

WHELEN[®]

ENGINEERING COMPANY INC.

51 Winthrop Road
Chester, Connecticut 06412-0684
Phone: (860) 526-9504
Fax: (860) 526-4078
Internet: www.whelen.com
Sales e-mail: autosale@whelen.com
Canadian Sales e-mail: canadiansales@whelen.com
Customer Service e-mail: custserv@whelen.com

Installation Manual GTT Model 795DM Emitter

Warnings to Installers

Whelen's emergency vehicle warning devices must be properly mounted and wired in order to be effective and safe. Read and follow all of Whelen's written instructions when installing or using this device. Emergency vehicles are often operated under high speed stressful conditions which must be accounted for when installing all emergency warning devices. Controls should be placed within convenient reach of the operator so that he can operate the system without taking his eyes off the roadway. Emergency warning devices can require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or vehicle damage, including fire. Many electronic devices used in emergency vehicles can create or be affected by electromagnetic interference. Therefore, after installation of any electronic device it is necessary to test all electronic equipment simultaneously to insure that they operate free of interference from other components within the vehicle. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving; sudden braking or collision. Failure to follow instructions can result in personal injury. Whelen assumes no liability for any loss resulting from the use of this warning device. PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.

Warnings to Users

Whelen's emergency vehicle warning devices are intended to alert other operators and pedestrians to the presence and operation of emergency vehicles and personnel. However, the use of this or any other Whelen emergency warning device does not guarantee that you will have the right-of-way or that other drivers and pedestrians will properly heed an emergency warning signal. Never assume you have the right-of-way. It is your responsibility to proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. Emergency vehicle warning devices should be tested on a daily basis to ensure that they operate properly. When in actual use, the operator must ensure that both visual and audible warnings are not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should be familiar with all applicable laws and regulations prior to the use of any emergency vehicle warning device. Whelen's audible warning devices are designed to project sound in a forward direction away from the vehicle occupants. However, because sustained periodic exposure to loud sounds can cause hearing loss, all audible warning devices should be installed and operated in accordance with the standards established by the National Fire Protection Association.

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.**
- **Failure to use specified installation parts and/or hardware will void the product warranty.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr the holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro®, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post (this does not include products that use cigar power cords).**
- **If this product uses a remote device for activation or control, make sure that this device is located in an area that allows both the vehicle and the device to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

IMPORTANT WARNING: When this emitter is mounted, it must not obstruct any part of the driver's view. Make sure that after the emitter is installed, the operator has an unobstructed view through the windshield.

IMPORTANT WARNING: Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle. Whelen Engineering Co. assumes no liability or responsibility for determining individual applications or exact installation location criteria.

Installation Style 1: Headliner Mounting

1. Attach the mounting bracket to the emitter by hooking the four tabs of the bracket into the 4 slots on the top, leading edge of the emitter housing. This is secured to the housing by inserting the 2 bracket mounting screws through the mounting tabs on the rear top of the housing and into the bracket mounting holes.
2. Now position the light (with bracket attached) onto the area of the headliner selected as the mounting location. Using a pin as a probe, make sure that both headliner mounting screws will catch the roof support beam under the headliner and miss the 2 holes in the support beam. Using a colored pencil or similar implement, mark the area of the headliner to be drilled for the mounting holes.

NOTE: It may be necessary to cut a section out of the emitter housing to accommodate your rear view mirror. Using a small cutting tool, cut the area outlined on the lower, leading edge of the emitter housing.

3. Remove the light and drill 2 mounting holes with an appropriately sized drill bit.
4. Remove the bracket from the emitter and secure the bracket to the mounting location using the mounting screws provided.
5. Re-attach the emitter to the mounting bracket as outlined in Step 1.

Replacement Headliner Mounting Kit: 01-0462780-00

Installation Style 2: Windshield Mounting

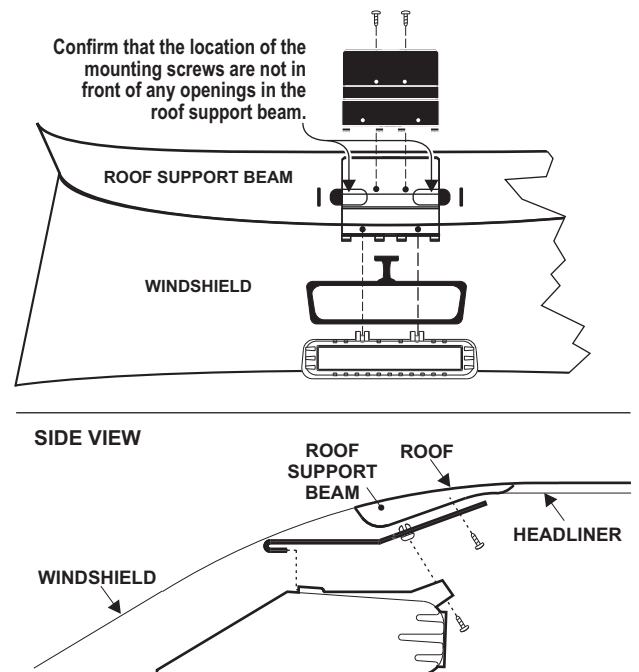
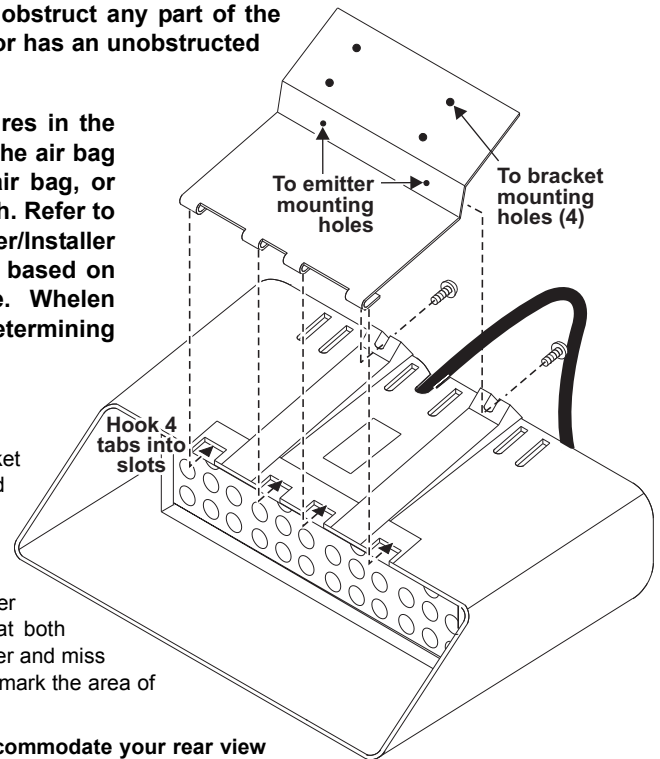
IMPORTANT WARNING: When this emitter is mounted, it must not obstruct any part of the driver's view. Make sure that after the emitter is installed, the operator has an unobstructed view through the windshield.

IMPORTANT WARNING: Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle. Whelen Engineering Co. assumes no liability or responsibility for determining individual applications or exact installation location criteria.

1. Attach mounting bracket to emitter by hooking the four tabs of the bracket into the 4 slots on the top, leading edge of the emitter housing. This is secured to the housing by inserting the 2 bracket mounting screws through the mounting tabs on the rear top of the housing and into the screw grommets in the bracket.
2. With a helper holding the mounting bracket in its proposed mounting location against the windshield, make a rough outline of the mounting bracket contact surface on the outside of the glass. A crayon or grease pencil should be suitable for this purpose.

CAUTION: The windshield *must* be at a temperature between 65° and 70° for the adhesive to work. If necessary, run your defroster to heat the windshield before installing.

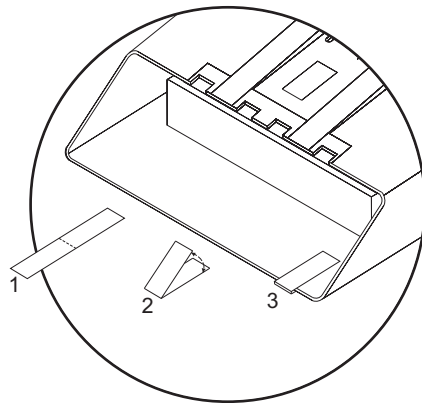
3. After the mounting area has been clearly outlined, remove the mounting bracket from the emitter housing.
4. Using the adhesive included with your mounting kit, attach the bracket to the windshield. Be sure to follow the instructions on the adhesive package precisely (the adhesive *must* be applied to the bracket and the activator *must* be applied to the windshield).
5. After allowing the proper drying time (see adhesive instructions) re-attach the emitter housing to the bracket (as outlined in step 1 of this section).



Removal Of Windshield Mount Bracket:

1. To remove your bracket after it's mounted, the windshield must be between 65° and 70°. If the windshield is too cold, it may crack.
2. Remove the emitter from the bracket and heat the windshield contact area of the bracket by heating the backside with a heat gun. Do not apply heat directly to windshield!
3. When the bracket has reached sufficient temperature, a gentle tug with a pair of pliers should release the bracket from the windshield. Do not touch the bracket with unprotected hands. Use protective gloves!
4. Scrape all of the old glue off the windshield and bracket before remounting.

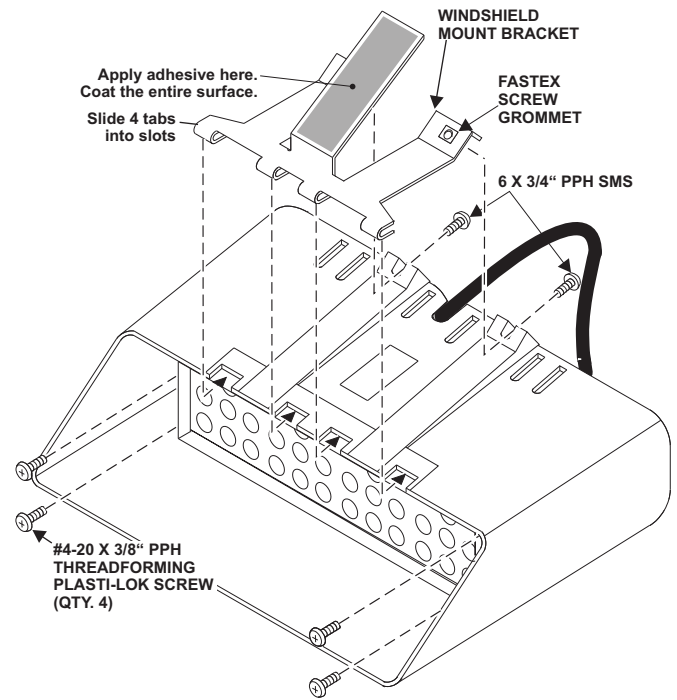
Addition Of Foam Tape:



If the emitter bumps up against your windshield you will want to attach the foam tape supplied with the bracket (see illustration)

1. Cut the tape in half.
2. Find the center of each piece.
3. Remove the paper from the adhesive side of the tape and (putting the center on the edge of the visor) stick it to the visor, wrapping it around top and bottom.

Replacement Windshield Mounting Kit: 01-0462780-01



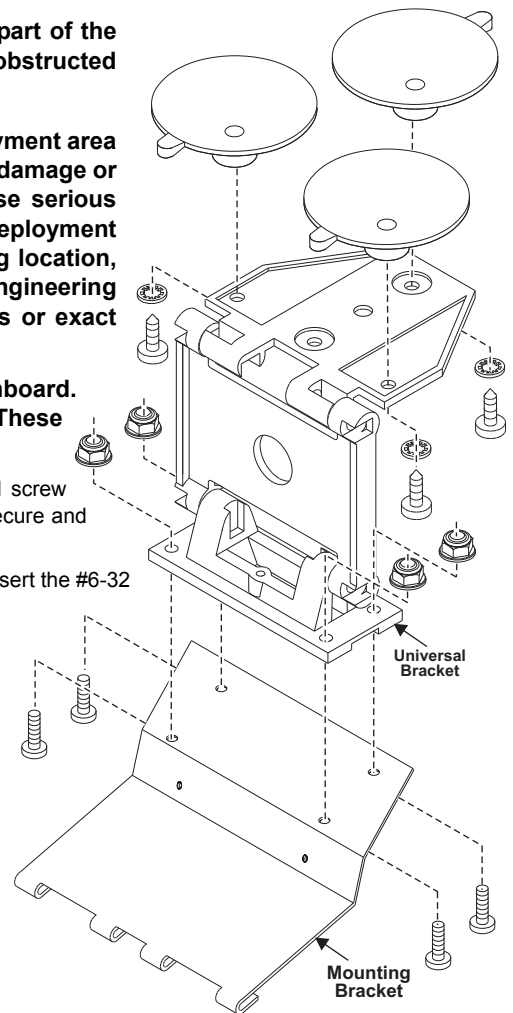
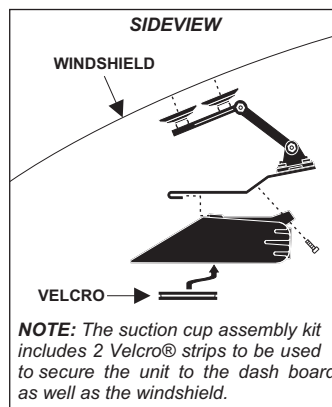
Installation Style 3: Suction Cup Mounting

IMPORTANT WARNING: When this emitter is mounted, it must not obstruct any part of the driver's view. Make sure that after the emitter is installed, the operator has an unobstructed view through the windshield.

IMPORTANT WARNING: Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle. Whelen Engineering Co. assumes no liability or responsibility for determining individual applications or exact installation location criteria.

CAUTION: This product has been designed to rest on the top of the vehicle's dashboard. Suction cups are used to prevent lateral movement while the vehicle is in motion. These suction cups should not be used to suspend this product above the dashboard.

1. Place the suction cup on the top portion of the universal bracket and insert a sheet metal screw (provided) up through the washer and into the suction cup. Tighten until the suction cup is secure and repeat with the remaining two cups.
2. Place the universal bracket onto the mounting bracket lining up the 4 screw holes indicated. Insert the #6-32 x 1/2" phillips pan head machine screw through the mounting bracket and universal bracket. Secure the brackets together using the 6-32 x 5/16" whiz lock nut.
3. Attach the mounting bracket to the emitter by hooking the four tabs of the bracket into the 4 slots on the emitter. Secure it by lining up the 2 bracket mounting screws through the 2 tabs on the light and screwing them into the bracket mounting holes on the bracket.
4. Stick the Velcro® strips onto the bottom of the unit. Place the other half of the velcro strips to desired mounting location on the dashboard. Secure the light (with bracket attached) to the dash, then press the universal bracket firmly to the glass until all three suction cups have a hold. Once it is affixed to the windshield the emitter is mounted and ready to go.



Replacement Suction Cup Mounting Kit: 01-0462889-00

Disable wiring:

The use of a disable switch is highly recommended so that emergency vehicle drivers do not need to remember to shut off their emitter when arriving at the scene. Without using this feature, nearby intersections may be unnecessarily held in preemption by vehicles at the scene.

The disable function is entered when the WHITE wire transitions either from +12V DC to ground or from a floating state to ground.

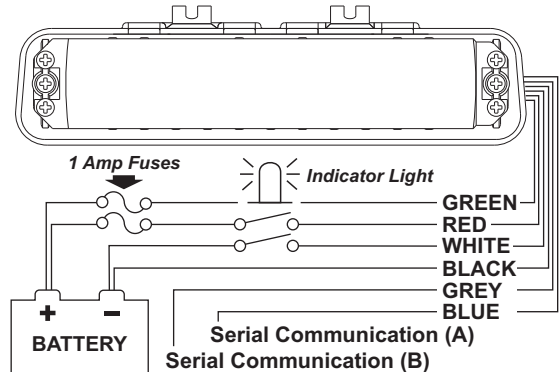
When installing the emitter the installer should provide sufficient wire/cable length to allow the end user to connect the WHITE wire as described.

Indicator light:

The use of an indicator light either in a switch or stand alone is highly recommended. The indicator light, when controlled by the GREEN wire will allow the user to determine if the emitter is operating normally (steady indication), in disable mode (Flashes once every 2 seconds), has failed (flashes 2 times per second).

The GREEN wire provides a DC return for the indicator light. When +12V DC is provided to one side of an indicator and the GREEN wire is connected to the other side (or to the light terminal of a lighted switch, the emitter will control the behavior of the indicator light .

When installing the emitter the installer should provide sufficient wire/cable length to allow the end user to connect the green wire as described above.



- WIRE FUNCTIONS:**
GREY / Serial Communication (B)
WHITE / Disable (Input)
ORANGE / Range Setting Enable
RED / +12V DC
BLUE / Serial Communication (A)
BLACK / DC Ground
GREEN / DC Return for indicator light

WARNING! All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

Caution: Permanent mounting of this product will require drilling. It is absolutely necessary to make sure that no other vehicle components could be damaged by this process. Check both sides of the mounting surface before starting. If damage is likely, select a different mounting location.

IMPORTANT! It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment!

IMPORTANT! Before returning the vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.