



Installation and Operations Manual for

Midnight Series

ATV/UTV Winch

Thank you for purchasing a Midnight Series Winch from MotoAlliance. Midnight Series winches are sold by dealers around the world and are known for premium performance at prices people can afford. Please take time to thoroughly read through the following instructions.

I. SAFETY PRECAUTIONS

As operator of this product, the responsibility for safe operation ultimately lies with you. It is important that you read and understand all the safety precautions and operating instructions prior to installing and operating your winch. Failure to understand that proper operation of this product can result in serious injury and/or property damage. Please begin with the following general safety information.

Load Capacities and Instructions

1. Maximum working load capacity is on the first layer closest to the drum. Do not overload. Do not attempt prolonged pulls at heavy loads. Overloads can damage the winch and/or cable and create unsafe operating conditions.
2. Do not move the vehicle to assist the winch in pulling the load. **This is considered towing** which can damage the winch in an obvious way and will void the warranty.
3. Never use the winch for lifting or moving people.
4. **The winch is not designed for hoisting overhead.** Each winch is equipped with a permanent magnet motor and is designed for

intermittent duty winching. Using as a hoist will void the warranty.

5. Use caution when pulling or lowering a load up and down a ramp or incline. Keep people, pets, and property clear of the path of the load.
6. When using a winch to move a load, place the vehicle transmission in neutral, set the vehicle parking brake and chock the wheels.
7. Do not use the winch to hold loads in place – for example, it should not be used to tie down a winch on a trailer. Please use tie-down straps.

Steel Cable / Synthetic Rope Usage

1. Cables are installed under minimal load at the factory. **It must be respoiled onto the drum under minimum 500lb load** to take the “flex” out of the line so that the outer layers will not draw down onto the inner layers and damage the winch and/or cable. Please see *Cable / Rope and Rubber Line Stopper Installation* under the Installation Instructions section for more information.
2. Cables will unwind quickly the first time the gears are unengaged. Hold the cable with your thumb as you disengage using the freespool knob to prevent tangling the cable on the drum (“bird’s nest”). This condition will disappear as the cable ages and the flex is taken out of the line.
3. Cables must be guided when spooling onto the winch. This may involve stopping the pull and checking the cable periodically, particularly when pulling at severe angles. If it is not winding in evenly (if it is piling upon either end), stop

and tie off the load, re-align the cable, and begin again. Simply winching in the cable without checking can cause serious damage.

4. When using the freespool option, there cannot be any pressure on the cable or the mechanism could ruin. Unwind the cable slightly with the switch and motor to create slack in it before disengaging the gears.
5. Always stand clear of the cable when winching in case of breakage. Inspect the cable frequently. A frayed cable should be replaced immediately to prevent injury to people and damage to vehicles.

For Safety:

- Use leather gloves when handling the cable
 - Put a damper blanket or heavy blanket on steel cables when under load
6. Never put fingers through the clevis hook when winching. Doing so may cause the loss of a finger.
 7. When moving a load, always make sure the cable is taut. If a nylon sling is used, check the attachment to the load.

General Safety Items

1. Never obscure the warning instruction label.
2. *Always* operate the winch with an unobstructed view of the winching operation.
3. Never release the freespool knob when there is a load on the winch.
4. Disable the winch when not in use so unauthorized people or children are not able to start the winch. We suggest also removing the key to prevent such use.

5. Do not operate under the influence of drugs, alcohol or medication.
6. Do not connect the winch to either 110V AC house current or 220V, as winch burnout or fatal shock can occur.
7. Always disconnect the battery connections before working with the winch so that it cannot be accidentally turned on.

II. INSTALLATION INSTRUCTIONS

Winch Mounting Information

1. It is recommended to use a mounting kit that has been engineered for specific make/model ATV/UTVs. Winch mount kits by other manufacturers may be used provided they follow the standard four bolt mounting pattern.
2. Midnight Series winches come with a universal mount plate that may be used as a fairlead mount. It may also be used to mount the winch on a flat surface. Modifications may need to be made to the plate for use on different ATV/UTVs.
3. Most often, winches are mounted with the cable coming from under the spool. In certain instances, (such as the Honda Rancher 420) cable will come from the top of the spool.
4. Detailed mounting instructions are included in VIPER winch mounting kits.

Electrical Information

DO NOT ATTEMPT TO INSTALL WIRING WHEN THE BATTERY IS CONNECTED!

DISCONNECT VEHICLE GROUND AND POSITIVE BATTERY LEADS FROM THE BATTERY BEFORE BEGINNING.

Severe injury from hazardous and flammable materials may be released or ignited. Wear eye protections and remove all metal jewelry. Do not lean over battery when making connections.

1. When attaching wires to the motor or contactor terminals, hold the inner nut with a wrench while tightening the outer nut with a second wrench. Do not allow the terminals to rotate in their housings. Rotation may cause internal wire damage or part misalignment.

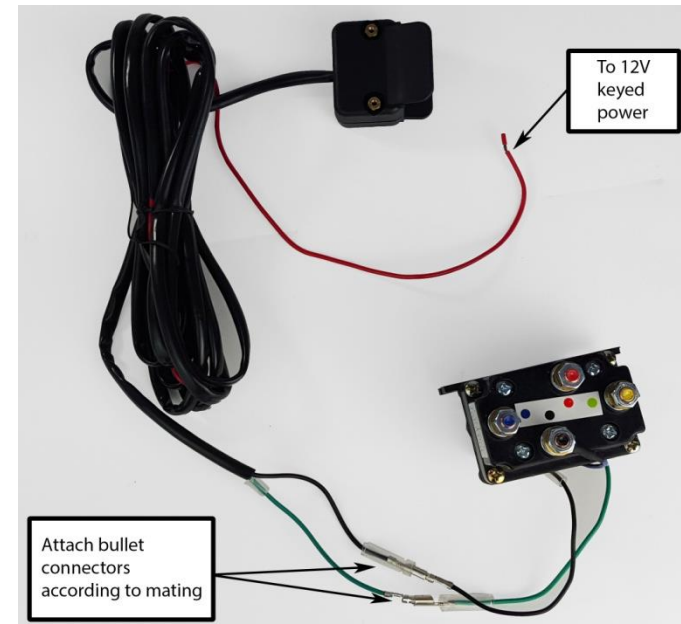
2. CONTACTOR LOCATION:

The contactor separates the winch from its power source when not in use. It is recommended that the contactor be mounted close to the battery in a clean, dry location.

Typical locations are in or near the glove compartment or storage box and on some models, under the seat. Make sure the location chosen allows sufficient clearance from all metal components such as frame tubes. Drill mounting

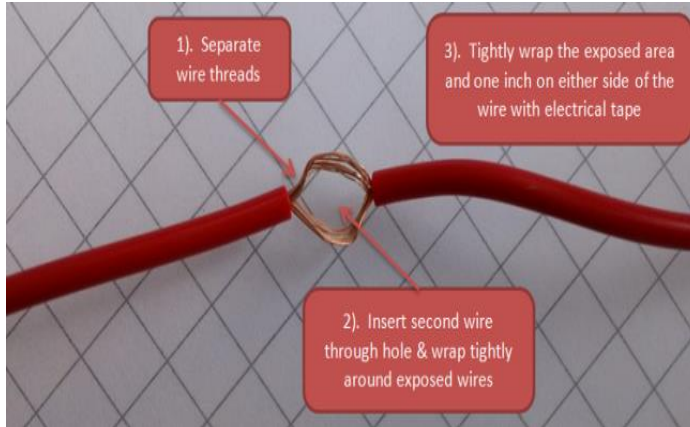
holes once a location is found but do not install as it is easier to wire the contactor prior to mounting.

3. SWITCH MOUNTING and INSTALLATION:



- a. Turn off the machine ignition and disconnect the negative battery terminal.
- b. Attach the handle bar switch to the handle bar using the included mount.
Note: use a piece of electrical tape to prevent rotation on the bar.
- c. Route the wiring harness back to the contactor/solenoid avoiding sharp edges and hot surfaces.
- d. Splice the end of the red wire to a key controlled auxiliary power wire on the ATV/UTV following the instructions shown below.

Please Note: The wire should only have power when the ignition key is turned on.



- e. Attach the two bullet connectors to the corresponding connectors on the winch contactor/solenoid.

4. BATTERY CONNECTION:

When routing the wires, the appropriate terminals should be located near the battery, switch, mounting point and winch. Installation requirements will vary depending on the winch and vehicle.

Note: If the wires are not long enough to reach the battery, switch mounting point, and winch, switch the wires or increase the length of the wiring harness.

Ensure that the wiring harness does not interfere or come in contact with any hot or moving engines, suspension, steering, braking or exhaust parts.

Attach the battery wires and the winch wires to the contactor locations as shown below.

Note: Do not connect the battery at this time.



- Connect BLUE post to the winch BLUE post
- Connect YELLOW post to the winch YELLOW post
- Connect RED post to the battery POSITIVE post
- Connect BLACK post to the battery NEGATIVE post

Cable / Rope and Rubber Line Stopper Installation

The first layer around the winch drum should be put on close and tight. New cables/ropes must be wound onto the drum of the winch under a load of at least 500lb. Cables/Ropes are not wound on the winch under load at the time of production.

1. Completely unspool the steel cable / synthetic rope on the winch and remove from the winch.

2. Thread the cable/rope through the hole on the rubber line stopper.
3. Attach the cable/rope back to the winch.
4. Attach the clevis hook to a solid anchor point such as a large tree or another vehicle.
5. Put the ATV/UTV in neutral.
6. Using the handle bar switch, a cabled/tether remote switch, or a wireless remote, slowly wind the cable back onto the winch.
7. Ensure that the cable winds tight, even rows onto the drum. If the cable starts to pile up on one side or becomes tangled, stop winching and power out the cable until the tangled rows are off the drum. Respool in tight, even layers.
8. Stop the winch when the vehicle is about 10 feet away from the anchor point.
9. Let the tension out of the rope and disconnect the clevis hook from the anchor.
10. Attach the hand saver strap to the clevis hook.
11. Hold onto the hand saver strap to spool in the rest of the cable. Do not put your fingers through the winch hook.
12. Carefully spool in the remaining cable under light tension by pulling back on the rope while pulsing the switch. If a rubber line stopper is being used, spool the cable in until the hook is snug against the stopper.

III. WINCH OPERATION

Freewheel / Freespool Operation

1. Move the freewheel clutch knob to disengage. If there is load on the drum, the clutch may not move easily. **DO NOT force the clutch knob**. Release the tension on the drum by letting out some of the cable with the “power out” function.
2. Pull out the desired length of cable and secure to the anchor point or load. Check to ensure there are at least five turns of cable remaining on the drum.
3. Re-engage the drum by returning the clutch to the engaged position. **FREEWHEEL MUST BE ENGAGED** before winching. Never attempt to free or engage the knob while the drum is turning.

Submersion, Heavy Use and Winch Care

1. The winch is an electrical device designed to hold up under extreme conditions as long as it is cleaned, inspected and serviced on a regular schedule. The frequency will depend on operating conditions, frequency of use and common sense.
2. For very heavy pulls, operate the winch in 30 second intervals with pauses of at least one minute to avoid overheating the winch.
3. The freespool knob is not fully sealed and is the most susceptible to environmental conditions such as mud, sand and silt. This can be easily removed and cleaned should it begin to stick.
4. The motor and gears are fully sealed and submersible. However, mud, sand, silt and water are **HIGHLY CORROSIVE** and can degrade the seals and lubrication

VI. TROUBLESHOOTING

Please observe the following troubleshooting tips for further help in operating your winch:

Symptom	Possible Cause(s)	Corrective Action
Motor will not operate or runs in one direction only	<ol style="list-style-type: none"> 1. Switch inoperative or wired incorrectly. 2. Broken wires or bad connection. 3. Damaged motor. 	<ol style="list-style-type: none"> 1. Replace Switch. 2. Check for poor connections. 3. Replace or repair motor.
Motor runs extremely hot	<ol style="list-style-type: none"> 1. Long period of operation. 2. Damaged motor. 	<ol style="list-style-type: none"> 1. Allow to cool. 2. Replace or repair motor.
Motor runs but with insufficient power or line speed	<ol style="list-style-type: none"> 1. Weak battery. 2. Battery to winch wire too long. 3. Poor battery connection. 4. Poor ground. 5. Damaged motor. 	<ol style="list-style-type: none"> 1. Recharge or replace battery, check charging system. 2. Keep winch within distance allowed by lead wires. 3. Check battery terminals for corrosion. Clean as required. 4. Check and clean connections. 5. Replace or repair motor.
Motor runs but drum doesn't turn	<ol style="list-style-type: none"> 1. Clutch not engaged. 	<ol style="list-style-type: none"> 1. Engage Clutch
Winch runs backward	<ol style="list-style-type: none"> 1. Motor wires are reversed. 2. Switch sires reversed. 3. Switch installed incorrectly. 	<ol style="list-style-type: none"> 1. Recheck wiring. 2. Recheck wiring. 3. Check switch installation.
Winch will not hold load	Excessive load.	Reduce load or double line.
Contactors only runs one way, or hums	Connections "stuck" on inside.	Lightly tap with hammer to break apart connections.