



## **INSTALLATION INSTRUCTIONS**

THANK YOU FOR PURCHASING NOWEEDS EXHAUST DIVERTER SYSTEM. THIS PRODUCT WAS DESIGNED TO BE EASY TO INSTALL AND JUST AS EASY TO OPERATE. PLEASE READ INSTRUCTIONS FULLY IN ADVANCE - AND CALL US WITH ANY QUESTIONS 1.605.830.1146 BEFORE YOU INSTALL THIS PRODUCT.

FEEDBACK FROM YOU IS ALWAYS APPRECIATED. PLEASE LET US KNOW WHAT YOU LIKE / DISLIKE SO WE CAN CONTINUE TO IMPROVE WHAT WE FEEL IS THE COOLEST PERFORMANCE PRODUCT ON THE MARKET TODAY.

[www.noweeds.net](http://www.noweeds.net)

Patent # 6,584,767

### **- INCLUDED IN KIT-**

#### **NOWEEDS SINGLE-**

- 1- DIVERTER VALVE ASSEMBLY
- 1- CONTROLLER AND SWITCH ASSEMBLY
- 3- STAINLESS STEEL BAND CLAMPS
- \*WIRE TIES AND INSTRUCTIONS\*

#### **NOWEEDS DUAL-**

- 2- DIVERTER VALVE ASSEMBLIES
- 1- CONTROLLER AND SWITCH ASSEMBLY
- 6- STAINLESS STEEL BAND CLAMPS
- \*WIRE TIES AND INSTRUCTIONS\*

#### **WEEDS SINGLE-**

- 1- DIVERTER VALVE ASSEMBLY
- 1- CONTROLLER AND SWITCH ASSEMBLY
- 1- STAINLESS STEEL BAND CLAMP
- \*WIRE TIES AND INSTRUCTIONS\*

#### **WEEDS DUAL-**

- 2- DIVERTER VALVE ASSEMBLIES
- 1- CONTROLLER AND SWITCH ASSEMBLY
- 2- STAINLESS STEEL BAND CLAMPS
- \*WIRE TIES AND INSTRUCTIONS\*

PLEASE RESPECT STATE AND LOCAL LAWS  
CONCERNING EMISSIONS AND SOUND LEVELS.  
OPEN HEADERS ARE INTENDED FOR RACE OR  
OFF-ROAD USE ONLY

**STEP 1-** LIFT AND SUPPORT VEHICLE IN APPROVED OR REINFORCED AREAS WITH JACK STANDS OR HOIST.

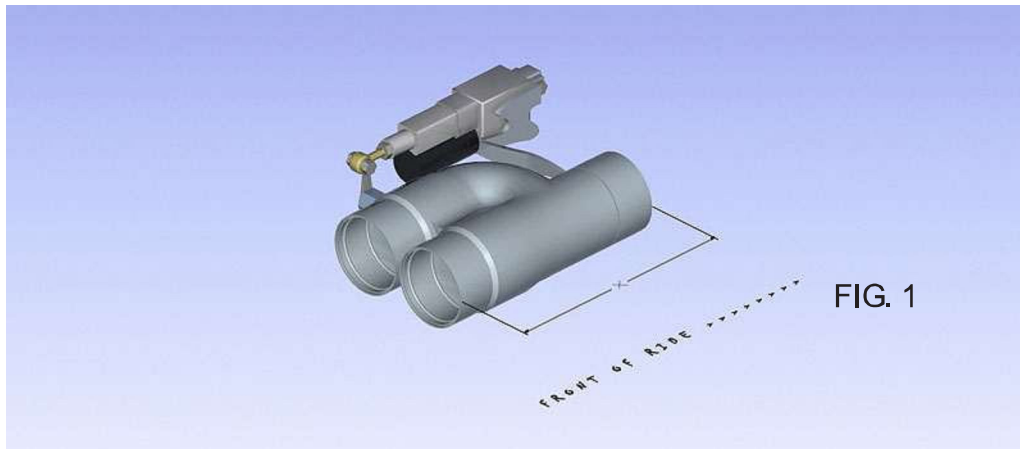


FIG. 1

**STEP 2-** DETERMINE TOTAL LENGTH OF DIVERTER "X" (SEE Fig. 1) WRITE THIS NUMBER DOWN. ALSO TAKE NOTE OF THE WIDTH AS WELL FOR DETERMINING PROPER PLACEMENT OF DIVERTER.

**STEP 3-** FIND BEST LOCATION FOR NOWEEDS THIS WILL BE AFTER CATALYTIC CONVERTER (IF APPLICABLE) AND BEFORE MUFFLER (SEE FIG. 2). KEEP IN MIND A PERFORMANCE MUFFLER AND / OR EXIT PIPE (NOT INCLUDED) NEED TO BE ROUTED AS WELL. THIS TAKES SOME PLANNING AND EVEN A FEW MOCK-UP TESTS TO GET IT RIGHT.

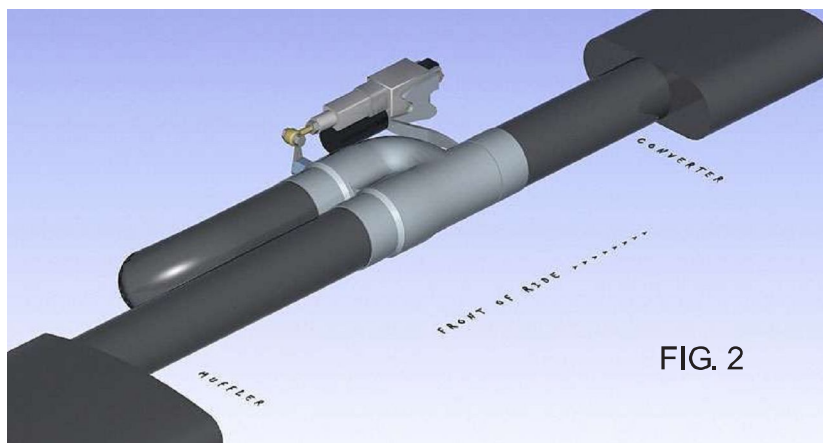


FIG. 2

**STEP 4-** ONCE LOCATION IS ESTABLISHED- CUT SECTION OF PIPE OUT AT LENGTH FROM Fig. 1 (SEE Fig 3) AND SAVE THIS PIECE NOWEEDS CAN BE TAKEN OUT AT A LATER TIME AND THIS PIECE OF PIPE CAN BE REUSED.

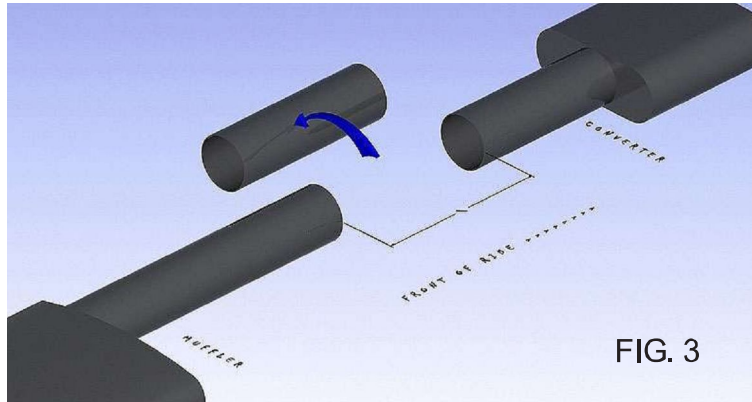


FIG. 3

**\*\*\*FOR WELD-IN APPLICATION GO TO PAGE 5\*\*\***

**STEP 5-** PULL 2 BAND CLAMPS TOGETHER FORMING A CYLINDER AND INSERT THE CLAMP BOLTS AND NUTS **\*\*DO NOT TIGHTEN YET\*\*** TAKE BOTH CLAMPS AND SLIDE THEM OVER THE EXISTING PIPE ON BOTH SIDES OF CUT THAT WAS MADE IN STEP 4- (SEE Fig4).

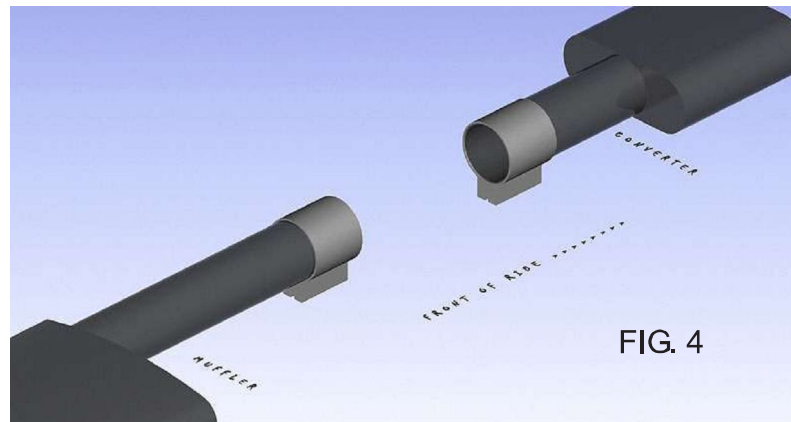
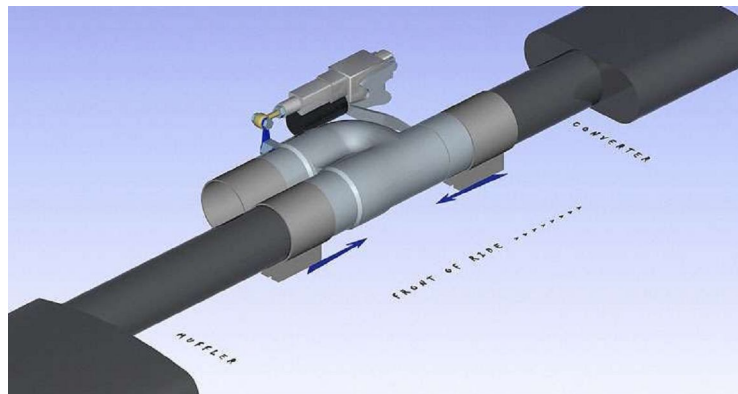


FIG. 4

**STEP 6-** CAREFULLY HOLD THE DIVERTER IN POSITION WITH SINGLE INLET FACING FRONT OF VEHICLE AND SLIDE CLAMPS TOWARD DIVERTER OVERLAPPING EXISTING PIPE AND DIVERTER INLET AND OUTLET PIPES. (SEE Fig. 5) SNUG DOWN CLAMP BOLTS BUT DO NOT TIGHTEN YET.



**STEP 7-** ROTATE THE DIVERTER INSIDE THE CLAMPS UNTIL IN THE RIGHT POSITION- THEN TIGHTEN BAND CLAMPS TO 50-70 ft. lbs.

**\*NOTE\* ORDER OF PIPES EXITING DIVERTER CAN BE SWAPPED IF NECESSARY**

**STEP 8-** YOU ARE NOW READY TO INSTALL PIPE FOR DIVERTED EX-HAUST. (SEE FIG. 6) THIS PIPE MAY OR MAY NOT INCLUDE A PERFORMANCE MUFFLER. **\*RACE OR OFF ROAD ONLY IF MUFFLER IS NOT USED\***

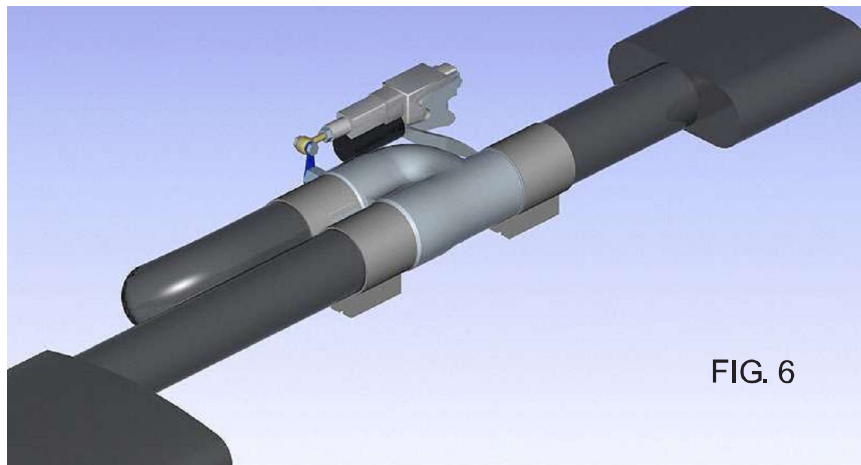


FIG. 6

**\*\*\*MAKE SURE SYSTEM HAS PLENTY OF SUPPORT- SOME EX-HAUST SYSTEMS HAVE A HANGER NEAR DIVERTER AND DON'T REQUIRE ADDITIONAL SUPPORT. ALL APPLICATIONS VARY\*\*\***

**GO TO PAGE 6 TO CONTINUE**

**\*\*\*WEEDS INSTALLATION CONTINUED FROM PAGE 3\*\*\***

**STEP 5-** CAREFULLY HOLD THE DIVERTER IN POSITION WITH SINGLE INLET FACING FRONT OF VEHICLE AND TACK-WELD INTO PLACE. (SEE FIG. 7) **\*\*MAKE SURE DIVERTER IS ROTATED PROPERLY BEFORE TACK-WELDING INTO PLACE.**

**AFTER TACK-WELDING BOTH ENDS YOU THEN CAN LAY A CONTINUOUS WELD ON EACH END OF THE DIVERTER.**

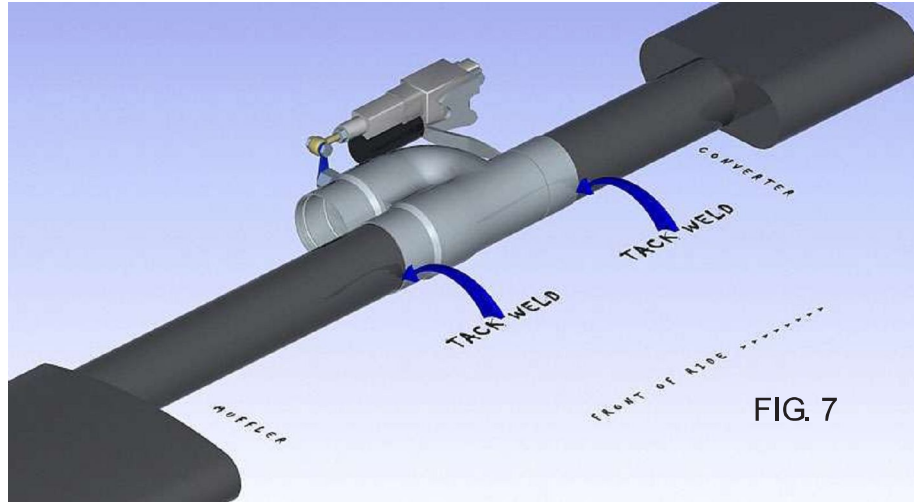


FIG. 7

**STEP 6-** YOU ARE NOW READY TO INSTALL PIPE FOR DIVERTED EXHAUST. (SEE FIG. 8) THIS PIPE MAY OR MAY NOT INCLUDE A PERFORMANCE MUFFLER. **\*RACE OR OFF ROAD ONLY IF MUFFLER IS NOT USED\***

**DUE TO CLOSE TOLERANCES BETWEEN PIPES, A FULL 360 DEGREE WELD CANNOT BE MADE; FOR A BETTER SEAL USE SUPPLIED CLAMPS INSTEAD OF WELDING.**

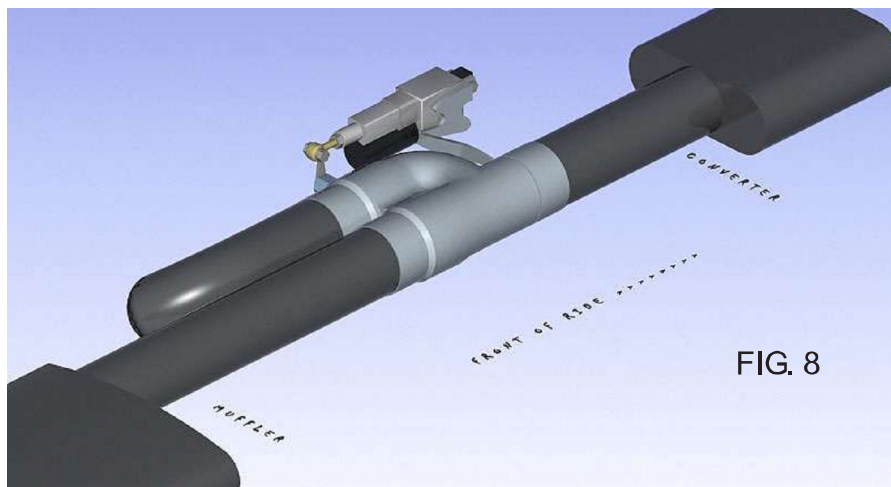


FIG. 8

**\*\*\*MAKE SURE SYSTEM HAS PLENTY OF SUPPORT- SOME EX-HAUST SYSTEMS HAVE A HANGER NEAR DIVERTER AND DON'T REQUIRE ADDITIONAL SUPPORT. ALL APPLICATIONS VARY\*\*\***

**\*\*\*TO PAGE 6 TO CONTINUE\*\*\***

**I- FOLLOW WIRING/CONTROLLER INSTALLATION GUIDE.**

**II- TEST ACTUATOR TRAVEL, MAKING SURE EVERYTHING RUNS SMOOTH AND IS FREE OF OBSTRUCTIONS. IN DUAL SYSTEMS VERIFY THAT THE ACTUATORS MOVE IN SYNC (FRONT TO BACK) WITH EACH OTHER.**

**\*\*NOTE\*\* SLIGHT TENSION ON THE MOTOR PLATE IS ENGINEERED INTO DIVERTER TO MAINTAIN VALVE CLOSURE AND SAFEGUARD AGAINST DAMAGE TO VALVES OR ROTATING ASSEMBLY IN THE EVENT OF AN OBSTRUCTION. BE SURE DIVERTER MAINTAINS EQUAL PRESSURE ON MOTOR PLATE IN OPEN AND CLOSED POSITIONS.**

**III- LOWER VEHICLE AND START IT UP. YOU CAN NOW CHANGE VOLUME AND PERFORMANCE FROM THE SWITCH AND SHOULD BE COMPLETE WITH THE INSTALLATION.**

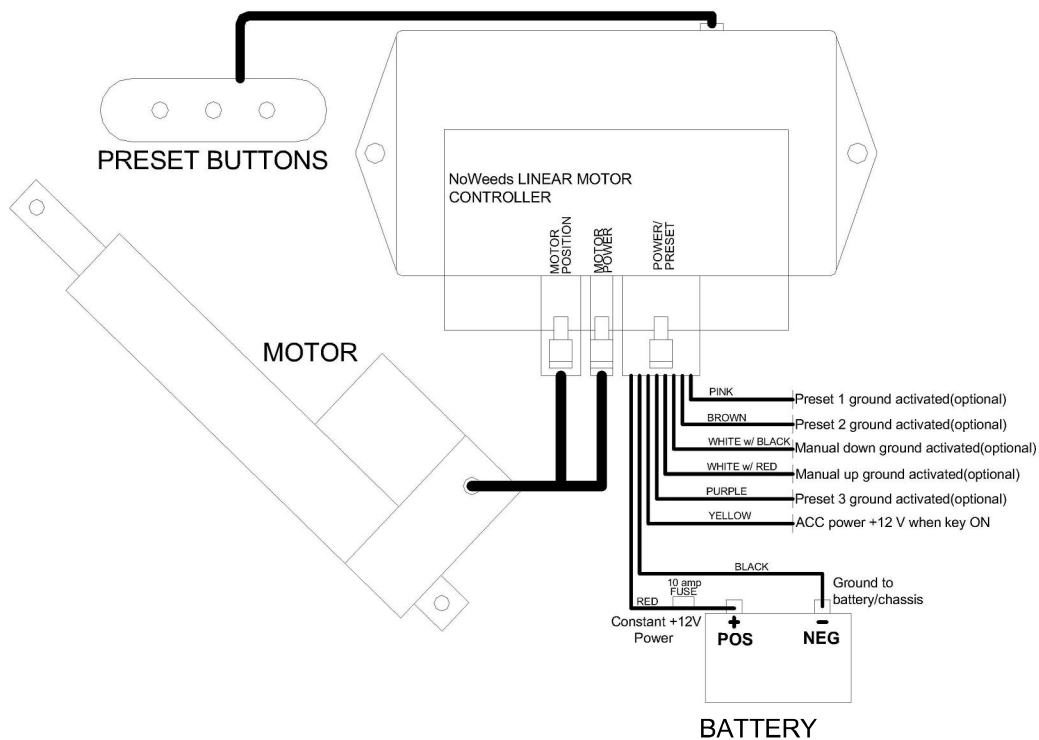
**MAINTENANCE-** YOUR NOWEEDS / WEEDS DIVERTER SYSTEM SHOULD BE RELATIVELY MAINTENANCE FREE. YOU SHOULD , HOWEVER CHECK FOR LEAKS AT CLAMPS OR WELDS INITIALLY AND ALSO CHECK TIGHTNESS OF THE HARDWARE AFTER A COUPLE OF HUNDRED MILES AND OCCASSIONALLY CHECK FOR DIRT BUILDUP AROUND THE ACTUATOR AND SHAFT / PIVOT ARM AND CLEAN IF NECESSARY.



**THATS IT. ONCE AGAIN, THANKS FOR YOUR BUSINESS! BE SURE TO GIVE US A CALL OR STOP ONLINE WITH ANY QUESTIONS OR COMMENTS.**

## WIRING INSTRUCTIONS

### PAC-3100 NOWEEDS LINEAR MOTOR CONTROLLER



#### Switch 1 (wire jumper for factory use only)

- |             |   |                                |
|-------------|---|--------------------------------|
| ON(shorted) | - | enables preset buttons 1 and 3 |
| OFF(open)   | - | only position 2 can be saved   |

#### Features

The PAC-3100 is designed to control a single linear actuator/motor. . The PAC-3100 has many convenient features which include:

- 1 User programmable positioning
- 2 Stylish, lighted push button control
- 3 Remote, ground activated, input lines to control the system with a remote system

#### Wiring

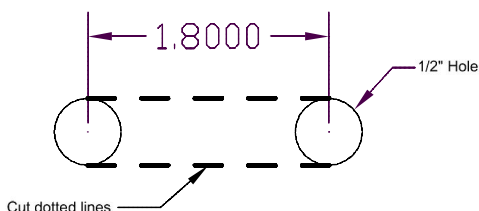
- |        |   |   |
|--------|---|---|
| BLACK  | - | Connect to a main ground location   |
| RED    | - | Connect to fused constant 12 volt power   |
| YELLOW | - | Connect to switched 12 volt power<br>(An accessory terminal will work for this) |



PURPLE	-	Optional remote ground trigger for preset 3
PINK	-	Optional remote ground trigger for preset 1
BROWN	-	Optional remote ground trigger for preset 2
WHITE w/ BLACK	-	Optional remote ground trigger for Manual LOUD
WHITE w/ RED	-	Optional remote ground trigger for Manual quiet
PRESET BUTTONS	-	To mating 4 pin connector

## Mounting

The preset buttons require an oval hole to be cut for mounting, keeping in mind the buttons can be mounted horizontal or vertical. Drill two 1/2" holes 1.8" apart on center, then cut from hole to hole.



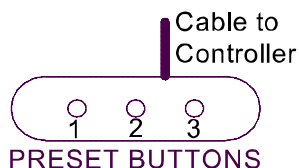
Once the hole is cut insert the button panel from the front. From the back, slide the two L-clamps over the studs and secure with the supplied lock washers and nuts.

## Preset Disable (SWITCH 1)

This “switch” is activated by placing a jumper wire between the pads on the circuit board to simulate the switch, since it is not actually placed on production units. When the jumper is in place and the key is on presets 1 and 3 are enabled and can be changed. These two locations, 1 & 3, are the open and close for the noweeds exhaust cut outs and are set at the factory. Only position 2 is user settable to allow for different sounds the partially opening the cut outs. Preset 2 can be set with or without the jumper.

## Preset Buttons (Preset LOUD and quiet):

There are three buttons that represent a preset position. The drawing below shows the button numbers, button 1 is furthest from the wires that connect the buttons to the controller. To move the motors in press and hold buttons 1 and 2 at the same time, the motors will begin moving in until the buttons are released. Holding button 2 and 3 at the same time will move both motors out as long as the buttons are held.





## Saving and Setting the Preset

Each button on the button panel represents a preset position. The user programmable position, button 2, can be changed or set as many times as desired. Follow the steps below to set the heights.

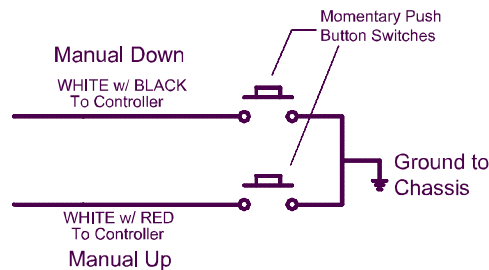
- 1 Use Manual LOUD and Manual quiet to move the motors to get to the desired position (buttons 1 & 2 or 2 & 3).
- 2 Once at the desired sound level, press and hold button 2 for about 5 seconds.
- 3 The other buttons will flash indicating that the position has been saved
- 4 Release button

**NOTE:** To move to a preset push and release a button. The motors will move automatically to the preset position for that button. If any button is pressed while moving to a preset position the motors will stop at the current position.

## Optional Presets and Remote Manual Up/Down

The five optional remote wires coming from the controller can be used to activate the linear motors via remote system, such as a Dakota Digital Commander Series. The option preset wires: pink, brown, and purple represent preset heights 1, 2, and 3 respectively. To activate a move to position the wire needs to be momentarily grounded; this is how most outputs of remote systems work. Check your remote system owner's manual to insure that the outputs are grounding.

The Manual LOUD (white/red) and Manual quiet (white/black) can also be tied to a remote system to move the linear actuators in or out. The wires are also ground activated as long as they are grounded; connecting them to a momentary ground will only move the motors a short distance. The Manual LOUD/quiet wires can also be connected to a momentary push button switch. Hooking one side of a push button switch to the momentary LOUD/quiet wire of the PAC-3100 and the other side to ground will allow the linear actuator to move as long as the push button is held.. See figure below for wiring push buttons.



## TROUBLESHOOTING GUIDE

Problem	Possible cause	Solution
Linear actuator will not move	Red wire does not have power Fuse is blown Motors are disconnected Unit is damaged	Check power connection Replace fuse Check wiring between controller and the linear actuators Return for repair
Linear actuator only moves a short distance then reverses or stops	Motor pot wires are disconnected or damaged	Check the 4 pin connector and motor wires for damage
Preset buttons will not work	Buttons are not connected	Check connection between controller and the preset buttons

### LIMITED WARRANTY

All DAKOTA DIGITAL instruments are warranted free of defects in material and workmanship for 2 years from the date of purchase. In the event of a problem with one of our products within the warranty period, DAKOTA DIGITAL will replace or repair the instrument at no charge. (The decision to repair or replace is solely that of DAKOTA DIGITAL. DAKOTA DIGITAL is not responsible for shipping costs of products returned under warranty or for labor charges for product installation and removal.) This warranty becomes invalid if the product is misused, altered or installed incorrectly.

**For warranty coverage, you must first call to receive an RMA#.** Ship the product transportation prepaid via UPS or insured Parcel Post. A copy of the original invoice or dated bill of sale along with a description of the defect is also required. Make sure that the RMA number is clearly visible on the outside of the package as well as inside on the paper work.

The above warranties, both expressed and implied, do not cover damages caused by improper installation, misuse, abuse, fire, unauthorized modifications, floods or acts of God, or reimbursement of customer or shop time. The extent of the warranty is limited only to the product and does not cover any loss or damage to vehicle, equipment, or non-DAKOTA DIGITAL products.

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