

# **INSTALLATION AND PARTS MANUAL**

**REMOTE CONTROL**  
**PACKAGE**  
**99100160**

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# INTRODUCTION

This manual was written for the assembly, installation and maintenance of the optional Remote Control Package. Most importantly, this manual provides an operating plan for safe use. Refer to the Table of Contents for an outline of this manual.

Please keep this manual with your machine at all times as reference material and so it can be passed on to the next owner if the machine is sold.

We require that you read and understand the contents of this manual COMPLETELY, especially the chapter on SAFETY, before attempting any procedure contained in this manual.



The Society of Automotive Engineers has adopted this SAFETY ALERT SYMBOL to pinpoint characteristics that, if NOT carefully followed, can create a safety hazard. When you see this symbol in this manual or on the machine itself, BE ALERT!, your personal safety and the safety of others, is involved.

• Defined in the next column, are the SAFETY ALERT messages and how they will appear in this manual.



Information, that if not carefully followed, can cause serious personal injury or death!



Information, that if not carefully followed, can cause minor injury or damage to equipment!

*NOTE: Additional information concerning the equipment or the procedure that may or may not be contained elsewhere in this manual.*

## FCC STATEMENT

FCC I.D. I7C - MM7 - 07 – 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 undesired operation.

(CANADA)

Complies with (DOC) GRR 11 6.(4), Enconformite Avec (MDC RGR 11 6.(4))

**BE AWARE! It is illegal to remove, deface or otherwise alter the safety decals mounted on this equipment.**

Record the Serial Number in the space provided below as a handy record for quick reference. The Serial Number Plate for the Transmitter Unit is located on the inside of the Battery Compartment. The Serial Number Plate for the Receiver Unit is located on the outside of the Cover. This plate contains information that your Dealer needs to answer questions or to order replacement parts, if needed, for your unit.

NAME PLATE DATA	
SERIAL NUMBER TRANSMITTER _____ (Located Inside Battery Compartment)	
SERIAL NUMBER RECEIVER _____ (Located On Outside Of Cover)	
DATE OF PURCHASE _____	
	(FILL IN)

DEALER	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE ( ) - _____	
	(FILL IN)

ORIGINAL PURCHASER	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE ( ) - _____	
	(FILL IN)

We reserve the right to make changes or improve the design or construction of any part(s) without incurring the obligation to install such parts or make any changes on any unit previously delivered.



## SAFETY



**BEFORE ATTEMPTING ANY PROCEDURE IN THIS BOOK, READ AND UNDERSTAND ALL THE SAFETY INFORMATION CONTAINED IN THIS SECTION. IN ADDITION, ENSURE ALL INDIVIDUALS WORKING WITH YOU ARE ALSO FAMILIAR WITH THESE SAFETY PRECAUTIONS.**

**REMEMBER** The careful operator is the best operator. Most accidents are caused by human error. Certain precautions must be observed to prevent the possibility of injury or damage.

**ALWAYS** wear seat belt and shoulder harness when driving, or when riding as a passenger in the vehicle. Hidden obstructions can cause the vehicle to stop suddenly while plowing snow, resulting in serious injury if proper safety gear is not being worn.

**ALWAYS** insert the cylinder lock when plow is not in use. If the cylinder lock is not installed, the plow blade could inadvertently drop and cause serious injury.

**ALWAYS** check the job site for terrain hazards, obstructions and people!

**NEVER** exceed 10 mph when plowing. Excessive speed may cause serious injury and damage to equipment and property if an unseen obstacle is encountered while plowing.

**ALWAYS** position blade so it does not block path of headlamp beam. Do not change blade position while traveling. An incorrect plow position blocking headlamp beam may result in an accident.

**NEVER** exceed 45 mph when snow plow is attached to vehicle. Braking distances may be reduced and handling characteristics may be impaired at speeds above 45 mph.

**NEVER** operate a snow plow when under the influence of alcohol, drugs or other medications that could hamper your judgement and reactions. An accident may result in serious injury or death to other persons or yourself.

**ALWAYS** shut off the vehicle engine, place the transmission in Neutral or Park, turn the ignition switch to the "OFF" position and firmly apply the parking brake of the vehicle before attaching or detaching the blade from the vehicle or when making adjustments to the blade.

**ALWAYS** lock the vehicle when unattended to prevent unauthorized operation of the plow.

**ALWAYS** inspect lift system bolts and pins whenever attaching or detaching the plow, and before traveling. Worn or damaged components could result in the plow dropping to the pavement while driving, causing an accident.

**ALWAYS** keep hands and feet clear of blade and A-Frame when attaching or detaching plow.

**NEVER** place fingers in A-frame or mount lug holes to check alignment when attaching snow plow. Sudden motion of the plow could severely injure a finger.

**NEVER** stand between the vehicle and blade or directly in front of blade when it is being raised, lowered or angled. Clearance between vehicle and blade decreases as blade is operated and serious injury or death can result from blade striking a body or dropping on hands or feet.

**NEVER** work on the vehicle without having a fully serviced fire extinguisher available. A 5 lb. or larger CO2 or dry chemical unit specified for gasoline, chemical or electrical fires, is recommended.

**NEVER** smoke while working on the vehicle. Gasoline and battery acid vapors are extremely flammable and explosive.

**ALWAYS** operate vehicle in a well-ventilated area. The carbon monoxide in exhaust gas is highly toxic and can cause serious injury or death.

**NEVER** allow hands, hair or clothing to get near any moving parts such as fan blades, belts and pulleys. Never wear neckties or loose clothing when working on the vehicle.

**NEVER** wear wrist watches, rings or other jewelry when working on the vehicle or individual equipment. These things can catch on moving parts or cause an electrical short circuit that could result in serious personal injury.

**ALWAYS** wear safety goggles when working the vehicle to protect your eyes from battery acid, gasoline, and dust or dirt from flying off of moving engine parts.

**ALWAYS** be aware of and avoid contact with hot surfaces such as engine, radiator, and hoses.

**ALWAYS** wear safety glasses with side shields when striking metal against metal! In addition, it is recommended that a softer (non-chipable) metal material be used to cushion the blow. Failure to heed could result in serious injury to the eye(s) or other parts of the body.

**NEVER** use your hands to search for hydraulic fluid leaks; escaping fluid under pressure can be invisible and can penetrate the skin and cause a serious injury! If any fluid is injected into the skin, see a doctor at once! Injected fluid **MUST BE** surgically removed by a doctor familiar with this type of injury or gangrene may result.

**REMEMBER** it is the owner's responsibility for communicating information on the safe use and proper maintenance of this machine.

# INSTALLATION

## ASSEMBLY TOOLS NEEDED

Sockets	3/16" — 7/16"
Wrenches	3/16" — 7/16"
Screw Driver	
Drift	3/16"
Drills	5/32" – 11/64"

**IMPORTANT:** In order to minimize current draw when the plow is attached to the vehicle and not in use make certain the down solenoid is deactivated by momentarily touching the UP switch.

1. Locate Receiver Box (#2) on the underside of hood away from moving parts, exhaust and any obstructions when the hood is in the closed position.

## INSTALLATION NOTES

1. Read all instructions carefully before attempting installation.

## MOUNTING INSTRUCTIONS



### WARNING

Disconnect battery ground and positive wires from vehicle battery or batteries. Serious damage to equipment could result from inadvertent grounding of hot wires.

**FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.**



### WARNING

Keep Transmitter in a SAFE location in order to prevent inadvertent operation by personnel unfamiliar with its operation and safe use.

Remember the Snow Plow is operational with keys out of the vehicle ignition!

**FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.**

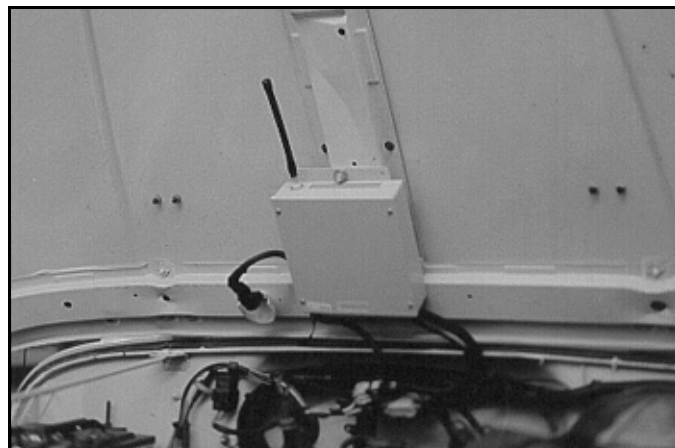


Figure 1-Showing Center Rib Mount (Jeep)

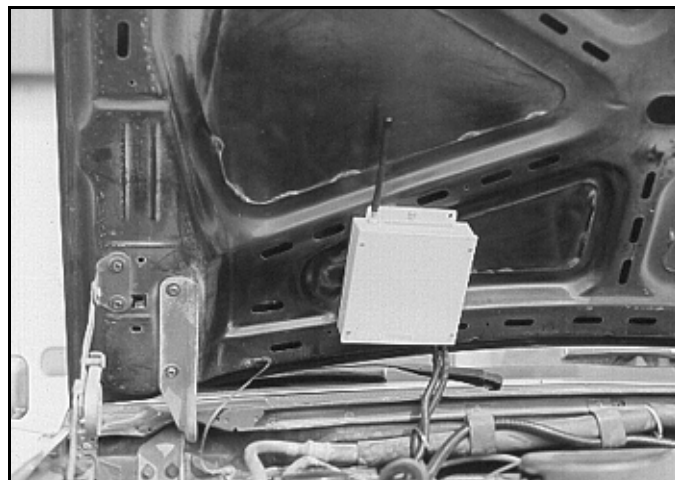


Figure 2-Showing Offset Mount (Ford)



## CAUTION

Installer should use his best judgement to decide the best location to mount the receiver box, making sure that hood ribs are used to mount receiver box.

Use care to insure that Receiver Box will not contact engine components when hood is closed. If Receiver Box contacts engine parts the Receiver Box will be damaged and the hood may be dented.

2. Using Receiver Box as a template mark location for at least two (2) Mounting Screws (#17). Drill with 11/64" Drill and secure Receiver Box with Mounting Screws.



## CAUTION

In drilling ribs be sure to drill only through rib, Not through hood!

3. Attach Adapter Harness (#18) to Receiver Box connectors and connect other end to vehicle power harness.

4. Route harnesses away from moving parts and exhaust manifolds. Secure to existing vehicle harness and/or structure with Cable Ties (#16) as required.



## CAUTION

Keep wiring harness away from moving parts, sharp edges and areas of extreme heat to avoid electrical failure and fire.



## WARNING

Disconnect vehicle NEG. (-) (Ground) battery cable while performing Steps 5 - 13 to avoid serious bodily injury from fire or explosion.

**FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.**

*NOTE: STEPS 5-11 use components from Power Pack Package*

5. Attach the small ring terminal of the solenoid ground wire to other small terminal of the start solenoid switch.

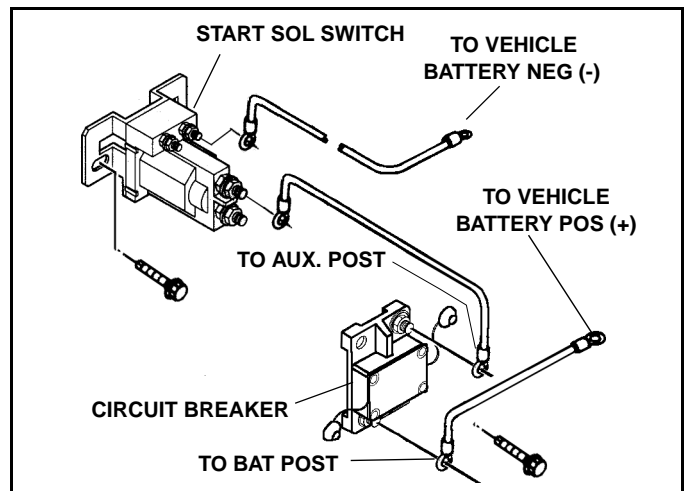


Figure 3

6. Attach one of the 2' long Red battery cables to the Aux. Post of the circuit breaker and one of the large terminals of the start solenoid switch. (See Figure 3)

7. Attach the heavy Red wire from the vehicle harness to the remaining large terminal of the start solenoid switch.

8. Position the start solenoid switch close enough for the remaining negative lead on the solenoid to reach the vehicle battery NEG (-) comfortably, and mount it with two (2) 1/4" x 1" self-tapping screws.

**IMPORTANT: The Circuit Breaker and Start Solenoid Switch must be placed in a location that will avoid excessive heat. DO NOT locate these parts near the engine exhaust manifold. A preferred location is one that will receive good air flow from the radiator fan but protected from excessive engine heat.**

9. Mount the circuit breaker with two (2) #10 x 1" self-tapping screws.

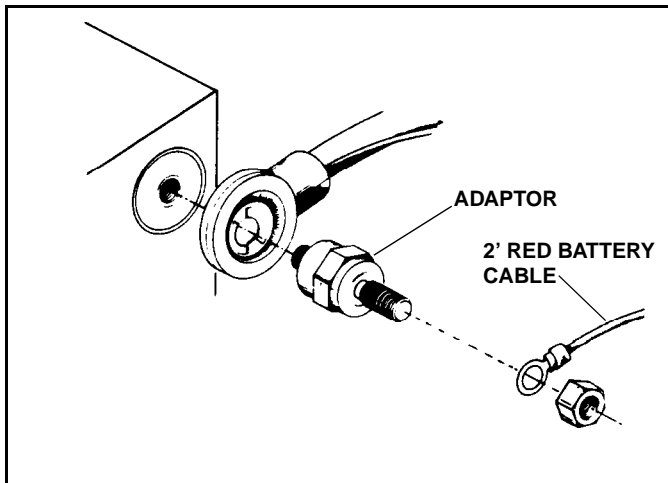


Figure 4

*NOTE: If the vehicle has a "side post" battery, it is recommended that adaptors be purchased to make connections at the vehicle battery easier. (See Figure 4) Adaptors can be purchased locally or are available from your Sno-Way Dealer in packages of two (2), Part #96100773.*

10. Attach the other 2' long Red battery cable to the battery terminal of the circuit breaker and to the POS. (+) battery terminal. (See Figure 4)

11. Attach Brown/Tan Wire from Remote Adaptor Harness to the open small terminal of the Start Solenoid Switch.

12. Connect Red/Black wire from Adapter Harness to power lead on Solenoid. (Power Lead is the 4 Gage Red Wire routed from the vehicle Circuit Breaker to the Solenoid.)

13. Attach Black/White Wire from Remote Adapter Harness to the Solenoid Terminal holding the battery ground wire.

14. Attach the vehicle harness negative wire, vehicle NEG (-) cable and start solenoid negative wire to the vehicle battery NEG (-) post.



## WARNING

**Make sure that Red Positive (+) lead goes to Positive (+) terminal on the battery and that the Black Negative (-) lead goes to the Negative (-) terminal on the battery. Reversed voltage may damage Controller and/or vehicle onboard systems.**

**FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.**

## REMOTE CONTROL THEORY OF OPERATION

### Raise Mode Of Operation

Operating the UP Contact energizes the 12VDC Motor causing the plow blade to raise.

Releasing the UP Contact de-energizes the 12 VDC motor causing the plow blade to stop. (See Plow Owners Manual for full operating details.)

### Lower Mode Of Operation

Operating the DOWN Contact energizes the Raise/Lower Solenoid, lowers the blade and establishes a Float Circuit. The Float Circuit allows fluid to enter and exit the Raise Cylinder allowing the blade to follow the contours of the ground. (See Plow Owners Manual for full operating details.)

### Angle Left or Right Mode Of Operation

Operating the Right or Left Contact energizes the 12 VDC Motor and either the Angle Left Solenoid or Angle Right Solenoid causing the Plow Blade to angle either right or left. (See Plow Owners Manual for full operating details.)

### DPS ON/OFF

Depressing this contact once will engage the Down Pressure System. (See Plow Owners Manual for full operating details.) Depressing this contact again will deactivate the Down Pressure System.

The DPS system is also deactivated when the Up Contact or the Down Contact are touched.

### AUX. ON/OFF

Can be used to activate rear work lights, Strobes, etc.

# USING THIS PARTS LIST

Below is parts listing with four columns. The first column is the "ITEM", the second is the "PART NUMBER", The third is the "DESCRIPTION" and the fourth is the "QUANTITY".

The "**ITEM**" is the number used in the corresponding illustration.

The "**PART NO.**" is the number used to order replacement parts. If a number does not appear in the column the part is only available by ordering the complete assembly.

The "**DESCRIPTION**" is the name of the replacement part. At times the name may be indented, this means that the indented parts are part of the preceding assembly.

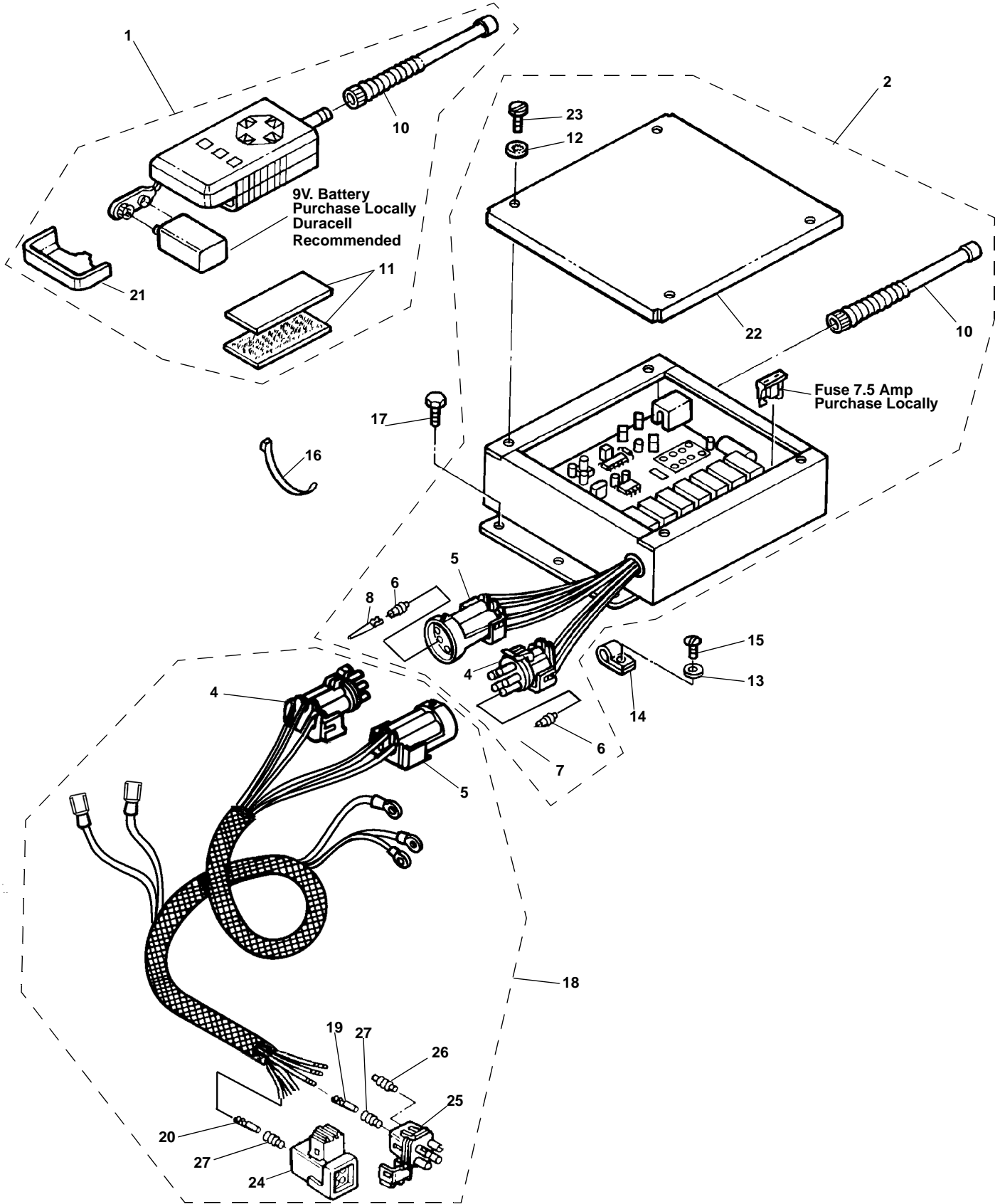
The "**QTY.**" is the quantity needed to service the assembly illustrated, not the complete product.

## PARTS LIST

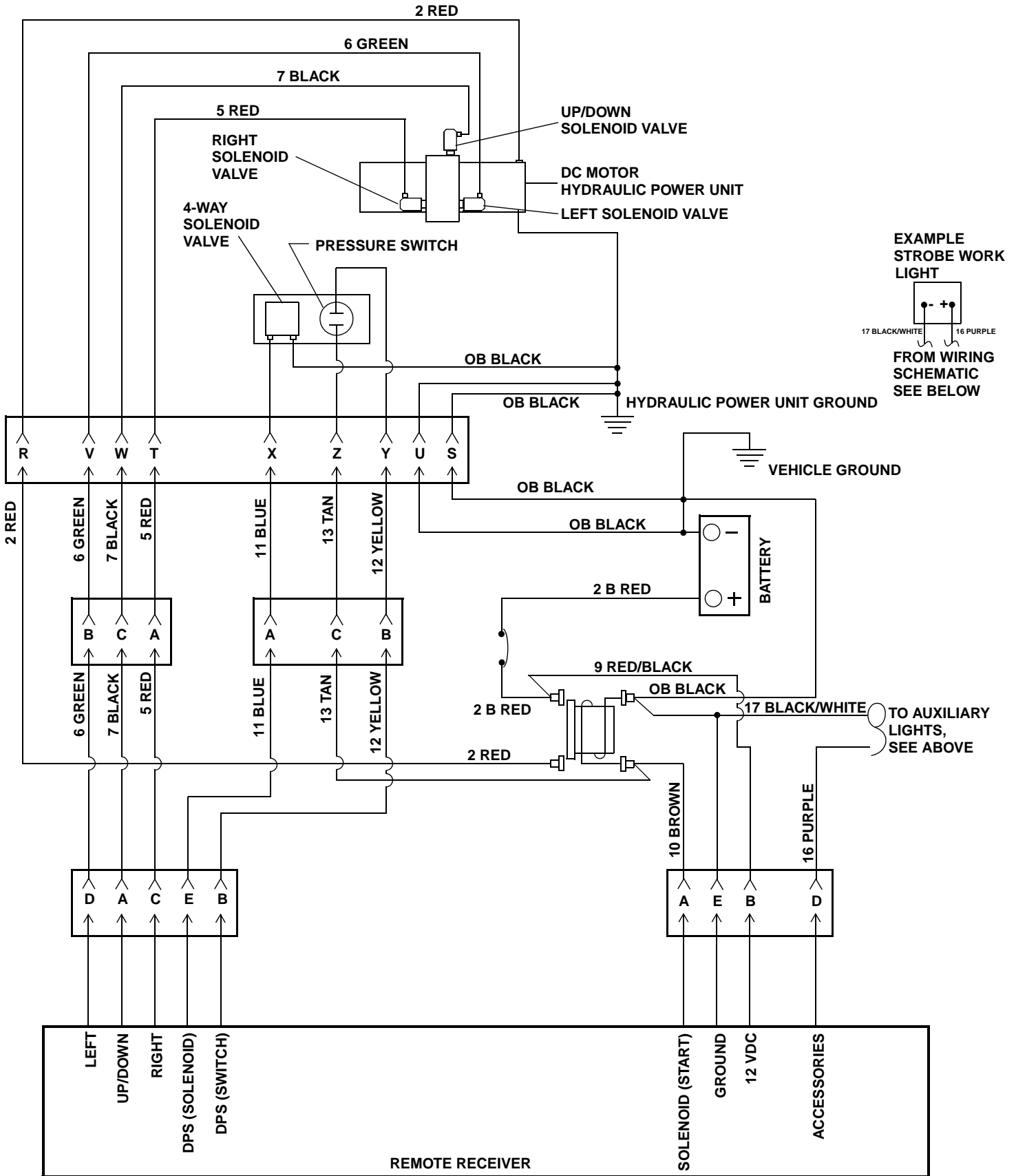
ITEM	PART NO.	DESCRIPTION	QTY.
1	96101672	Transmitter .....	1
2	96101673	Receiver.....	1
3	97100223	Decal, Return (Not Pictured).....	1
4	96100495	Connector, Plug .....	1
5	96100496	Connector, Socket.....	1
6	96101431	Seal, Wire .....	10
7	96002138	Pin (Male) .....	5
8	96002142	Socket (Female).....	5
9	96101455	Sleeve, Expandable (Not Pictured).....	2
10	96101659	Antenna .....	2
11	96101457	Fastener, Reclosable .....	2
12	98100086	Washer, Lock .....	4
13	98009064	Washer, Flat, #10.....	1
14	96101015	Clamp, Tube.....	1
15	98009172	Screw, #10-16 x 3/8" .....	1
16	96001227	Tie, Cable.....	4
17	98100063	Screw, #12-14 x 5/8" .....	4
18	96103109	Harness, Remote.....	1
19	96002142	Contact, Socket.....	8
20	96002138	Contact, Pin .....	8
21	96101661	Cover, Battery .....	1
22	96101660	Cover, Receiver .....	1
23	98100085	Screw, Machine.....	4
24	96002137	Connector, Socket.....	1
25	96002141	Connector, Plug .....	1
26	96002140	Plug, Silicone, Green .....	2
27	96002139	Seal, Silicone, Blue .....	11



# PARTS LIST



# WIRING SCHEMATIC REMOTE CONTROL (DOWN PRESSURE SYSTEM)



# SNO-WAY PLOWS

## LIMITED ONE-YEAR WARRANTY

SNO-WAY Warrants to the original retail purchaser for a period of one (1) year from the date of delivery from an authorized SNO-WAY Dealer that your new SNO-WAY Plow is free from defects in materials and workmanship if properly set up and operated in accordance with the recommendations set forth in SNO-WAY's Set-up and Operator's Manuals.

SNO-WAY Plows used by a dealer as a demonstrator shall be warranted only for the period of one (1) year from the date of delivery to said dealer and the first subsequent purchaser shall be entitled to the remaining warranty protection.

This warranty shall not apply to any item of equipment which has been repaired or altered outside the SNO-WAY factory or authorized SNO-WAY dealership or which has been subject to misuse, negligence or accident: neither shall it apply to equipment which has not been operated in accordance with SNO-WAY printed instructions or has been operated beyond the SNO-WAY'S recommended snow plow operating class.

**The Polycarbonate Moldboard is warranted to the original retail purchaser for a period of two (2) years from the date of delivery of the SNO-WAY Plow from an authorized SNO-WAY dealer and applies only to breakage of the Polycarbonate Moldboard. This warranty does not cover hazing, abrasion, yellowing, scratching or damage due to chemical attack. This warranty shall not apply to the polycarbonate moldboard which has been repaired or altered outside the SNO-WAY factory or authorized SNO-WAY dealership.**

To validate this warranty, your dealer and you must complete the enclosed Warranty Registration Card at time of purchase of the plow and return the Factory copy to SNO-WAY International, Inc. within ten (10) days following delivery of your new Plow.

To obtain warranty service, promptly return your Plow or any defective part at your expense to any authorized SNO-WAY dealer during the warranty period. Replacement or repair of defective or inadequate parts shall be performed without charge for labor or materials by such dealer at his regular place of business during regular business hours after inspection and determination that the warranty applies.

### EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, SNO-WAY makes no representation of warranty of any kind expressed or implied, including merchantability or fitness for particular purpose in respect to the equipment.

SNO-WAY shall not be liable for incidental or consequential damages for any breach of warranty, including but not limited to loss of use, inconvenience, rental or replacement equipment, loss of profits or other commercial loss.

No agent, employee or representative of SNO-WAY has any authority to bind SNO-WAY to any affirmation, representation or warranty concerning its equipment except as specificity set forth herein.

Certain limitations expressed herein are excludable in accordance with provisions of local law. Such limitations shall be deemed struck if such local law is applicable. All other limitations and provisions shall continue to apply.

**SNO-WAY INTERNATIONAL, INC.**

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