



CONDUCTOR'S SPECIAL 228H TRAIN HORN KIT INSTALLATION MANUAL

228H

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WARNING: To ensure the longevity of your system, reading and following these instructions are recommended. Make sure to change filters and to drain the moisture from your tank on a regular basis.

INSTALLATION GUIDE

BEFORE GETTING STARTED

Read over the entire instruction guide before you begin your installation.

KIT CONTENTS:

- HornBlasters Shocker XL Horns
- HornBlasters Air Source Kit (2H/228H)
- 1/2" Electric Solenoid Valve
- 17' 1/2" Airline
- 10' 5/16" Airline
- 1 x 1/2" PTC to 1/2" NPT Fitting
- 4 x 5/16" PTC to 1/8" NPT Elbow Fittings
- 1 x 1/2" NPT to 4x 5/16" PTC Fitting
- 1 x Air Filter Relocation Kit
- 1 x Universal Wiring Kit
- 22' 10 Gauge Red Wire
- 22' 18 Gauge Grey Wire
- 22' 18 Gauge Blue Wire
- 40-AMP 5-Pin Relay
- 2 x 35 Amp Fuses
- 1 x Inline Fuse Holder
- 1 x Toggle Switch
- 1 x Push Button

IMPORTANT: This horn kit uses 12-volt DC components. Only install this kit with a 12-volt DC power source.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: To prevent the risk of electrical shock or electrocution:

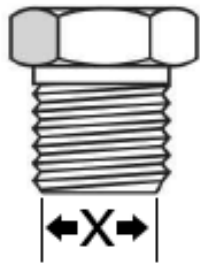
- Do not disassemble any electrical components of this horn kit (air compressor, air valve, pressure switch).
- Do not attempt repairs or modifications of any component. Please refer to qualified service agencies for all service and repairs.
- Do not operate any component where it can fall or be submerged into water or any kind of liquid.
- Do not reach for any component that has fallen or been submerged into water or any kind of liquid.
- Use the included components with 12 volt DC systems only.
- Do not leave the air system unattended during use.

WARNING: To prevent injury:

- Never allow children to operate the compressor or air horn. Use close supervision when operating this equipment near children.
- The air compressor will become very HOT during and immediately after operation. Do not touch any part of the compressor with your bare hands during or immediately after use.
- Do not use this product near open flames or explosive materials or where aerosol products are being used.
- Do not operate this product where oxygen is being administered.
- Do not pump anything other than atmospheric air.
- Never use this product while sleepy or drowsy.
- Do not use any tools or attachments with the supplied air source unit without first determining maximum air pressure for that tool or attachment.
- Never point any air nozzle or air sprayer toward another person or any part of your body.
- The included compressor is equipped with an automatic reset thermal protector and can automatically restart after the thermal protector resets. Always cut off power source when thermal protector becomes activated.
- Use only in well ventilated areas.
- Do not sound the air horn(s) in close proximity to another person's or your own ear(s).
- Do not fill the included air tank above 150 PSI. Doing so may result in death or serious injury.

Name	Description	Part #
Tire Inflation Kit	Adds a quick disconnect to your system which allows you to use air tools with our kit.	AA-TIK-H
Electric Drain Valve Kit	Replaces the drain cock with a solenoid valve; allows for remote draining of the system	AM-D04K
Digital Air Gauge	2' Digital Air Pressure Gauge allows you to monitor the tank pressure in the cab	GA-220H
Six Horn Upgrade	Adds two more bells to the system for more volume!	HU-S6-1
Shocker Horn Bracket	Mounting plate for the set of four horns only	HB-SB-1

Identifying Fittings



The diameter of the thread (X) will indicate what size thread a fitting has. If you're not sure which fittings are 1/2", 3/8", or 1/4", measure the thread on each fitting and match it up with the values below.

1/2" NPT 0.84"	3/8" NPT 0.675"	1/4" NPT 0.54"	1/8" NPT 0.405"
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1x
Safety Blowoff Valve



1x
1/2" PTC Fitting



4x
Shocker Horn Elbow



1x
Drain Cock Fitting



1x
Banjo / 4-Way Splitter



1x
Pressure Switch (Pre-installed)



1x
1/2" Solenoid Valve

INSTALLING YOUR TRAIN HORN KIT

SAFETY DURING INSTALLATION

- Ensure tight and secure connections to avoid any electrical shorts
- Use eye protection when operating power tools.
- Take your time and do not rush your installation.

PLANNING YOUR INSTALLATION

This is the most important step in your installation.

- Plan out the location of each component before starting your installation.
- Make sure you have enough air line and wire to install the system before beginning the installation.
- Make sure mounting locations are secure and void of debris.
- Try to keep the supply wire to the compressor as short as possible. Wires lose voltage over distance therefore shorter wires will result in better performance.
- Mount your air source unit in a location that is as cool as possible and away from heat sources. This will make your compressor run cooler and last longer.
- Your air source unit must be mounted upright with the compressor above the tank. Failure to mount the unit in this position will allow any condensation buildup to drain back in to the compressor and harm its components, and also will disrupt the compressor's ability to cool.
- Teflon tape or a locking compound should be used on every fitting in your air system to prevent air leaks; unless a white or red PTFE paste is already applied.
- Use the supplied 10 gauge wire or thicker (lower gauge #) wire to power your air compressor.

RECOMMENDED TOOLS

- 3/8" Long Socket (Horn Front Mount)
- 1/2" Long Socket (Horn Rear Mount)
- 1/2" Wrench
- 9/16" Wrench (1/4" NPT Fittings)
- 7/8" Wrench (1/2" Banjo)
- 12mm Wrench
- 10mm Wrench or Socket (Air Source Mounting)
- Drill (3/16" & 7/16" Bits)
- Wire Cutter/Stripper
- Tubing Cutter/Razor
- Eye and Ear Protection

I. INSTALLING YOUR HORNBLASTERS TRAIN HORNS

The horns can be mounted in any direction and will emit sound that can be heard from all around. While mounting the horns avoid places where they could receive a direct impact from road debris. You may mount the horns directly onto your vehicle or use various mediums such as grommet strips (plumber's strap), sheet metal, or custom brackets. Be aware that an air line will be connected to the rear mount of each horn.

1. Locate a secure, dry, and safe position for your horns.
2. Drill a 3/16" hole for the front mount of each horn and a 7/16" hole for each rear mount.
3. Secure the horn using the supplied mounting hardware.

II. INSTALLING YOUR AIR SOURCE KIT

When installing your compressor, choose a location where it can be mounted upright, rather than on its side or upside down. This orientation helps to maximize the lifespan of the unit. The flexibility of the air filter relocation allows you to position it in an area away from the elements regardless of the compressor's placement, ensuring optimal air quality for its operation.

1. Disconnect the ground cable from the vehicle's battery.
2. Position the unit in the desired location and secure it using the supplied mounting hardware (10mm).
3. Remove the orange plug in the compressor's air inlet.
4. Using the supplied hardware, mount the air filter somewhere dry and out of direct contact with moisture. Check the diagram **page 5**.

AIR SOURCE RECOMMENDED INSTALL LOCATIONS

RECOMMENDED LOCATIONS FOR CARS (COMPRESSOR)

- **Optimal Protection from the Elements:** While the air system is weather-resistant, installing it in the trunk significantly enhances its longevity by shielding it from direct exposure to harsh weather conditions.
- **Space-Efficient Installation:** By positioning the unit to the side or back of the trunk, it occupies minimal space – comparable to a desktop computer – ensuring you retain full use of your trunk for other needs.
- **Ease of Access:** Locating the air system in the trunk provides convenient access for maintenance or adjustments, without interfering with other vehicle components.



RECOMMENDED LOCATIONS FOR TRUCKS (COMPRESSOR)

- **Toolbox Installation:** The toolbox is an ideal location for the compressor. However, it's important not to use the toolbox itself as a grounding point for safety and functionality.
- **Engine Bay Placement:** Installing the compressor in the engine bay is feasible, but it's crucial to position it away from heat sources like the exhaust manifold and engine block. Ensure the compressor remains upright and securely attached to the tank.
- **Under-Vehicle Installation:** You can also mount the compressor under the vehicle, which provides flexibility in placement. If choosing this option, ensure the air filter is relocated to a spot away from direct exposure to water, dirt, and road debris to protect it from the elements.
- **Orientation Warning:** Remember, the compressor MUST NOT be mounted upside down. For optimal operation and safety, mount it either sideways or upright only.



AIR FILTER RELOCATION

Your air system includes an air filter relocation kit, as shown on the right. This kit allows you to relocate the air filter up to 6 feet away, protecting it from the elements and road debris.

Includes:

- Remote Mount Air Filter Housing
- Spare Air Filters
- Hose Barb Fittings
- Air Line Mounting Tabs & Hardware
- 6ft of Air Line

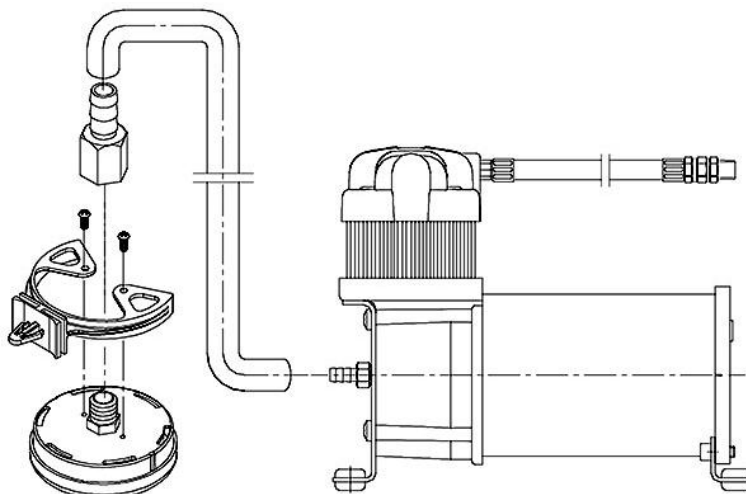


Begin by attaching the female hose barb fitting to the remote mount air filter housing, as depicted in the image below. Next, attach the male hose barb fitting to the intake side of the air compressor, also shown below. Once both fittings are installed, use the provided roll of 3/8" air line to connect them together.



Position the air filter in a high and dry location to prevent it from getting wet or exposed to the elements. While the compressor is fully sealed, a wet filter can lead to water being drawn into the compressor, potentially causing problems in the future. To ensure a longer lifespan for your compressor, it's crucial to relocate the filter to a place where it remains dry. Also, be careful to avoid kinking the air line when routing the filter.

***If your compressor is mounted outside where it is exposed to the elements, the filter MUST be relocated.**



RECOMMENDED INSTALL LOCATIONS (HORNS)

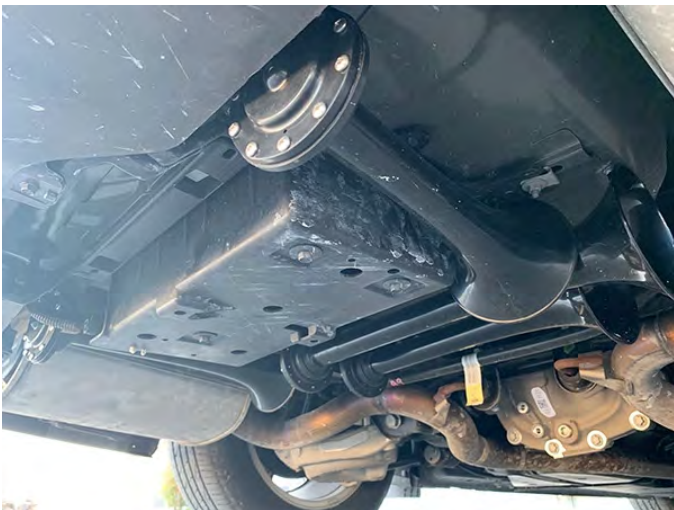
Recommended Install Locations (Horns)

- You can mount these horns in the front bumper similar to a car or underneath the bed as shown above.
- If you face the horns forward when mounted underneath they may pickup some dirt/dust from the road. This is normal and will not damage the horn. We suggest using a blowgun to remove excess dirt/dust from each bell semi-annually.



Recommended Install Locations for the Horns

- These horns will sound their best when facing down towards the ground, or towards the front of the vehicle (these can face forward!) We typically see these mounted behind the front bumper, ahead of the radiator on most vehicles. (see picture below, to the right)
 - If you opt to install the horns in the front grille, make sure that the opening at the end of each bell is not blocked or covered. **Make sure to leave some room for airflow to your radiator!**



Shocker horns installed underneath a mustang



Shocker horns installed in the front grille of a Subaru WRX



INSTALLING YOUR TRAIN HORN KIT (cont.)

III. INSTALLING YOUR AIR TUBING & AIR VALVE

Before cutting any air tubing make sure to double check your measurements. Make sure to cut equal lengths of air line to connect each horn to the manifold or the horns may sound at different times. We recommend cutting lengths with at least an extra inch per line just to be safe. Unlike compression fittings our push to connect fittings can be used multiple times. The air valve should connect to the center fitting of the banjo fitting. When threading any fittings make sure to use Teflon tape to prevent air leaks. The air valve may be mounted in any direction but it preferred that it is mounted vertically.

IMPORTANT: The air horns & fittings up to the outlet of the air valve will use 5/16" air line. The air source unit will use 1/2" air line to connect to the inlet port of the air valve.

IMPORTANT: Do not make any kinks in your air line. Doing so will disrupt air flow and the damage is irreversible.

IMPORTANT: The air valve is directional and must be properly installed. There is an arrow on the brass body of the valve that shows the air flow direction, the arrow must point towards the horn. Improper installation will cause the valve to malfunction and create a constant air leak to the horns.

FITTING FLOW CHART

[Air Source] » [1/2" Line] » [1/2" to 1/2" NPT M Fitting] » [Air Valve] » [5/16" 4-point Banjo Fitting] » [5/16" Line] » [5/16" to 1/8" NPT F Elbow Fitting] » [Rear Horn Mount]

1. Plan out the fittings placement before you begin and make sure you understand the correct order.
2. Make sure that your tank is empty of air and that the compressor is not running during installation.
3. Start by cutting equal lengths of 5/16" tubing to run from each horn to the 4-point banjo fitting.
4. The valve has a directional arrow on its body, the arrow starts with the inlet and points out to the outlet; the arrow should point towards your horns.
5. Next connect your air valve's inlet port to your air source unit using 1/2" air line and 1/2" to 1/2" PTC fitting.

IV. WIRING YOUR VALVE & AIR SOURCE UNIT

Your train horn kit will use two completely independent circuits. One circuit will connect your horn trigger (push-button intermittent switch, or toggled factory button) to your electric valve. The other circuit will connect your accessory trigger (ignition positive wire) to your air source kit.

VALVE WIRING FLOW CHART

[Factory Horn Wire] » [Toggle Switch] » [Air Valve] » [Ground]

AIR SOURCE WIRING FLOW CHART

[Remote Wire/Accessory Wire] » [Inline Fuse] » [Air Source Unit] » [Ground]

CIRCUIT 1

1. Begin by wiring your horn trigger.
 - a. If you are intending to use your factory horn switch, start by locating the load wire of the horn button (positive when horn is depressed in a standard vehicle) and wiring it to the included toggle switch.
 - b. If you are going to use a push button switch (intermittent toggle switch) wire a fused (5A) wire from any 12 volt source desired (battery) to your switch.
2. Next wire your switch to any pole of your air valve.
3. Wire the other side of the air valve to ground.
4. Test your circuit by activating your trigger and listening for a 'click' from the valve.

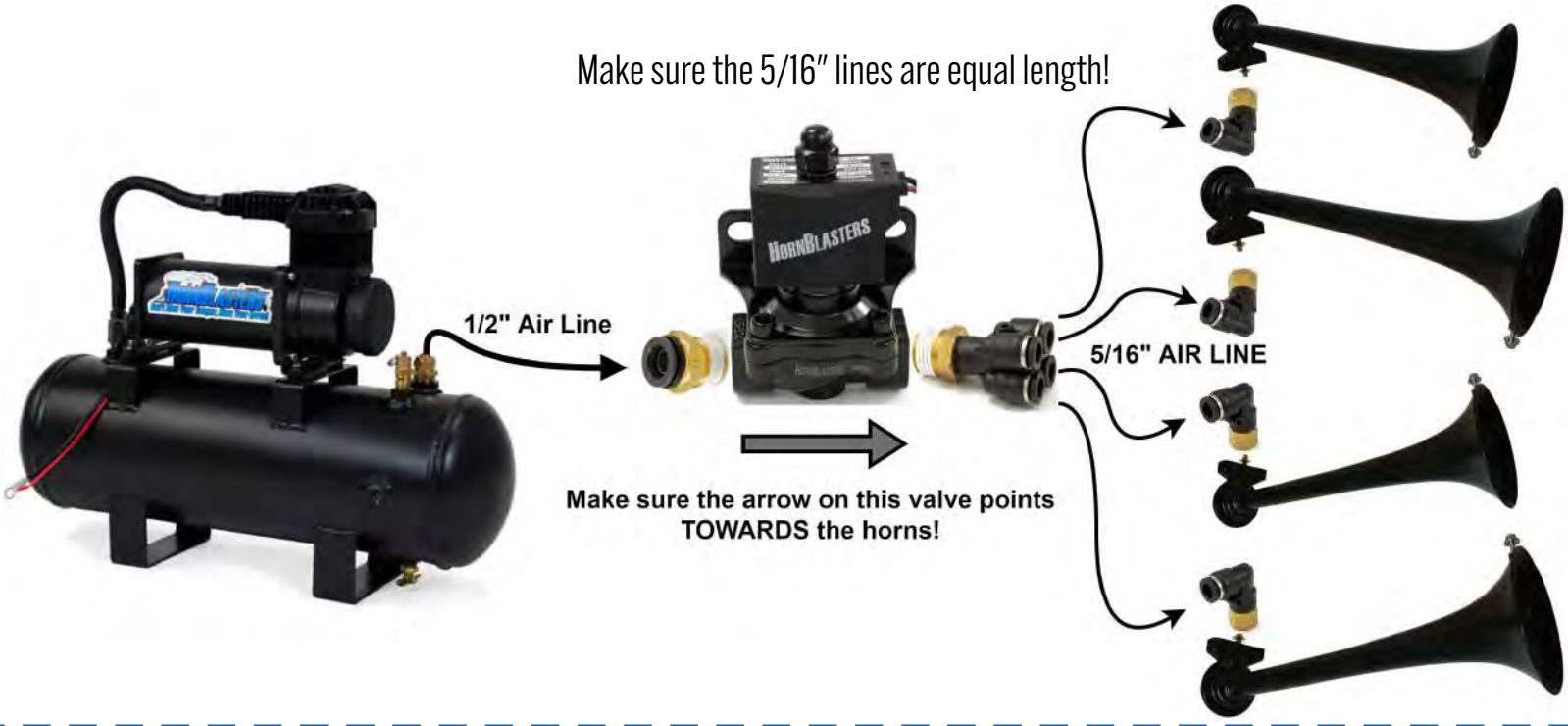
CIRCUIT 2

1. Locate an accessory line in your vehicle that is capable of a 16 amp load.
2. Wire your accessory line using an inline fuse (35A) to your air source unit (Red Wire).
3. Ground the other side of your air source unit (Black Wire) to ground.
4. Your air compressor system will not turn on automatically when power is on (Key is in 'accessory' or 'on' position) and automatically turn itself off upon reaching destination.

YOU'RE DONE!

Time to test your horns! Share your photos on our facebook at www.facebook.com/hornblasters or instagram/twitter @hornblasters and don't forget to check www.trainhornforums.com, the largest train horn community on the internet.

Make sure the 5/16" lines are equal length!



Bad Cut



Good Cut



Ensure each air line is fully seated over the compression fitting before tightening the nut down over it. If the line is not fully seated over the barb, it can slip off the fitting even with the nut in place. Hold the line in place and use a wrench to tighten the compression ferrule down.

The compressor filter must be changed out every 2-3 months, otherwise the compressor will start to pull in dirt/dust and wear prematurely. The filter can be swapped out with three easy steps, as shown below.

Use a flathead screwdriver to pry the filter housing apart. You can insert the flat end of the screwdriver into seam, where the arrow is



Remove the old filter element from the housing. Insert the new element into the center so that the white portion of the filter lines up with the plastic tabs. Replace the cover back over the housing, lining the tabs up on the sides of the cover.



WIRING INSTRUCTIONS

Wiring the Relay

Pin 30: This pin will connect to the battery positive terminal. You **MUST** use the supplied 10-gauge RED wire for this connection. Use the supplied tan or green terminal to connect the red wire to this pin. Cut our fuse holder in half to make two ends, and place this in-between pin 30 and the battery positive terminal.

Pin 86: This pin will connect to a key-power source. This can be tricky if you've never installed our kits before. You are looking to connect this pin to any circuit that is **ONLY ON WHEN THE VEHICLE IS ON**. This will prevent your kit from running when the veh off. Common key-power sources include the cigarette lighter fuse, sunroof, radio, trailer running lights, daytime running lights, etc.

Pin 85: Route a lead from this pin to the frame of the vehicle as a ground point. You may use the supplied Blue or Grey wire for this connection.

Pin 87: Take the red lead coming off the compressor/tank combo and connect it directly to this pin.

Your relay is now wired and ready for use. You can use a small lead of wire to connect pins 30 & 86 together to test the relay. If you have this wired correctly, the relay should make a light 'click' sound when the two pins are connected. This means the relay is turning on and off properly. When you start the vehicle, it will send power to pin 86 and turn the relay on, which will allow the compressor to run.

Key-Power-Source (Normal Method)

If you're having trouble locating a fuse that is only hot when the vehicle is on, you can go online to <https://fuse-box.info/>. You can use a test light to check whether or not the fuses are hot with the key in the off position. Route the black probe/clip to the battery negative terminal (-) and use the red probe on the metal contacts of the fuse(s) you want to check. If the light comes on, your fuse is hot. If the light does not turn on, start the vehicle and check for current. The light should illuminate now that the vehicle is running.

Using A Toggle Switch Instead

You can use a toggle switch to ensure the compressor doesn't run when the vehicle is off. To do this, locate the supplied toggle switch that came with your horn kit. Wire one lead of the toggle switch to the output side of your inline fuse holder, and take the opposite lead of the toggle switch to pin 86 on the relay. When you flip the switch on, the relay will switch on and allow the compressor run. Wiring your kit this way unfortunately means that you MUST turn the switch off with the vehicle, otherwise the compressor could run overnight and drain your battery.

(SEE WIRING DIAGRAM ON NEXT PAGE)

2 GALLON CONDUCTOR'S SPECIAL WIRING DIAGRAM

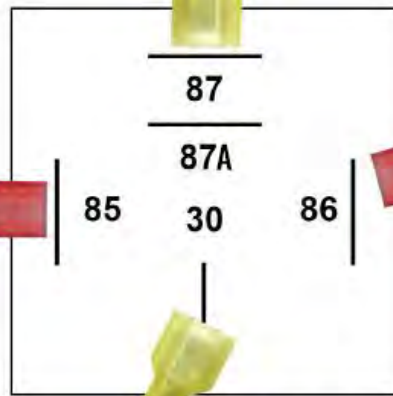
(PIN 87A IS NOT USED)



Pin 86 to key-power source (see next page)

Pin 85 ran to ground

(PIN 87A IS NOT USED)



Pin 30 to Inline fuse holder

35A Fuse

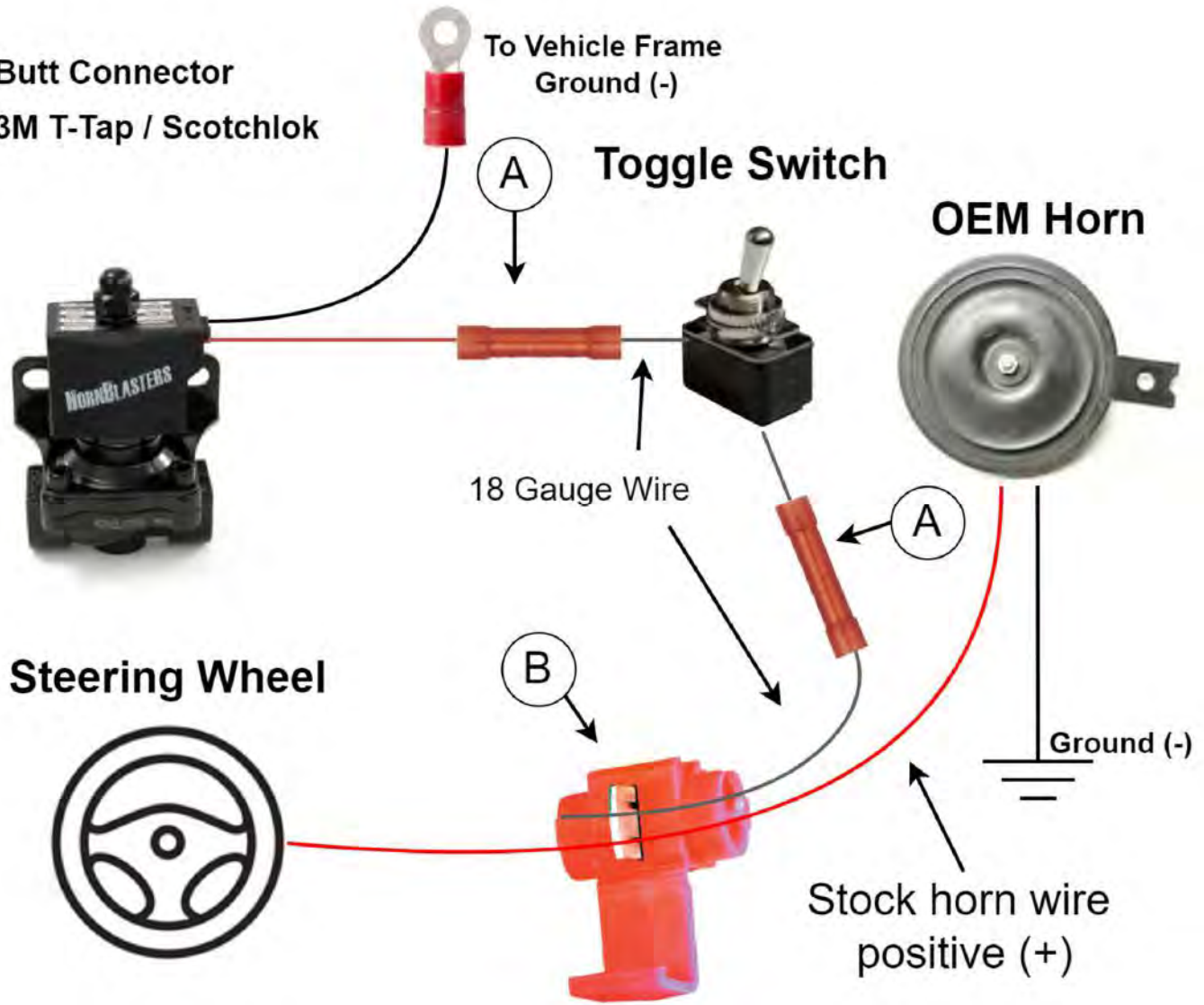
Fuse holder to battery positive (+)



Connecting the Train Horns to the Steering Wheel

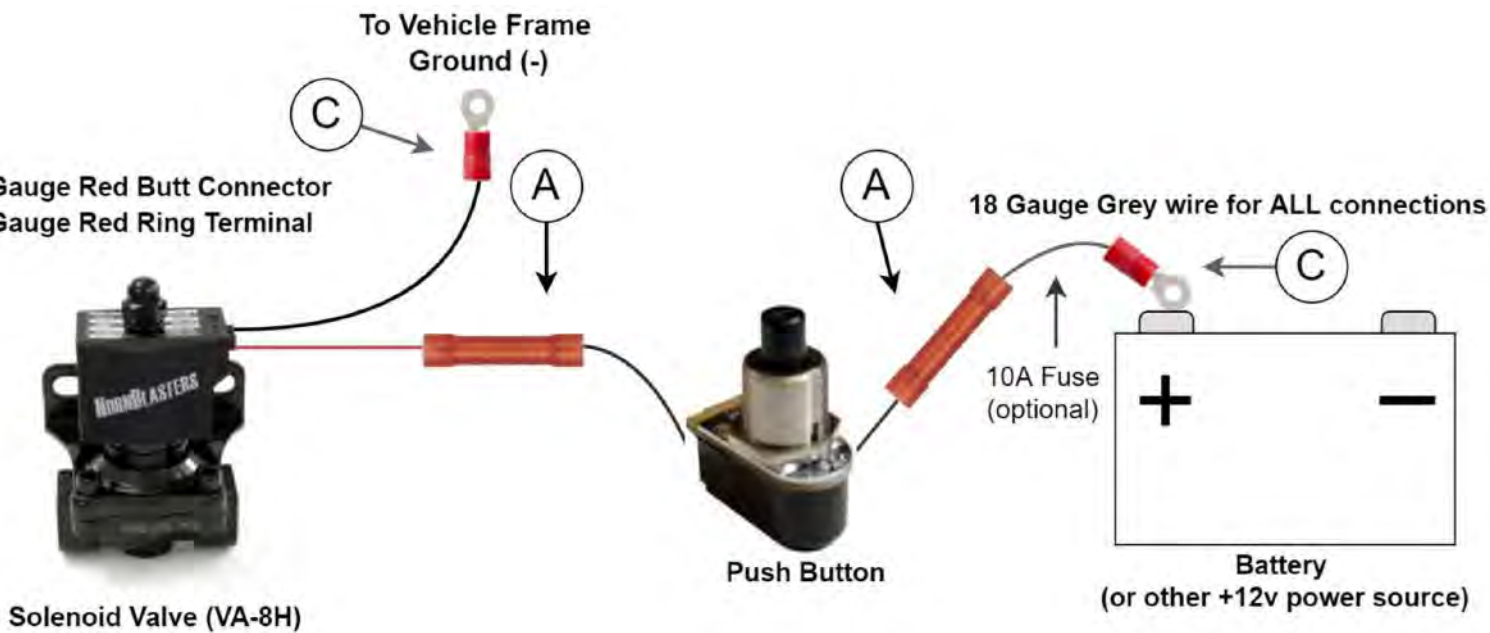
A = 18 Gauge Butt Connector

B = 18 Gauge 3M T-Tap / Scotchlok



Connecting the Train Horns to a Push Button

A = 18 Gauge Red Butt Connector
C = 18 Gauge Red Ring Terminal



MAINTENANCE & TIPS

Disconnect electrical components and drain you air system before performing maintenance.

GENERAL AIR HORN SYSTEM MAINTENANCE

- Check your air horns for debris when appropriate. You should check at least once a month and clean when necessary.
- Drain your air system at least every other week, to remove any condensation buildup on the inside of you air tank.
- Make sure you air compressor is clean and free from debris at all times.
- Periodically change your two stage air filter on your compressor.

TIPS

- Make sure your engine is running when you air compressors are in use to insure proper voltage and to prevent damage to your system.
- Do not run your compressor above its maximum rated working pressure. Doing so will not only void you warranty, but may also damage your compressor.
- The air horns are pre-tuned to a locomotive chord and to their loudest possible tone. Do not adjust the tuning screw on the horns. Doing so will void your warranty and may damage the horns if improperly adjusted.

TROUBLESHOOTING

PROBLEM

Air horn will not sound.	<ol style="list-style-type: none"> 1. No pressure in air tank. 2. No power or toggle switch in 'Off' position. 3. Blown fuse. 4. Loose connections or bad ground in air valve circuit (circuit 1). 	<ol style="list-style-type: none"> 1. Check that air tank is pressurized. 2. Make sure all toggle switches are on. 3. Disconnect electrical components and replace fuse. 4. Check that all electrical circuits are secure and not corroded.
Horn tone changes when sounded	<ol style="list-style-type: none"> 1. A side fitting as used to connect the air source (line from valve) to the 4-point banjo manifold. 2. Air line connecting the horns is not of equal length. 	<ol style="list-style-type: none"> 1. Check that air source (line coming from valve) is entering the center fitting of the 4-point banjo manifold. 2. Check that the air line connecting each horn to the 4-point banjo manifold is of equal length.
Excessive moisture in horn or safety discharge.	<ol style="list-style-type: none"> 1. Excessive water in tank. 2. Compressor is exposed to high humidity. 	<ol style="list-style-type: none"> 1. Depressurize tank using safety, then drain tank. Tilt the tank to drain moisture and drain more frequently. 2. Move the compressor to an area with less humidity.
Compressor will not run.	<ol style="list-style-type: none"> 1. No power or toggle switch in 'Off' position. 2. Blown fuse. 3. Motor overheat. 4. Faulty pressure switch. 	<ol style="list-style-type: none"> 1. Make sure all toggle switches are on. 2. Disconnect compressor from power & replace fuse (35A). 3. Let compressor cool off for about 30 minutes for thermal overload switch to reset. 4. Replace pressure switch.
Thermal overload protector cuts out repeatedly.	<ol style="list-style-type: none"> 1. Lack of proper ventilation/ambient temperature too high. 2. Compressor valves failed. 	<ol style="list-style-type: none"> 1. Move compressor to a well ventilated area or an area with a lower ambient temperature. 2. Replace air compressor.
Excessive knocking or rattling	<ol style="list-style-type: none"> 1. Loose mounting bolts. 2. Worn bearing on eccentric or motor shaft. 3. Cylinder or piston ring is worn. 	<ol style="list-style-type: none"> 1. Tighten bolts. 2. Replace compressor. 3. Replace compressor.
Tank pressure drops when compressor shuts off	<ol style="list-style-type: none"> 1. Loose drain cock. 2. Air valve or check valve is leaking. 3. Loose connections. 4. Defective safety valve. 	<ol style="list-style-type: none"> 1. Tighten drain cock. 2. Replace air valve or check valve. 3. Check all air connections with soap and water solution and tighten as necessary. 4. Replace safety valve.
Compressor runs continuously and air flow lower than normal	<ol style="list-style-type: none"> 1. Excessive air usage. 2. Loose connections. 3. Worn piston ring or inlet valve. 4. Clogged air filter element. 	<ol style="list-style-type: none"> 1. Decrease air usage. 2. Check all connections with soap and water solution and tighten as necessary. 3. Replace compressor 4. Replace air filter element.
Compressor runs continuously causing safety valve to open.	<ol style="list-style-type: none"> 1. Faulty pressure switch. 2. Defective safety valve. 	<ol style="list-style-type: none"> 1. Replace pressure switch. 2. Replace safety valve.

CAN'T FIGURE IT OUT?

No problem! Give us a call at 813-783-8058, or email at support@hornblasters.com and we'll be more than happy to help you fix you system. Also feel free to visit our online horn community, www.trainhornforums.com, for more information.

PHOTOGRAPH & MEDIA SUBMISSION GUIDELINES

Send in your installation photographs and any other media for a chance to be featured on our web site!

GENERAL PHOTOGRAPH SUBMISSION GUIDELINES

- Please submit clean, concise photographs. Make sure your subject is clearly visible and in focus.
- You may submit and digital image format either via email at media@hornblasters.com, or via digital media (CD, DVD, etc).
- Make sure to include some kind of personal information with your submission. We would love to be able to contact you and thank you.

INSTALLATION GALLERY SUBMISSION GUIDELINES

- Please take at least one photo of each major components of your installation (horns, compressor, tank, valve, switches, etc).
- Don't forget to send us some shots of your vehicle too! If we can't tell what the install is on, we probably won't post it.
- Include as much installation information as possible.
 - Who installed the system and when was it installed?
 - How long did the install take?
 - What is the year, model, and style of your vehicle?
 - If you took your system to a shop, would you recommend the shop to others?
 - Do you have any comments or tips about the installation?
 - Anything else you want to tell us, we always appreciate your feedback!
 - Optionally include a little personal information:
 - Your name (if you would like your full name to be displayed, you have to let us know!)

GENERAL VIDEO SUBMISSION GUIDELINES

- We accept all kinds of media. Please provide us with the highest quality media to prevent video degradation.
- We can read all formats of video. We recommend using either the default your camera records with; or if you are compressing the video, we recommend using AVI containers and Xvid, Divx, or a MPEG codec. We recommend AGAINST using any kind of Windows Media*, Real Media*, or Apple QuickTime* formats.
- You may submit any digital image format either via email at media@hornblasters.com, or via digital media (CD, DVD, etc).
- Make sure to include some kind of personal information with your submission. We would love to be able to contact you and thank you!

*Windows, Windows Media, Real, Real Media, Apple, and QuickTime are all registered trademarks and copyright of their respective owners.

GET INVOLVED IN THE TRAIN HORN COMMUNITY

No matter what your take is on your new train horn kit, it's always good to have someone to share your stories with. Trainhornforums.com is the largest train horn community online and provides a place to share photos of your ride, post videos, catch up with other train horn and HornBlasters fans, meet other train horn enthusiasts, or even find help with a complicated question.

Go online to www.trainhornforums.com and sign up today!



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