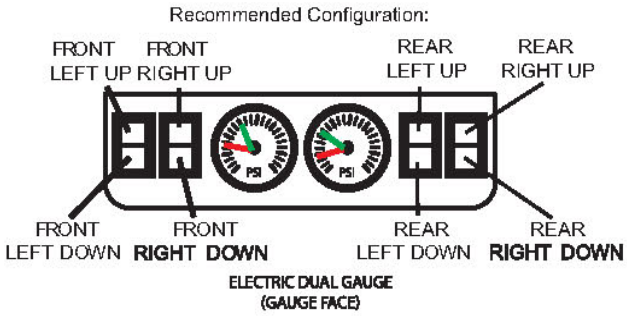
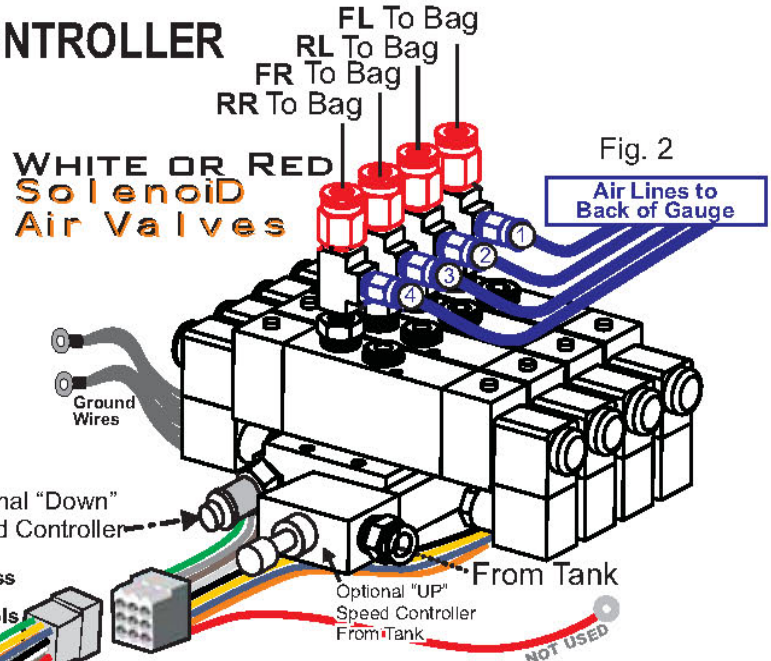
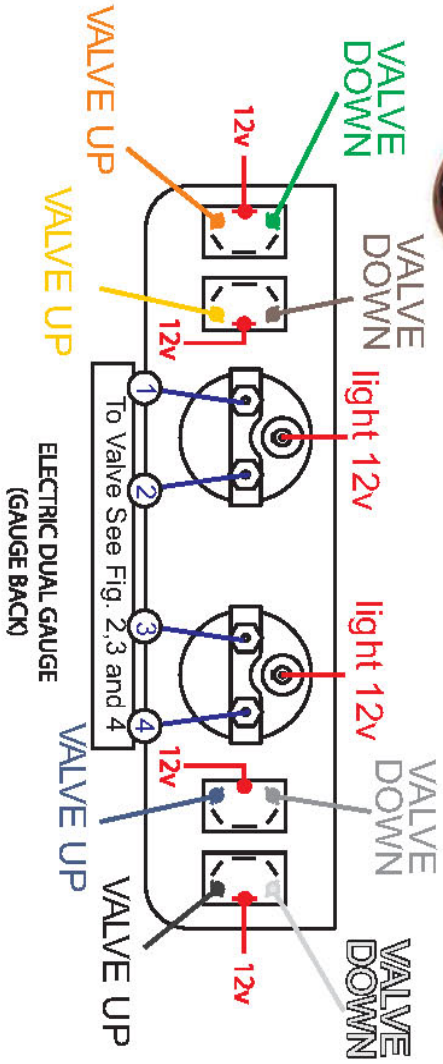
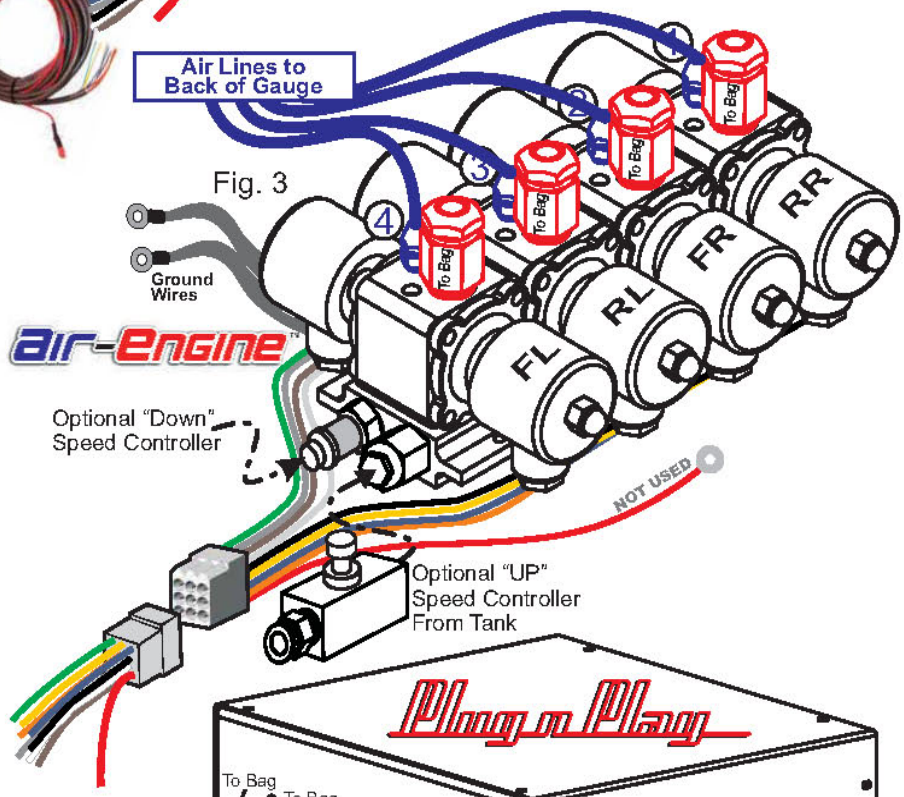
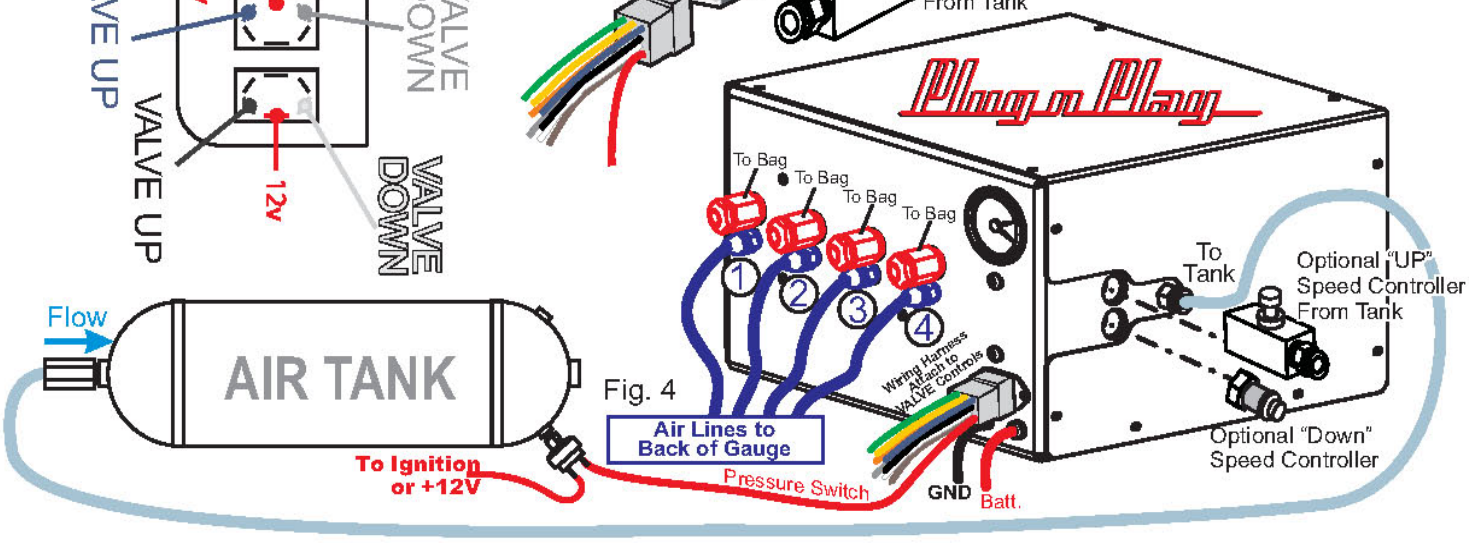
ELECTRIC DUAL GAUGE & CONTROLLER







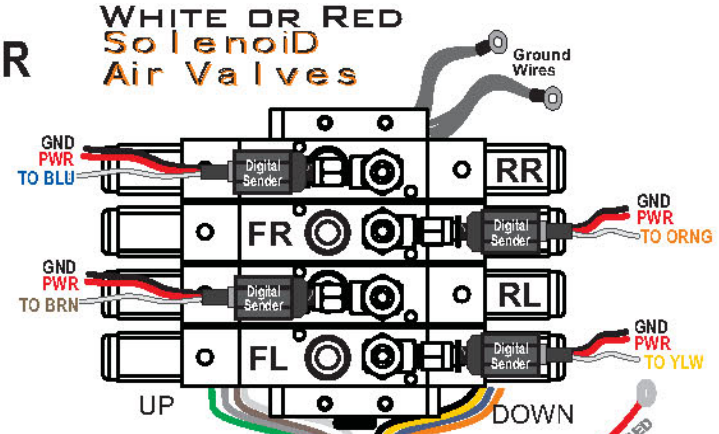


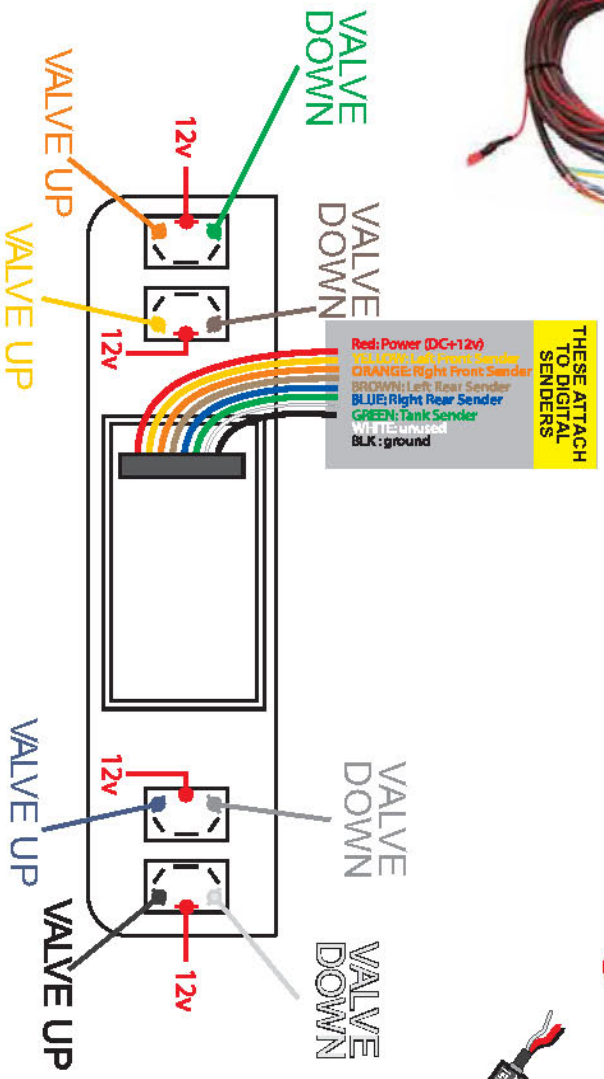


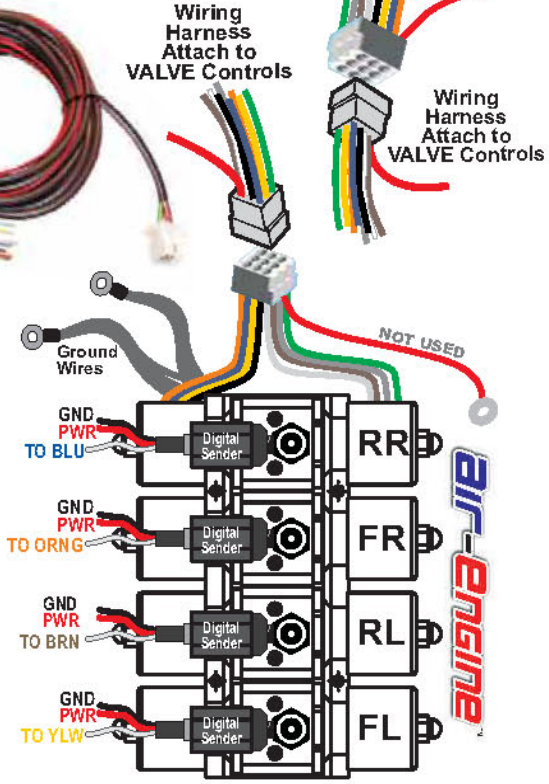
DIGITAL GAUGE & CONTROLLER

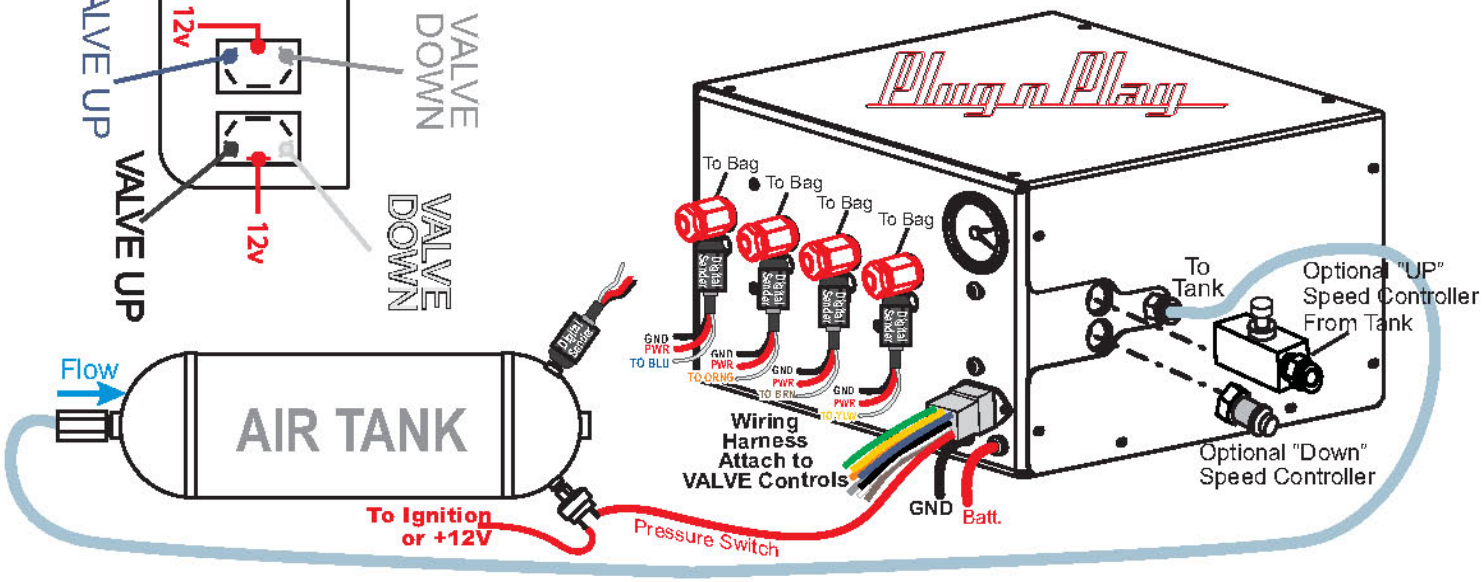
Recommended Configuration:

NOTE:300 PSI GAUGE WILL NOT GIVE ACCURATE READINGS UNDER 170 PSI. 150 PSI SENDERS MUST BE USED FOR ACCURACY UNDER 160 PSI. 300 PSI SENDERS ARE ONLY FOR USE WITH COMPRESSED GAS









THE WHOLE UNIT INCLUDES:

- With blue background Digital Gauge *1
- Voltage base air pressure sender *5pcs
- Specific wires for sender *5pcs
- Wire harness *1ps
- Instruction manual

DISPLAY STYLE

- Digital Panel: LCD (with blue color background)
- 5 data shown on the panel individually indicates the 4 corner pressures, and tank air pressure in the center
- Front Panel: ABS CHROME PANEL
- Case: ABS SHELL

BUTTON INSTRUCTION

- SW1: POSITION CHANGE BUTTON (L-F, R-F, L-R,R-R, TANK, CURRENT STATUS)
- SW2: SET UPPER AND DOWN LIMITS BUTTON(▲ ▼)
- SW3: UP ADJUST BUTTON(sets upper warning limit)
- SW4: DOWN ADJUST BUTTON (sets down warning limit)

WIRING DESCRIPTION:

- BLACK – CONNECT TO A GOOD GROUND POINT IN THE VEHICLE
- WHITE – UNUSED
- GREEN – CONNECT TO TANK PRESSURE SENDER
- BLUE – CONNECT TO THE RIGHT- REAR PRESSURE SENDER
- BROWN – CONNECT TO THE LEFT- REAR PRESSURE SENDER
- ORANGE – CONNECT TO THE RIGHT-FRONT PRESSURE SENDER
- YELLOW – CONNECT TO THE LEFT- FRONT PRESSURE SENDER
- RED – POWER (DC+12V) CONNECT TO CAR KEY – ON ACC POSITION

AS-3 SENSOR SPECIFICATION:

1. Power supply voltage: DC12V
Wires color: Red: +12V, Black: Ground, White: Voltage Signal Output
2. Current consumption: 20mA
3. Output voltage: 650mV to 4500mV
4. Pressure range: 0-20 bar, (Max 300 PSI)
5. Accuracy resolution range: (±) 1PSI
6. Media compatibility: Clean, dry air & non-corrosive gases
7. Connector: 1/8"27 NPT Fitting, Connector color: Silver

DIGITAL GAUGE SPECIFICATION:

1. Reading signal: 650mV-4500mV
2. Supply Power: DC12V
3. Current consumption: Gauge 50mA Sender: 20mA @12V
4. Operating temperature: -20 to 80℃
5. Reading pressure range: 0-20bar, (Max 300 PSI)
6. Gauge accuracy resolution: (±)1psi
7. Back light color: Blue

Caution: Cannot be used with any other senders other than those supplied. Readings will not be correct.

MOUNTING

- The gauge requires a rectangular cut out that is about (93mm * 60mm (3.66"* 3.94")
- It should be inserted into the opening from the front
- Insert the gauge. The back shell is fixed by four poles so that the gauge is secure
- The face of the gauge is 103mm * 63mm. (4.08"* 2.48")

FACTORY INSTALL VALUE

- When connecting to the Battery without sensors, the digital gauge will sound for 10 seconds
- The initial warning is 1 psi on the bottom limit. 300 psi on the upper limit.
- Without sensors connected, each digit of panel will display "------"
- If Gauge flashes constantly, warning limits are not set properly or vehicle connected to improper air pressure

FEATURES:

- A warning feature that flashes the gauge readout when outside operation limits
- Exact measurement of any position of the 4 sensors & tank air pressure
- The air pressure gauge will read and operate correctly between range of 0-20bar (Max 300psi)
- User adjustable High & Low air pressure warning pressure setting
- High visibility full character LCD display in blue background

LIMIT WARNING SETTING INSTRUCTIONS

- The Low and High Warning Limit Values can be set to different values.
- There are four buttons in front of the gauge panel which set the warning limit.

The procedure setting the warning limit is as follows:

- Press SW1 button by each time to select the sensors sequence position
LF, R-F,L-F, R-R,TANK & REALstatus), the display will show HIGH WARNING LIMIT "XXX" where "XXX" is the current high pressure warning poin
- Press SW2 to select the High or Low Warning Limits (▲ ▼)
- Press SW3 button increase the High Warning Limit Values (▼) up
- Press SW4 button to decrease the Low Warning Limit Values (▼) down
- Position selection sequence: L-F, R-F, L-R, R-R, TANK & Original status
- When L-F, Low Warning Value is set, Push SW1 to change other Positions
- Each time the SW3 (UP) or SW4(DOWN) buttons are pressed the warning point will increase or decrease
- After 10 seconds press button again. The display will recover to current status automatically.

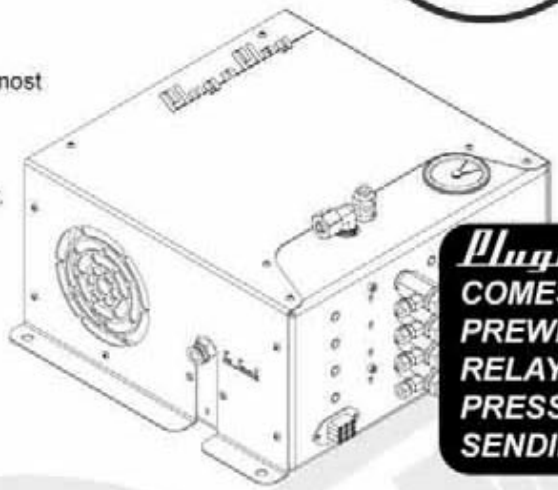
FAQS AND LIVE CHAT SUPPORT AT WWW.AIRBAGIT.COM

USER GUIDE AND INSTALLATION MANUAL

smart ride

USA : 800-898-9719

Congratulations on your purchase of the smart-ride - the most advanced and easiest to use air bag control system on the market! With a backlit display, real-time control of all of your air bags, and up to 4 fully customizable presets, the smart-ride will put you in complete control of your air suspension system at the touch of a finger.



PlugnPlay COMES WITH PREWIRED RELAYS AND PRESSURE SENDING UNITS

FEATURES

4 User-adjustable presets: When selected it will automatically adjust the valves to the preset level.

Sensor Monitoring: Real-time monitoring of up to 5 sensors (Left Front, Left Rear, Right Front, Right Rear, Tank)

Auxiliary Inputs: Allow control of the Smart-Ride via thrid party controllers.

Arm Mode : When "Armed Input" wire senses a signal from alarm it will deactivate all features of the display and show a big bold "ARMED" message.

Smart Buttons : To increase or decrease ride height, press arrow keys.
a. Press Once = Incremental Changes
b. Press and Hold = Rapid incremental changes.

Automatic Compressor Control : When the tank reaches a user defined level it will send a positive output for the compressor to run. This signal will remain on until tank reaches user specified pressure level.

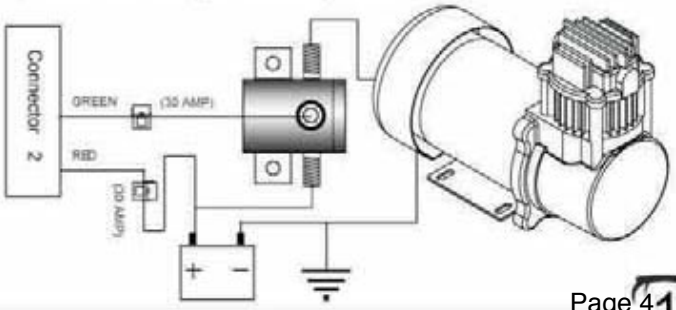
INSTALLATION WITH PLUG N PLAY

1. ! Safety First! Disconnect negative battery terminal
2. Mount smart-ride reciever and control display in a dry spot.
3. Wire according to diagram (page 4)
   a. Connect red wire to 12v constant
   b. Connect black wire to (-)ground
   c. Connect yellow wire to (+) switched power ignition
   d. Plug 5 pin white plug into smart-ride reciever
   e. Install 5th Sending unit into an open port on the air tank and connect the red/white wire from connector 3.
   f. Calibrate sending units and verify sending units.
   g. Plug white 9 pin plug into the Plug n Play and opposite end into the smart-ride reciever.
   h. Optional - If using keyless entry use (-) outputs to trigger manual valve or preset wires in connector 1.
   i. Optional - Connect grey wire connector 1 to a (-) output of keyless entry or alarm to disable unit when armed.
   j. Reconnect negative battery terminal.

INSTALLATION (NON-PLUG N PLAY)

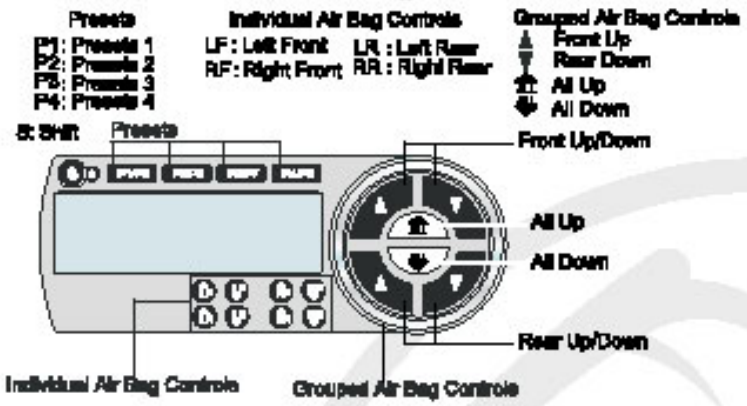
! NEVER WIRE VALVES DIRECTLY TO smart-ride CONTROLLER !

1. ! Safety First! Disconnect negative battery terminal
2. Mount smart-ride reciever and control display in a dry spot.
3. Wire according to diagram (page 4)
   a. Connect red wire to 12v constant
   b. Connect black wire to (-)ground
   c. Connect yellow wire to (+) switched power ignition
   d. Connect sending unit wires to (wk) output of pressure sensor
   e. Calibrate sending units and verify sending units.
   f. Connect Fill (up) wires to corresponding valve's terminal 85 of activation relay.
   g. Connect dump (down) wires to corresponding valve's terminal 85 activation relay.
   i. Connect compressor as shown below to utilize Smart-Ride Automatic Compressor Control
   h. Optional - If using keyless entry use (-) outputs to trigger manual valve or preset wires in connector 1.
   i. Optional - Connect grey wire connector 1 to a (-) output of keyless entry or alarm to disable unit when armed.
   j. Reconnect negative battery terminal.



CALIBRATION

Controller Diagram

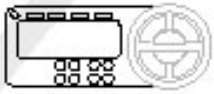


How to Calibrate the Sending Unit

1. Hook up an analog gauge to Tank.
2. Press and hold S and both ALL and ALL buttons at the sametime, till shift LED starts to flash and Tank's air pressure shows "T000" on the LED, which means the unit, has entered into programming mode.
3. Inflate the tank to any air pressure. Read the air pressure on the analog gauge, and press the ALL or ALL buttons until the display shows the same pressure as the analog gauge.
4. Press S button to program current resistance of the sending unit.
5. Repeat step 3 and 4 (until the unit knows at least 2 resistances (up to 16 can be programmed). The more resistances that are programmed the more accurate it will be.
6. Press S button to exit learning mode.

* Optional *

Valve Timing and Settings



1. Press buttons at the same time for 10 seconds until the shift LED starts to flash.

a. The number shown on the LF LCD represents the output time (10=1sec. 0=0sec. the default is 5=0.5sec),press buttons to adjust. The number shown on the RF LCD represents the output interval (10=1sec. 0=0sec. the default is 5=0.5sec), press buttons to adjust. The number shown on LR represents the air pressure tolerance (the default is 5psi), press buttons to adjust. The number shown on RR represents auto-cycling on/off value.

b. Press S button to exit.

OPERATIONS

How to Set Preset

1. Adjust each air bag to the desired pressure.
   For preset P1, P2, P3, P4
2. Press and hold selected preset button for 7 seconds.
   For preset P5, P6, P7, P8
   a. Press the S button
   b. Press and hold selected preset button for 7 seconds.
3. System will flash to confirm

How Set Compressor Tank Pressure

(Default Setting 110psi)

1. Press and hold both ALL and ALL buttons for 5 seconds Seconds. (Tank section of LED Display should be Blinking)
2. Use the ALL and ALL buttons to choose the desired pressure.
3. Press and hold both ALL and ALL buttons for 5 Seconds. (Tank section of LED Display should STOP Blinking)

User Reset: Resets the Smart-Ride to factory defaults.

1. Press and hold ALL FOUR Preset buttons for 10 seconds (Shift light will go on)
2. Press the button (shift light will blink)
3. Press the button (shift light will stop blinking)

WIRE DESCRIPTIONS

CONNECTOR 1 :: 3rd Party User Interface :: All Optional except Pin4

Pin 1 :: Yellow/ Black :: Negative (-) Input :: Preset 2 Activation
Pin 2 :: Brown :: Negative (-) Input :: Preset 1 Activation ::
Pin 3 :: Blue :: Negative (-) Input :: Preset 3 Activation ::
Pin 4 :: Yellow :: Ignition Positive (+) Input :: This wire activates the illumination on the display when given 12 volts positive.
Pin 5 :: Purple :: Negative (-) Input :: Preset 4 Activation ::
Pin 6 :: Grey :: Negative (-) Input :: Alarm Wire :: This wire will active the alarm mode when given an constant negative ground.
Pin 7 :: Green / Black :: Negative (-) Input :: Preset 5 Activation
Pin 8 :: Red :: Negative (-) Input :: Preset 6 Activation ::
Pin 9 :: Pink :: Negative (-) Input :: Preset 7 Activation ::
Pin 10 :: Orange :: Negative (-) Input :: Preset 10 Activation
Pin 11 :: Green :: Negative (-) Input :: Right Rear Pump ::
Pin 12 :: Brown / White :: Negative (-) Input :: Right Rear Down
Pin 13 :: Purple / Black :: Negative (-) Input :: Light Rear Up ::
Pin 14 :: Red / Black :: Negative (-) Input :: Left Rear Down ::
Pin 15 :: Grey / Red :: Negative (-) Input :: Right Front Up ::
Pin 16 :: Orange / Black :: Negative (-) Input :: Right Front Down
Pin 17 :: Pink / Black :: Negative (-) Input :: Left Front Up ::
Pin 18 :: Yellow / White :: Negative (-) Input :: Left Front Down ::

Pin 1 :: Red :: 12 Volt Power Supply :: This wire is the main feed

Connector 2 :: Power & Valve Outputs ::

into the unit and needs to be connected to a fused 12 volt constant power supply.

Pin 2 :: Black :: Chassis Ground :: This wire is the main ground into the unit and needs to be connected to a fused 12 volt constant power supply.

Pin 3 :: Purple :: Positive (+) Output :: Left Rear Up ::

Pin 4 :: Grey :: Positive (+) Output :: Right Front Up ::

Pin 5 :: Green :: Positive (+) Output :: Right Rear Up ::

Pin 6 :: Brown :: Positive (+) Output :: Right Rear Down ::

Pin 7 :: Yellow :: Positive (+) Output :: Left Rear Down ::

Pin 8 :: Blue :: Positive (+) Output :: Left Front Down ::

Pin 9 :: Orange :: Positive (+) Output :: Right Front Down ::

Pin 10 :: Pink :: Positive (+) Output :: Left Front Up ::

Connector 3 :: Sensor Input ::

Please note the sensor needs to be grounded good. Poor display readings is caused by bad sensor grounds, or incorrect sensor learning. In addition you must use the same style sensor for all Bags and tanks.

Pin 1 :: Red/White :: Tank Sensor Input (variable negative re sistance) This comes seperate when purchased with the Plug n Play.::

Pin 2 :: Brown/Blue :: Left Front Bag Sensor Input (variable negative resistance) ::

Pin 3 :: Orange/Blue :: Right Front Bag Sensor Input (variable negative resistance) ::

Pin 4 :: Blue/White :: Left Rear Bag Sensor Input (variable negative resistance) ::

Pin 5 :: Orange/Green :: Right Rear Bag Sensor Input (variable negative resistance) ::

TROUBLESHOOTING

Q. When I press my preset button the system has a hard time fnding the preset accurately.
A. If the system can't fnd your preset easily you will need to adjust the interval time which can be set between 1-10, 1 being 1/10 of 1 second, 10 being 1 full second.

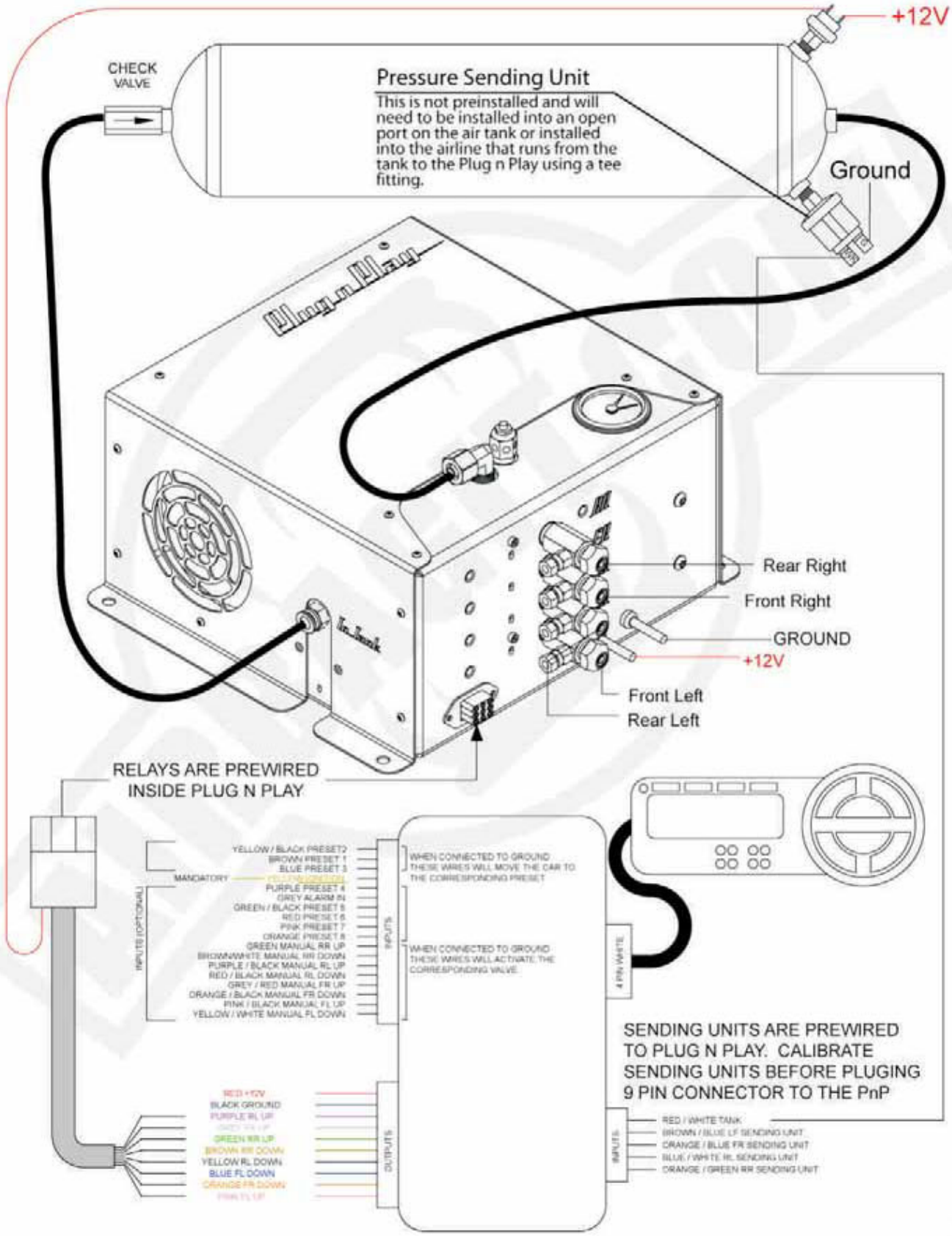
Q. Display is reading inaccurate PSI.
A1. If the PSI reading is incorrect you will need to re-calibrate your sensors to the smart-ride system.
A2. Confrm the sensors are grounded and connected properly to the smart -ride system.
A3. Maximum PSI of sensor has been exceeded.
A4. The sensor is a non-linear sensor and is not compatible with the Smart-Ride.

Q. All my pressures are right except for 1.
A1. Follow the cooresponding wire from the smart-ride controller to the pressure sender and check for any shorts or breaks.
A2. Check to make sure the sensor is properly grounded.
A3. Swap the wire between this sensor and the tank sensor to see if the display changes. If the display doesn't change then double check the wiring to the sensor.

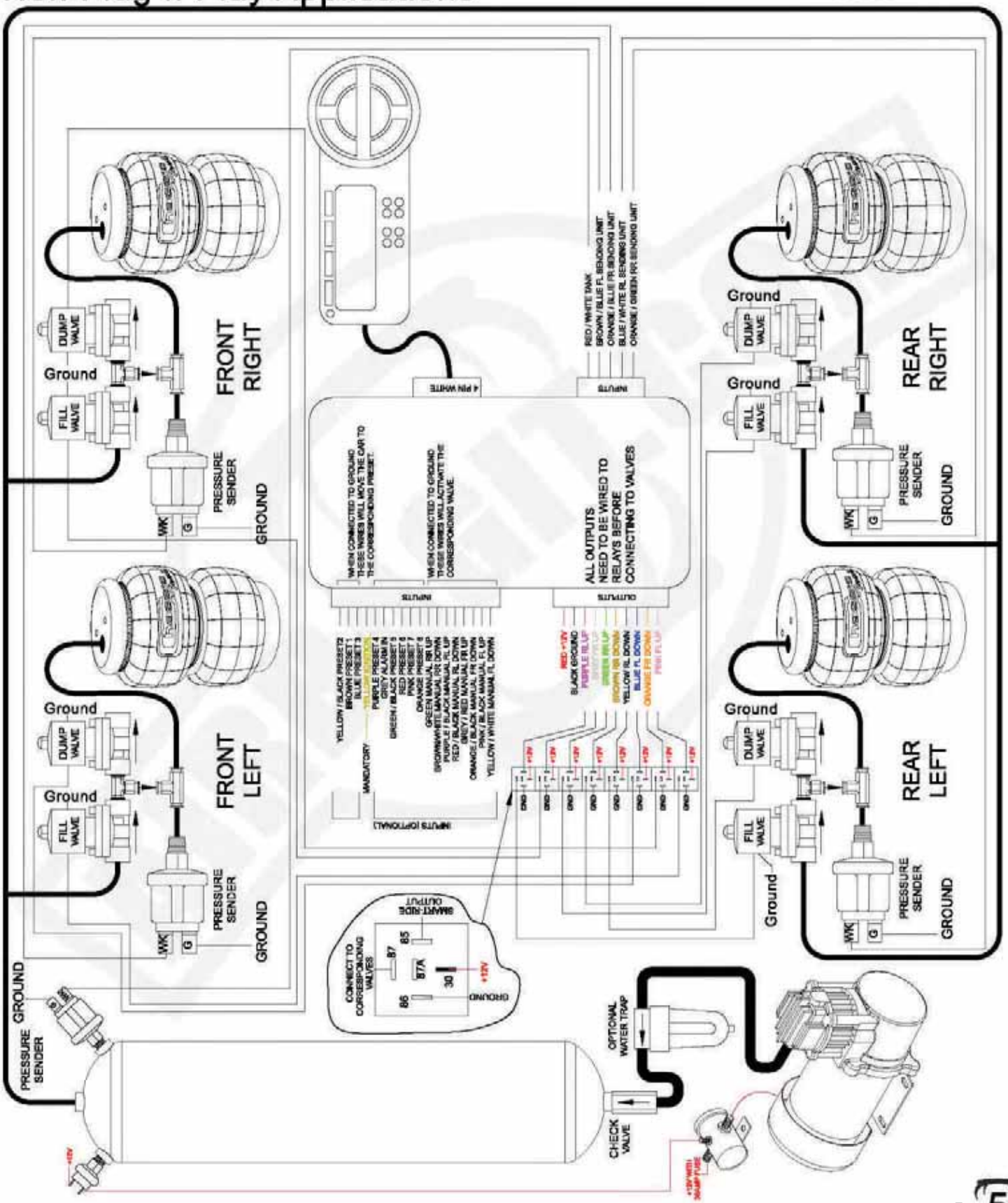
Q. Display shows alarm and nothing works.
A. Deactivate your alarm system. Check for ground on the grey wire at pin 6 on Connector 1.

Q. Display will not illuminate. (nothing on screen)
A. Be sure that the solid yellow wire is hooked up to switched ignition power.

Q. I received an extra Pressure Sending unit with my Plug n Play?
A. This is the Pressure Sending Unit for the tank. We can't pre-install this since you have the choice to run different tanks in different locations. Install this sending unit into an open port on the tank. If you do not have an open port then install a tee fitting into the air line that run from your tank to your Plug n Play or Valves.


+12V
CHECK VALVE
Pressure Sending Unit
This is not preinstalled and will need to be installed into an open port on the air tank or installed into the airline that runs from the tank to the Plug n Play using a tee fitting.
Ground
Plug n Play
Rear Right
Front Right
GROUND
+12V
Front Left
Rear Left
RELAYS ARE PREWIRED INSIDE PLUG N PLAY
YELLOW / BLACK PRESET2
BROWN PRESET 1
BLUE PRESET 3
MANDATORY
PURPLE PRESET 4
GREY ALARM IN
GREEN / BLACK PRESET 5
RED PRESET 6
PINK PRESET 7
ORANGE PRESET 8
GREEN MANUAL RR UP
BROWN/WHITE MANUAL RR DOWN
PURPLE / BLACK MANUAL RL UP
RED / BLACK MANUAL RL DOWN
GREY / RED MANUAL FR UP
ORANGE / BLACK MANUAL FR DOWN
PINK / BLACK MANUAL FL UP
YELLOW / WHITE MANUAL FL DOWN
INPUTS (OPTIONAL)
INPUTS
WHEN CONNECTED TO GROUND THESE WIRES WILL MOVE THE CAR TO THE CORRESPONDING PRESET
WHEN CONNECTED TO GROUND THESE WIRES WILL ACTIVATE THE CORRESPONDING VALVE.
4 PIN WHITE
SENDING UNITS ARE PREWIRED TO PLUG N PLAY. CALIBRATE SENDING UNITS BEFORE PLUGING 9 PIN CONNECTOR TO THE PnP
RED +12V
BLACK GROUND
PURPLE RL UP
GREEN RR UP
BROWN RR DOWN
YELLOW RL DOWN
BLUE FL DOWN
ORANGE FR DOWN
OUTPUTS
INPUTS
RED / WHITE TANK
BROWN / BLUE LF SENDING UNIT
ORANGE / BLUE FR SENDING UNIT
BLUE / WHITE RL SENDING UNIT
ORANGE / GREEN RR SENDING UNIT

Non Plug n Play Applications



Attaching the external Air Filter