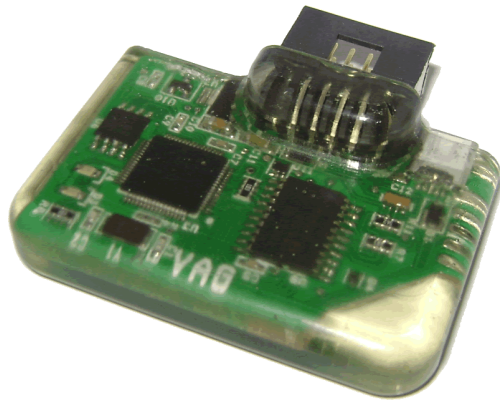




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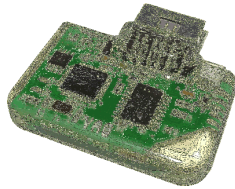
INSTALLATION GUIDE AND OPERATOR MANUAL



WHAT'S IN THE BOX?

READ BEFORE INSTALLATION

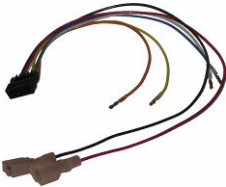
1. Digital Lowering Module (DLM)



2. Pass-Through



3. Wiring Harness



4. Connector Shell



5. T-Tap Vampire Clips (2)



6. Installation Manual



7. Installation Disk



8. USB Cable



WARNING

An individual with fundamental knowledge of electronics should install this Digital Lowering Module (DLM). Individuals installing these modules should be familiar with wire identification and have the ability to extract and insert connector pins.

RENNtech is not responsible for damages resulting from improper handling or installation of the DLM.

RIDE HEIGHT

To preserve ride quality and avoid possible damage to tires and suspension components, please note the following recommended settings:

- DLM installed in Porsche vehicles should be set between -0.75" and -1.75" from stock for normal driving.
- DLM installed in Audi, Bentley and Volkswagen vehicles should be set between -0.5" and -1.0" from stock for normal driving.

Lower settings could be used for show purposes, track use, or other controlled conditions, but are not recommended for road use.

INTRODUCTION

This DLM allows a user to raise and lower the ride height of their vehicle by manipulating digital signals.

In order to lower a vehicle by manipulating digital signals, the DLM must be installed between the ride height position sensor(s) and the vehicle's wiring harness. The DLM then receives these digital signals from the ride height position sensor(s) at each corner of the vehicle and modifies the signals to achieve the user-specified change in ride height.

1. Disconnect vehicle battery
2. Locate the vehicle's suspension module wiring harness
3. Remove wiring harness connector top cap to gain access to individual wires (See figures 1 - 3)
4. Remove the first ride height position sensor wire from suspension module wiring harness connector (see figure 4)
5. Connect the sensor wire into the DLM connector directly opposite the appropriate output wire, as indicated by the vehicle-specific schematic
PLEASE NOTE: Some installations require the contact pin's wire insulation clasp to be folded (see figure 6) in order to fit in the SLM connector shell
6. Connect the output wire from the DLM connector into the now vacant connection in the suspension module wiring harness connector (from step 3)
7. Repeat steps 4-6 for each ride height position sensor wire, removing and replacing sensor wires **ONE AT A TIME** to avoid mistakes and cross-wiring
8. Connect the T-Tap connectors (included in DLM package) to the vehicle's POWER and GROUND wires as indicated by the schematic
9. Connect the POWER and GROUND cables from the DLM to the T-Taps
10. Reassemble suspension module wiring harness connectors (reverse of step 3)
11. Attach the DLM connector shell to the connector (see figure 5)
12. Connect the DLM pass-through to the DLM connector
13. Reconnect vehicle battery (reverse of step 1)
14. Start the vehicle and cycle through the vehicle ride heights to verify that the wiring was done correctly (vehicle does not generate suspension errors)
15. Disconnect vehicle battery
16. Replace the DLM pass-through with the DLM
17. Reconnect the battery (reverse of step 18)

PREPARATION | IDENTIFYING THE PARTS - STEP BY STEP

The vehicle suspension module wiring harness connects to two connectors.

Follow these steps below to disassemble the connectors:

1. Disconnect both connectors from the suspension module by pulling the sliding housing away from the module
2. Cut the cable tie attaching the wires to the plug latch (see figure 1) **TAKING GREAT CARE NOT TO DAMAGE OR CUT THE WIRES**
3. Remove the TOP CAP (see figure 2) by pushing upward on the cap using a flat screw driver
4. Remove both side locking clips (see figure 3)
5. Remove top latching clip (see figure 4)
6. Slide the HEADER out of the Plug Latch



FIGURE 1
REMOVING TOP COVER

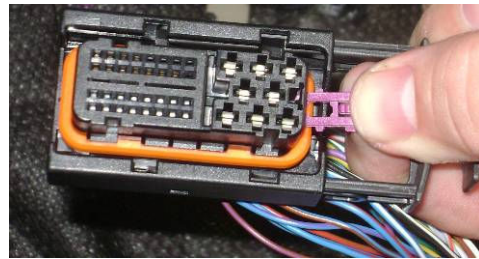


FIGURE 2
REMOVING SIDE LOCKING CLIPS

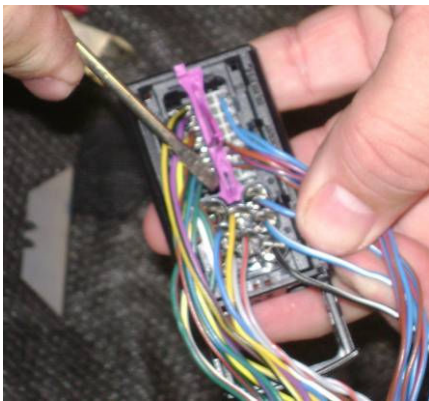
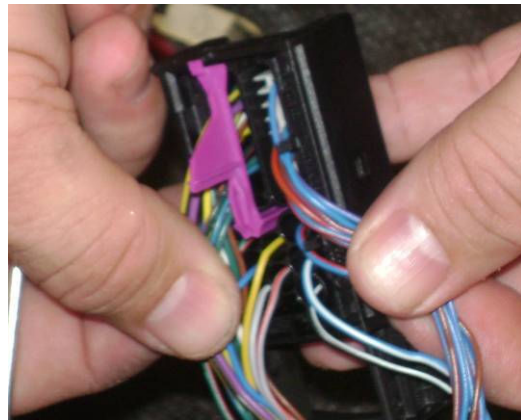


FIGURE 3
REMOVING TOP LOCKING CLIP
VAG V3 DIGITAL LOWERING MODULE



PREPARATION | IDENTIFYING THE PARTS - STEP BY STEP (CONT.)

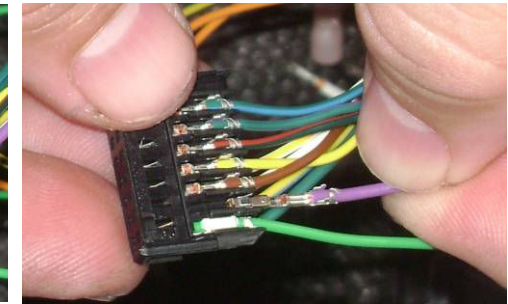
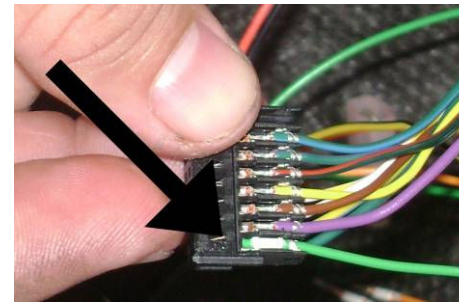


FIGURE 4
EXTRACTING PINS FROM WIRING HARNESS CONNECTOR

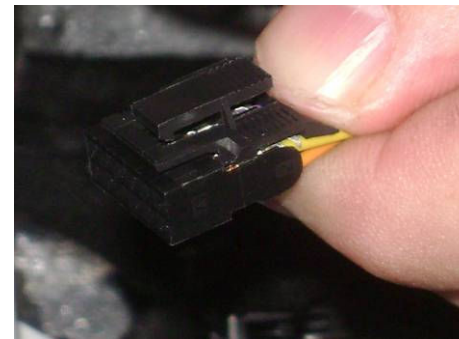


FIGURE 5
ATTACHING CONNECTOR SHELL

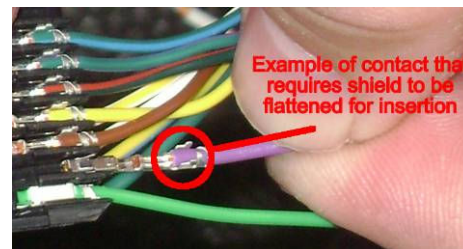
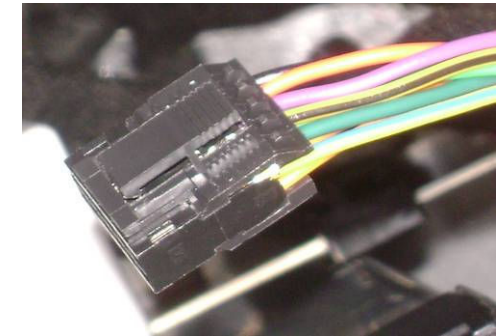
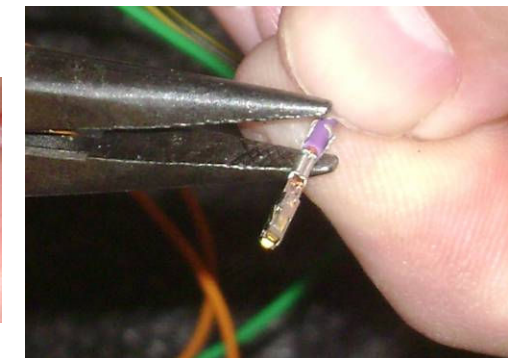


FIGURE 6
FOLDING CONTACT PIN INSULATION CLASP



AIR SUSPENSION | INSTALL NOTES

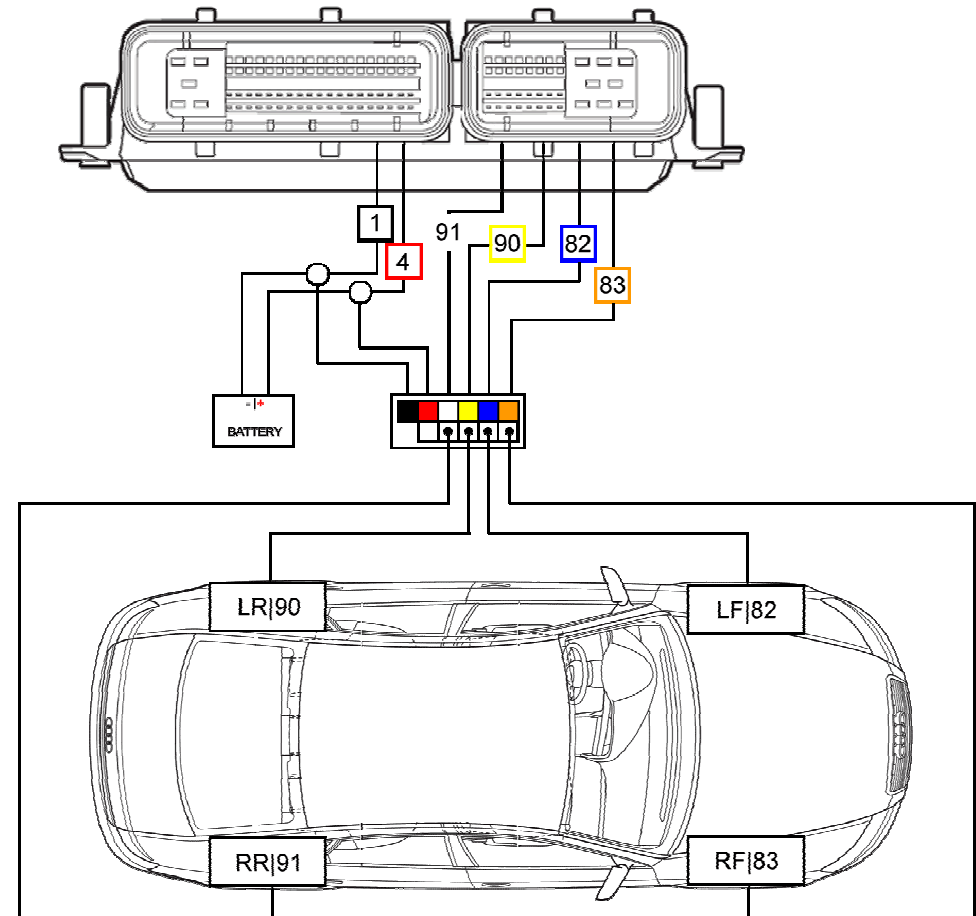
AUDI A8/Q7, PORSCHE CAYENNE, VW PHAETON/TOUAREG

1. Suspension module location:
Audi A8 - Behind CD player
Audi Q7 - In trunk, passenger side
Porsche Cayenne - In trunk, passenger side
VW Phaeton - Behind CD player
VW Touareg - In trunk, passenger side
2. Follow the general installation instructions
3. Guide to wiring schematic (at right)
 - a. Remove wire at **pin 83** from the small connector
 - b. Connect opposite **orange** wire in DLM connector
 - c. Connect **orange** wire from DLM connector at **pin 83** in the small connector
4. Repeat step 3 (above) for each wire **ONE AT A TIME**, using the table below as a reference
5. Using T-Taps provided attach power and ground wires

FUNCTION	CONNECTOR	PIN NO.	DLM COLOR
RT FRONT	SMALL	83	ORANGE
LT FRONT	SMALL	82	BLUE
LT REAR	SMALL	90	YELLOW
RT REAR	SMALL	91	WHITE
POWER	LARGE	4	RED
GROUND	LARGE	1	BLACK

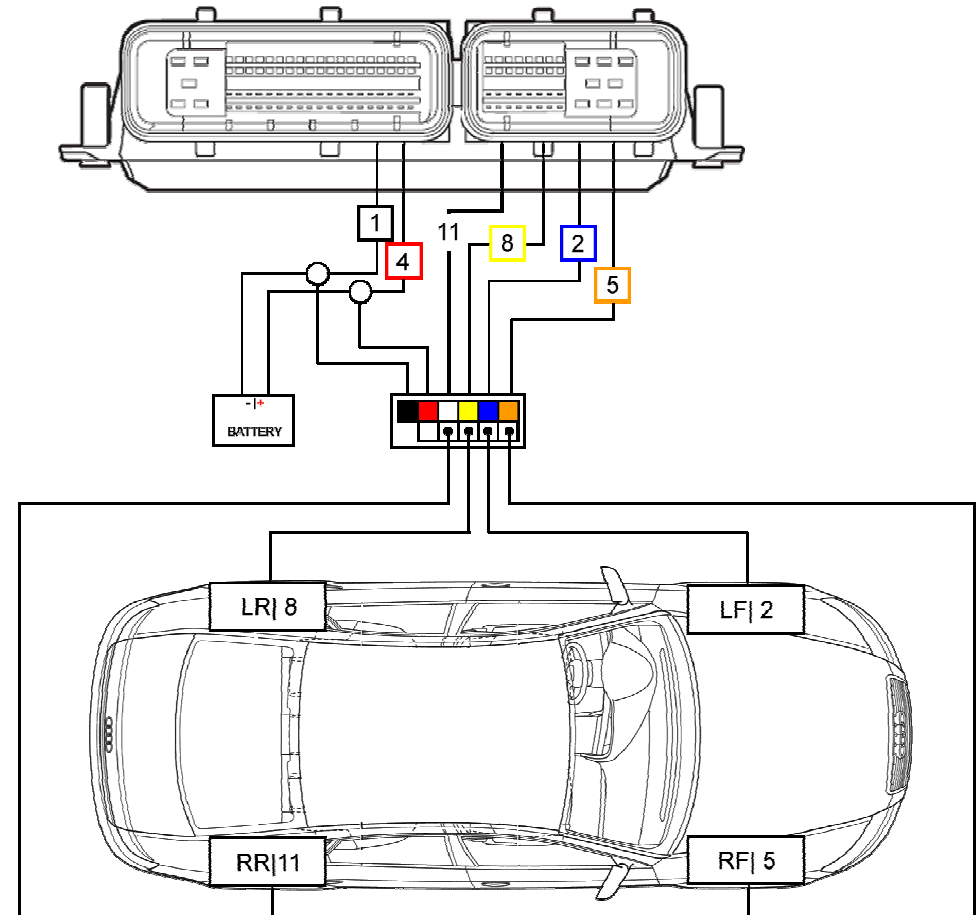
AIR SUSPENSION | SCHEMATIC

AUDI A8/Q7, PORSCHE CAYENNE, VW PHAETON/TOUAREG



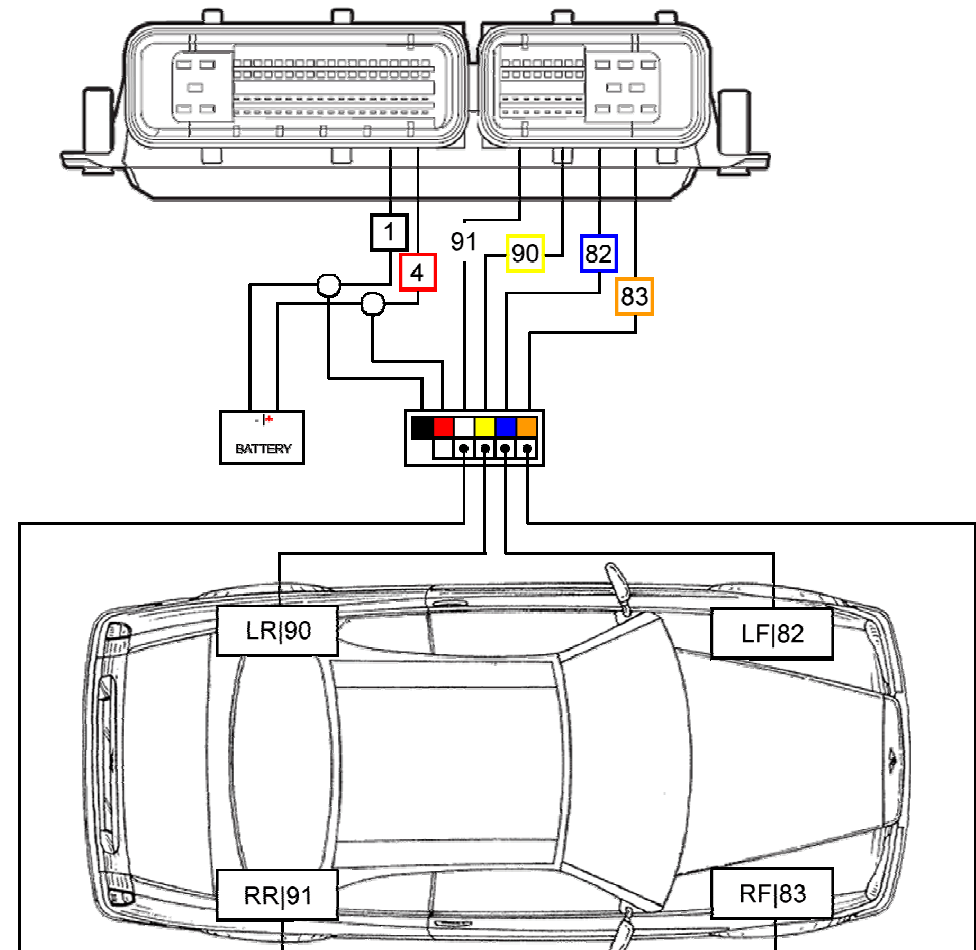
1. Suspension module location:
Audi A6 - Behind glove box
2. Follow the general installation instructions
3. Guide to wiring schematic (at right)
 - a. Remove wire at **pin 2** from the small connector
 - b. Connect opposite **orange** wire in DLM connector
 - c. Connect **orange** wire from DLM connector at **pin 2** in the small connector
4. Repeat step 3 (above) for each wire **ONE AT A TIME**, using the table below as a reference
5. Using T-Taps provided attach power and ground wires

FUNCTION	CONNECTOR	PIN NO.	DLM COLOR
RT FRONT	SMALL	2	ORANGE
LT FRONT	SMALL	5	BLUE
LT REAR	SMALL	8	YELLOW
RT REAR	SMALL	11	WHITE
POWER	LARGE	?	RED
GROUND	LARGE	?	BLACK



1. Suspension module location:
Bentley GT - Rear door panel, driver side
Bentley Flying Spur - Trunk, passenger side
2. Follow the general installation instructions
3. Guide to wiring schematic (at right)
 - a. Remove wire at **pin 83** from the small connector
 - b. Connect opposite **orange** wire in DLM connector
 - c. Connect **orange** wire from DLM connector at **pin 83** in the small connector
4. Repeat step 3 (above) for each wire **ONE AT A TIME**, using the table below as a reference
5. Using T-Taps provided attach power and ground wires

FUNCTION	CONNECTOR	PIN NO.	DLM COLOR
RT FRONT	SMALL	83	ORANGE
LT FRONT	SMALL	82	BLUE
LT REAR	SMALL	90	YELLOW
RT REAR	SMALL	91	WHITE
POWER	LARGE	4	RED
GROUND	LARGE	1	BLACK



NOTE:

The rear factory ride height sensors have been reversed on some Bentley models, so it requires a modification to the DLM settings. Please see item 7 in the "ADJUSTING RIDE HEIGHT" section for instructions.

OPERATOR MANUAL | RIDE HEIGHT ADJUSTMENT

DEFAULT SETTING

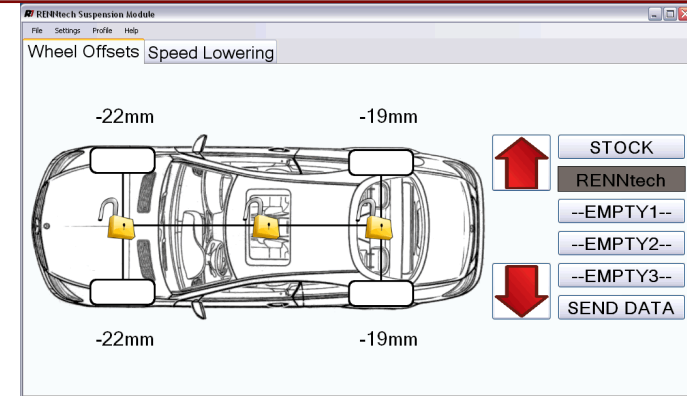
The digital lowering module (DLM) ships with a pre-set "RENNtech setting," which provides a moderate drop in ride height suitable for most installations assuming vehicle has stock wheels and tires installed.

ADJUSTING RIDE HEIGHT | REQUIREMENTS

The DLM is a highly advanced product that allows for precise, user-determined height adjustment at each wheel. In order to adjust the ride height of your DLM equipped vehicle, you will need the following:

- RENNtech DLM connector wired into vehicle
- USB A to Mini-USB cable (included with DLM)
- Windows PC (XP or newer) with internet connection and USB port

ADJUSTING RIDE HEIGHT | PROCEDURE



1. If you don't have the installation CD, download the DLM software from the RENNtech customer support page at www.renntechmercedes.com/customers.html
2. Install the DLM software
3. Run the DLM software, click on "Help" and "Install Drivers" to install the necessary USB drivers
4. Once the DLM drivers have been installed on your PC, connect the DLM to the PC using the USB cable provided
5. From the screen above it is possible to enter up to three custom ride-height setups (the DLM will open to the default "RENNtech" suspension settings)
6. Become familiar with the DLM software screen
 - a. "STOCK" menu button - returns the vehicle suspension to factory ride height
 - b. "RENNtech" menu button - default "lowered" settings
 - c. "--EMPTY--" menu button - allows for up to 3 user-defined suspension settings
 - d. "Wheels" - select a wheel to lower
 - e. "Locks" - select both wheels on an axle or all four wheels at once
 - f. "Arrows" - used to raise or lower vehicle wheel/axle to desired height
7. **SOME BENTLEY MODELS REQUIRE A MODIFICATION OF THE CHANNEL POLARITY SETTING. If the rear of the vehicle rises instead of lowering, please click on "Setting" and "Channel Polarity." Please change the default value of 9 to 5.**
8. Once the desired ride height settings are in place, save the changes by selecting "File," "Save" from the drop-down menu
9. Click on "SEND DATA" to transfer data to DLM (NOTE: WITHOUT THIS STEP THE DATA WILL NOT BE TRANSFERRED TO THE DLM)
10. Safely disconnect the DLM from the PC and connect it to the DLM connector installed in the vehicle.

NOTE: You may leave the DLM connected to the PC while it is connected to the vehicle in order to make adjustments

NOTES

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V3 DIGITAL LOWERING MODULE
1/15/2010