



Operation Manual

SwitchSpeed™ Controller:

Congratulations!

Thank you for purchasing the revolutionary SwitchSpeed™ Controller by AccuAir.

This air suspension controller manages up to 4 Air Springs as an intelligent switchbox with user-adjustable control of valve speed. The AccuAir SwitchSpeed™ also manages your Air Compressor(s) to keep onboard air at an ideal pressure for your application (If Optional Electronic Tank Pressure Sensor is connected).

To maximize functionality, the AccuAir SwitchSpeed™ allows you to select from three distinct valve speeds:

- 1.) ***Full Speed.***
- 2.) ***Medium Speed (Adjustable).***
- 3.) ***Precision Speed (Adjustable).***

The exact settings for each of these speeds is User Adjustable (see page 10 in your Operation Manual).



WARNING: Extended valve pulsing *MAY* reduce the life of your valves.

At AccuAir, we pride ourselves on thorough customer service, quality products, and a better driving experience through technologically superior design. Please visit our website or call us toll free to let us know if there is any way that we can help improve your AccuAir experience.

(877) AIR-DOWN
247-3 6 9 6



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Terms & Conditions:

AccuAir Control Systems, L.L.C. is hereby referred to as **ACCUAIR**. The Purchaser, end-user, or installer is hereby referred to as **CUSTOMER**.

Warranty

ACCUAIR will repair or replace any failed components for the life of the vehicle given that the components were installed and operated as intended by **ACCUAIR**. Upon the return of a failed component(s), **ACCUAIR** will determine the cause of failure. If it is due to improper installation, or misuse of the system, a repair charge will be assessed and the customer will be contacted before work is performed or replacement parts are shipped. If the failure is due to faulty parts, then **ACCUAIR** will repair or replace the failed components at their own discretion and in a timely manner.

Repairs and Returns

A Return Merchandise Authorization Number (RMA) is required for ALL shipments to AccuAir Control Systems. This number should be written in large letters on the shipping box. Call AccuAir to receive an RMA number and send items to:

AccuAir Control Systems, L.L.C.
Attn: Service Department/RMA # _____
1241 Johnson Ave. #355
San Luis Obispo, Ca, 93401
USA

Legal Disclaimer

- **ACCUAIR's** products must be installed by a qualified professional installation facility as recommended by **ACCUAIR**.
- System operation and installation is at the **CUSTOMER's** own risk. **ACCUAIR** accepts no liability for damage of property or persons caused by its products, components, accessories, installation instructions or otherwise.
- **ACCUAIR** accepts no responsibility for systems, products or components provided by other manufacturers for use with or around the **ACCUAIR** system. For components other than **ACCUAIR's**, follow the manufacturer's instructions for installation and operation.



WARNING: No part of the vehicle should be able to contact the ground when all air is out of the air springs.

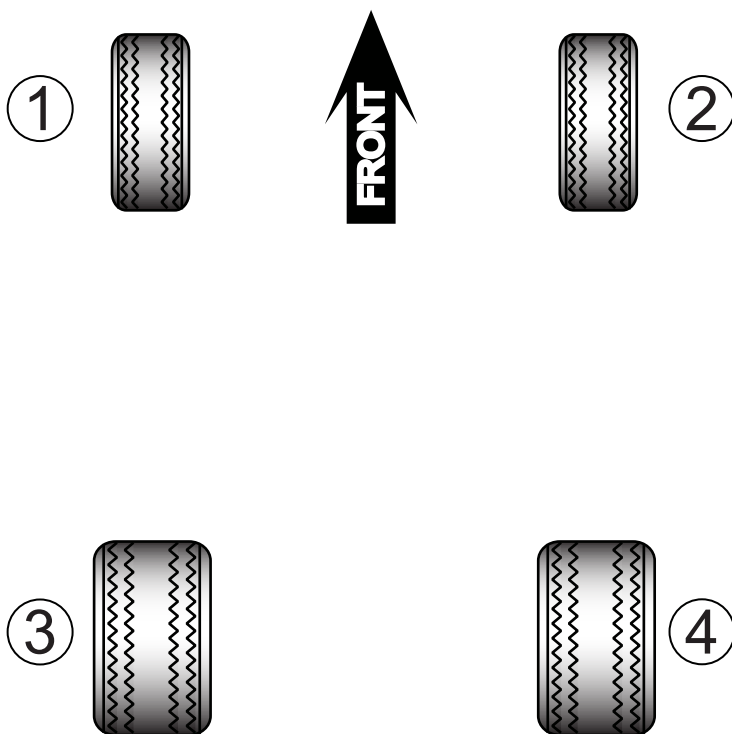


Service Disable:

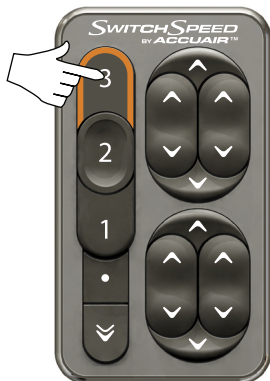
⚠ CAUTION: For all under vehicle maintenance, you must first disable the air system by removing the main system fuse located near the battery.

General Understanding:

For simplicity of use and understanding we refer to the four wheels of a vehicle by number. Instead of using “Left Front”, or “Right Front” etc. Refer to the following diagram for labeling:



General Operation:



Speed Selection #3:

While driving or parked, you may choose to **press the Speed #3 “3” Button momentarily.**

The Speed #3 “3” Indicator will be lit solid. Now use the Manual Adjustment Buttons to move the vehicle at this selected speed.



Speed Selection #2:

While driving or parked, you may choose to **press the Speed #2 “2” Button momentarily.**

The Speed #2 “2” Indicator will be lit solid. Now use the Manual Adjustment Buttons to move the vehicle at this selected speed.



Speed Selection #1:

While driving or parked, you may choose to **press the Speed #1 “1” Button momentarily.**

The Speed #1 “1” Indicator will be lit solid. Now use the Manual Adjustment Buttons to move the vehicle at this selected speed.




General Operation:

All-Down:

While parked, you may choose to automatically lower all four Air Springs to zero height. The system will adjust at the currently **Selected Speed**. There are two modes for this function:
(See page 11 for selecting **Mode Type**.)

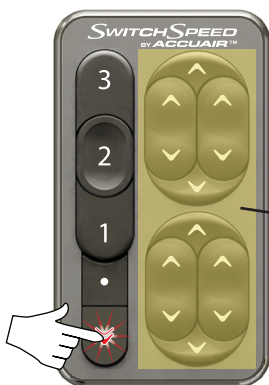
TIMER:

Press the All-Down “” Button for 3 seconds.

The All-Down “” Indicator Light will flash while lowering the vehicle and turn off based on a timer.



NOTE: This sequence can be stopped immediately by pressing any of the Arrow Buttons on the right side of the controller.




MOMENTARY:


Press the All-Down “” Button until the vehicle is as low as you desire.

General Operation:


Manually Raise/Lower:




To Adjust Front Air Springs Together (1&2):
Press the Combination #1 & #2 UP “” Button to FILL both Air Springs #1 & #2 together.

Press the Combination #1 & #2 DOWN “” Button to EMPTY both Air Springs #1 & #2 together.



To Adjust Rear Air Springs Together (3&4):
Press the Combination #3 & #4 UP “” Button to FILL both Air Springs #3 & #4 together.

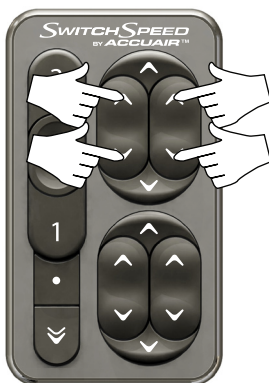
Press the Combination #3 & #4 DOWN “” Button to EMPTY both Air Springs #3 & #4 together.

General Operation:

Manually Raise/Lower, Cont:

To Adjust Air Spring #1:
Press the #1 UP “▲”
Button to FILL the
#1 Air Spring.

Press the #1 DOWN “▼”
Button to EMPTY the
#1 Air Spring.



To Adjust Air Spring #2:
Press the #2 UP “▲”
Button to FILL the
#2 Air Spring.

Press the #2 DOWN “▼”
Button to EMPTY the
#2 Air Spring.



To Adjust Air Spring #3:
Press the #3 UP “▲”
Button to FILL the
#3 Air Spring.

Press the #3 DOWN “▼”
Button to EMPTY the
#3 Air Spring.

To Adjust Air Spring #4:
Press the #4 UP “▲”
Button to FILL the
#4 Air Spring.










Press the #4 DOWN “▼”
Button to EMPTY the
#4 Air Spring.

Setup Programming:

To check or change any of the programmed settings during operation, press the Program “” Button momentarily to initiate Programming Mode:

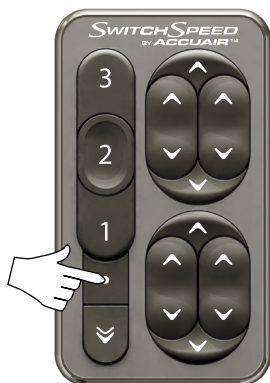
NOTE: Program Mode will exit after 5 seconds or can be exited by pressing the Program Button again and your changes will be saved.

Adusting Valve Speed:


Choosing Which Speed To Adjust		
Select which speed you wish to modify. The selected speed will flash to display the rate that the valves will be pulsed at. (Description on Pg. 10)		
Adjusting Speeds: (Description on Pg. 10)	Valve ON-Time	Valve OFF-Time
	INCREASE: 	INCREASE: 
	DECREASE: 	DECREASE: 
ALL-DOWN MODE TYPE. (Description on Pg. 11)	TIMER: 	MOMENTARY: 
Tank Pressure Mode: (Optional) 150 psi = White only 175 psi = White & Red alternating 200 psi = Red only (Description on Pg. 12)		
	150	175 200

Setup Programming:

Setting Speed Selections:





To Adjust Speed Selections:



With the Ignition ON, press the Program “” Button momentarily to enter Program Mode.



NOTE: *Program Mode will exit after 5 seconds or can be exited by pressing the Program Button again and your changes will be saved.*

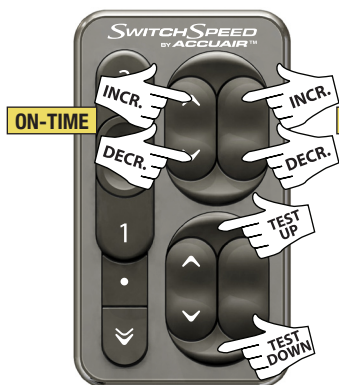


Now select which speed you want to adjust by pressing the Speed #2 “” Button, or the Speed #1 “” Button.

The Selected Speed Button will begin flashing to indicate the current valve pulse rate.

Use the #1 UP “” and #1 DOWN “” Buttons to **INCREASE** or **DECREASE** the **Valve ON-TIME Setting**.

Use the #2 UP “” and #2 DOWN “” Buttons to **INCREASE** or **DECREASE** the **Valve OFF-TIME Setting**.





NOTE: Use the Paired UP “” & Paired DOWN “” Buttons to test the current Speed Selection while setting the Valve ON / OFF Time.

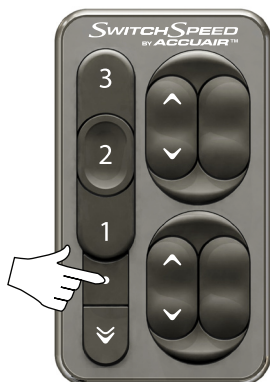
Setup Programming:

Resetting DEFAULT Settings:






Restoring the DEFAULT Pulse Time Settings:
With the Ignition ON hold the Program “” Button & Speed #1 “” Button for 5 seconds until all of the Speed Indicators strobe up and down. This will Restore the SwitchSpeed™ to the DEFAULT Pulse ON / OFF Times.

Selecting ALL-DOWN Mode Type:

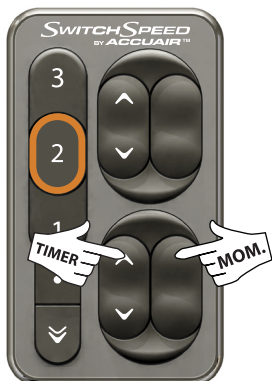


Change ALL-DOWN Mode To
TIMER or MOMENTARY:

With the Ignition ON, press the Program “” Button. Next press the #3 UP “” Button to turn ALL-DOWN Mode to TIMER and the #4 UP “” Button to turn ALL-DOWN Mode to MOMENTARY.

When the #3 UP “” Arrow is White:
ALL-DOWN Mode is TIMER.

When the #4 UP “” Arrow is Red:
ALL-DOWN Mode is MOMENTARY.

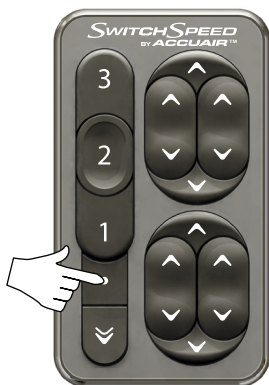


NOTE: Program Mode will exit after 5 seconds or can be exited by pressing the Program Button again and your changes will be saved.







Setup Programming:

Tank Pressure Mode: (If Optional Electronic Tank Pressure Sensor is Connected)



Your system was shipped with the **Tank Pressure Mode** set at **150 PSI**. If you have High Pressure Compressor(s) you can change the **Tank Pressure Mode** to **175 PSI** or **200 PSI** using the following Procedure:



To Change The Tank Pressure Mode:

With the Ignition ON, press the Program “” Button. Next press the #3 DOWN “” Button to set **Tank Pressure Mode** to 150 PSI, the #4 DOWN “” Button once to set the **Tank Pressure Mode** to 175 PSI and the #4 DOWN “” Button again to set the **Tank Pressure Mode** to 200 PSI.



When the #3 DOWN “” Arrow is White:

Tank Pressure Mode is at **150 PSI**.

When the #3 DOWN “” Arrow and the #4 DOWN “” Arrow are alternating ON & OFF:

Tank Pressure Mode is at **175 PSI**.

150 Mode:

- 110 psi ON / 150 psi OFF

175 Mode:

- 135 psi ON / 175 psi OFF

200 Mode:

- 160 psi ON / 200 psi OFF



When the #4 DOWN “” Arrow is Red:

Tank Pressure Mode is at **200 PSI**.

NOTE: If the **Electronic Tank Pressure Sensor** is **NOT** in use the #3 DOWN “” & #4 DOWN “” Arrows are **OFF**.

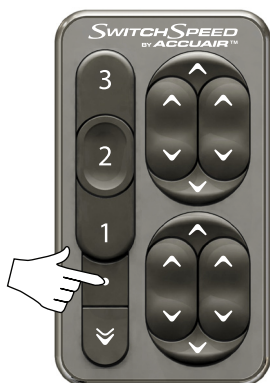
NOTE: **Program Mode** will exit after 5 seconds or can be exited by pressing the Program Button again and your changes will be saved.

Setup Programming:

Changing SwitchSpeed™ Backlighting Brightness:



The SwitchSpeed™ Controller's backlighting will turn on automatically when the system is on. The Backlighting will change to Nighttime Mode when the headlights are ON. The Brightness of both Modes can be adjusted with the procedure below:



NOTE: *With the headlights OFF you will be adjusting Daytime Mode with the following procedure. With the headlights ON you will be adjusting Nighttime Mode with the following procedure.*



NOTE: *The SwitchSpeed™ Backlighting brightness will adjust UP & DOWN as you change the settings.*

To Adjust The Backlighting UP or DOWN:

With the Ignition ON, press the Program “” Button. Next press the Combination #1 & #2 UP “” Button to make the Backlighting BRIGHTER.

With the Ignition ON, press the Program “” Button. Next press the Combination #1 & #2 DOWN “” Button to make the Backlighting DARKER.





NOTE: *Program Mode will exit after 5 seconds or can be exited by pressing the Program Button again and your changes will be saved.*

Operation Trouble Indication/Diagnosis:

In the unlikely case of a system component failure during operation, the Speed “1”, “2”, & “3” Indications will flash simultaneously and sequentially to indicate the trouble codes outlined below.

NOTE: *This is the ONLY time that all 3 of the Speed Selections will flash simultaneously during use.*

Warning Indication:

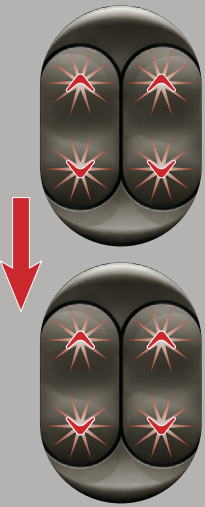
Pressure Sensor Warning	Number Of Flashes between the 2 second pause	
Tank pressure is not increasing after the ECU turns the Compressor(s) ON.	2	
<ul style="list-style-type: none"> • Verify Compressor circuit wiring connections. • Check Compressor fuse F2. • Verify Compressor plumbing connections. • Check for Compressor relay failure. • Check for Compressor failure. • Check for Pressure Sensor failure. 		
Pressure Sensor is not reading.	4	
<ul style="list-style-type: none"> • Verify wiring to Pressure Sensor. • Check Pressure Sensor for failure. 		

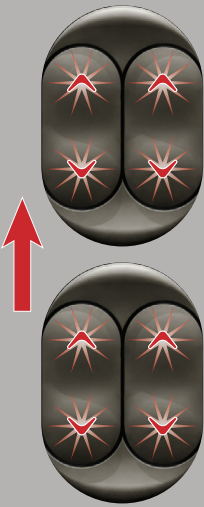
Operation Trouble Indication/Diagnosis:

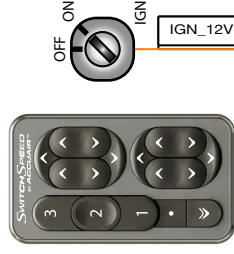
If the vehicle system voltage drops below 10.5 volts during operation, the SwitchSpeed™ will automatically turn the compressor(s) OFF and show the trouble indication below. The SwitchSpeed™ will go back to normal operation once the vehicle system voltage reaches 12.5 volts or the ignition is cycled.

In the very unlikely case that the vehicle system voltage raises above 16.0 volts during operation, the SwitchSpeed™ will show the trouble indication below, but continue to operate like normal. Prolonged usage in this state may cause damage to system components.

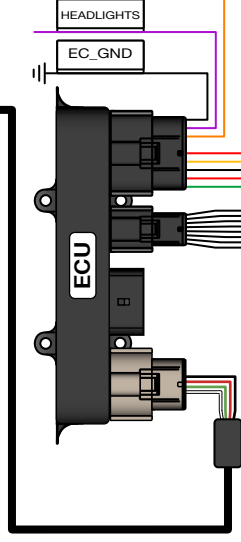
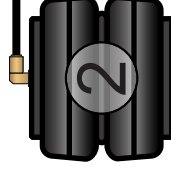
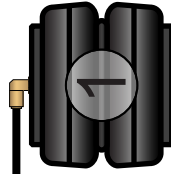
Warning Indication:

Low Voltage Warning	
System Voltage is BELOW 10.5V.	
The Error Indication will flash Sequentially DOWNWARD & the Compressor(s) will turn OFF.	

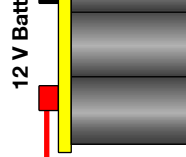
High Voltage Warning	
System Voltage is ABOVE 16.0V.	
The Error Indication will flash Sequentially UPWARD.	



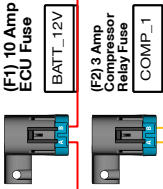
SwitchSpeed™
Controller



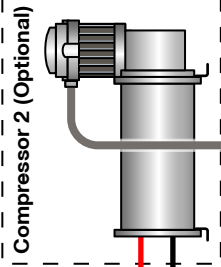
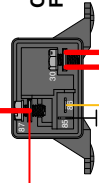
(Main) 70Amp Fuse



12 V Batt

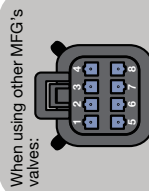


Compressor(s)
Relay



Compressor 1

Compressor 2 (Optional)



- When using other MFG's valves:
- 1.) Up 4 - - - White/Black
 - 2.) Up 3 - - - White/Orange
 - 3.) Up 2 - - - White/Purple
 - 4.) Up 1 - - - White
 - 5.) Down 4 - - - White/Gray
 - 6.) Down 3 - - - White/Green
 - 7.) Down 2 - - - White/Brown
 - 8.) Down 1 - - - White/Blue