and fuse exposed)

DRIVE CHAIN CARE AND MAINTENANCE

The drive chains on the lower unit should be lubricated and checked for tension every six (6) months (or every 3 months if used heavily).

!Δ WARNING: The following instructions require the activation of some PROJACK M1 control functions. Step away from the unit before activating any control functions. Severe personal injury could result from accidental contact with moving parts.

1. Gain access to the lower drive unit.
 - a. Support the trailer tongue with the conventional trailer jack or by connecting the trailer to a vehicle.
 - b. Using the remote control, raise or lower the lower drive unit to an easily accessible position. Whatever position is chosen, the drive wheels must not be in contact with the ground.
2. Gain access to the drive chains.
 - a. Remove the three (3) screws that secure the lower drive unit safety cover.
 - b. Remove the safety cover.
3. Lubricate both drive chains with suitable chain lube. Be careful to avoid getting lubricant on the drive wheels as this could lead to diminished traction during normal operation of the unit. Remove any accidental application of lubricant to the drive wheels. It will be necessary to activate each drive motor with the remote control to gain access to the entire chain length (see warning above). Note: There are commercially available chain lubricants in aerosol form. These are recommended for their ease of application and their ability to cling to surfaces.
4. Check the chain tension. There should be between 1/8-3/8 inch free movement of each chain (see diagram). If adjustment is necessary, proceed as follows:

Diagram MM 7 (show drive chain with proper slack)

- a. Disconnect the negative battery cable. Refer to the BATTERY section.
- b. Loosen the four (4) mounting bolts on the corresponding drive motor.

Diagram MM 8 (show drive gearmotor mounting bolt locations)

- c. Slide the drive motor forward until the chain tension is within specifications.
- d. Tighten the four (4) mounting bolts and recheck chain tension, readjust if necessary. Tighten the mounting bolts to 100 in. lbs.
- e. Reconnect the negative battery cable.
5. Replace the lower drive unit safety cover and secure with screws. Tighten to 25 in. lbs.
6. Retract the lower drive unit to the full up position, if it isn't already.

GENERAL MAINTENANCE

Frequency of maintenance will be determined by frequency and duration of use.

Diagram MM 9 (show complete unit with mounting hardware, identify 3/8-inch & 1/2-inch diameter bolts)

1. Inspect the mounting hardware before every use.
2. Check for cracked or broken parts. Replace as necessary.
3. Check for paint damage and/or heavy rust build-up. Repair or replace as necessary.
4. Check for loose or missing fasteners. Replace any missing fasteners with comparable units rated at grade 5 or better.
 - i. Torque all 3/8-inch diameter bolts (bolts and nuts with a 9/16-inch hex) to 25 ft. lbs.
 - ii. Torque all 1/2-inch diameter bolts (bolts and nuts with a 3/4-inch hex) to 70 ft. lbs.
5. Check the lower drive unit pivot bolt. Torque to 40 ft. lbs.

Diagram MM 10 (show lower rear view of unit, identify pivot bolt)

6. Inspect the tire/wheel assemblies. Replace as necessary.
7. Inspect the direct mount battery box, if used, for cracked or broken mounting points. Replace as necessary.
8. Inspect the protective/safety covers. Replace as necessary.
9. Inspect the wiring harness for frayed or broken wires and for worn or missing insulation. Replace as necessary.
10. Inspect the ON & OFF pushbutton covers for cracks or deterioration. Replace as necessary.

(INSERT TROUBLESHOOTING GUIDELINES)