

WHELEN[®]

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Installation Guide:
BETA1™ Series Control Head

DANGER! Sirens produce extremely loud emergency warning tones! Exposure to these tones without proper and adequate hearing protection, could cause ear damage and/or hearing loss! The Occupational Safety & Health Administration (www.osha.gov) provides information necessary to determine safe exposure times in Occupational Noise Exposure Section 1910.95. Until you have determined the safe exposure times for your specific application, operators and anyone else in the immediate vicinity should be required to wear an approved hearing protection device. Failure to follow this recommendation could cause hearing loss!

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 they can operate the system without taking their 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.

⚠ WARNING: This product can expose you to chemicals including Methylene Chloride which is known to the State of California to cause cancer, and Bisphenol A, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

- 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.
- Any holes, either created or utilized by this product, should be made both air- and watertight using a sealant recommended by your vehicle manufacturer.
- 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.
- 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!

**ACTIVATION OF THIS
SIREN MAY DAMAGE
UNPROTECTED EARS!**



CAUTION

Loud siren noise can cause hearing damage and/or loss. Refer to OSHA Section 1910.95 prior to putting ANY siren into service!

WARNING!

DISCONNECTING THE VEHICLE BRAKE LAMP CIRCUIT USING ANY SIRENS WITH RELAY OUTPUTS OR SWITCH CONTROLLERS COULD CAUSE VEHICLE OR PROPERTY DAMAGE, SERIOUS INJURY OR EVEN DEATH.

DISABLING THIS CIRCUIT IS A VIOLATION OF THE FEDERAL MOTOR VEHICLE SAFETY STANDARD FOR THE THIRD BRAKE LIGHT, AS WELL AS REAR BRAKE LIGHTS.

FUNCTIONS THAT BLACK OUT THE REAR BRAKE LIGHTS (SOMETIMES CALLED “BRAKE LIGHT CUT OUT”) MAY INTERFERE WITH THE BRAKE SHIFT LOCK MECHANISM, AND CAUSE THE VEHICLE TO MOVE UNEXPECTEDLY AND DANGEROUSLY.

DISCONNECTING THE BRAKE LIGHTS IN ANY WAY IS AT YOUR OWN RISK AND IS NOT RECOMMENDED BY WHELEN.

Introduction...

This manual outlines the procedures necessary for the installation and operation of the *BETA1™* Series Control Head. It is essential to read through this manual carefully before beginning the installation process.

Mounting the BETA I™

1. Locate a suitable mounting location for the *BETA1™* Series control head. Be sure that the control head fits properly and does not interfere with any dashboard components.

READ BEFORE INSTALLING!!!

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 the 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.

2. Position the control head on the proposed mounting location. Using a pencil or other suitable tool, scribe the mounting surface where the holes are to be drilled. (Fig. 1)

CAUTION! As mounting the *BETA1™* will require drilling, it is absolutely necessary to make sure that no vehicle components could be damaged by the mounting process. Check both sides of the mounting surface before starting and if damage is possible, select a different mounting location.

3. Drill the 2 mounting screw holes.
4. Position the control head onto the mounting surface. Using the sheet metal screws, secure the control head to the mounting surface.

Wiring for the Control Head...

To hook up the *BETA I™* control head simply plug the 17 ft. cable (supplied) into the control head then route the other end of the cable to the amplifier. (Fig. 2)

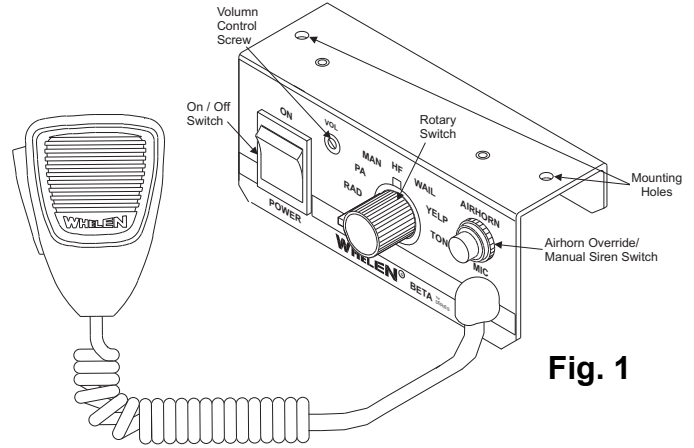


Fig. 1

Connecting to your Horn Relay:

1. Locate your vehicle's horn relay. Now locate the wire that connects the vehicle horn to the horn relay output and cut this wire. (Fig. 2)
2. Extend each end of the cut wire (using a minimum 16 gauge wire) to the control head.
3. Connect the wire coming from the horn relay output to the white wire of the 12 pin connector.
4. Connect the wire coming from the horn to the gray wire of the 12 pin connector.

Operating the Control Head...

Power Switch

This switch has two positions: Down (*BETA1* - Off) and Up (*BETA1* - On). When this switch is in the Off position, the *BETA1* will not function. When the switch is in the On position the siren is functional and may be activated at the operator's discretion.

NOTE: If the *BETA1* is connected to the vehicle's horn ring circuit, the vehicle horn is disabled when the *BETA1* power switch is in the ON position. The horn ring will now function as a manual siren switch.

Microphone

Pressing the microphone button will allow you to broadcast public address over the siren loudspeaker regardless of the rotary switch position. **NOTE:** This will override all other siren functions.

Airhorn Override / Manual Siren Switch

The airhorn override switch will activate the simulated airhorn tone when pressed and will terminate upon release. **Note:** The Airhorn will override all of the *BETA1* control head functions except the microphone.

Rotary Switch

The rotary knob controls the siren and PA (public address) functions of the BETA1™. There are 7 positions that may be selected. Each position and its function is outlined below:

RAD (Radio Repeat) - When the rotary knob is in the RAD position, any signal that is received by the vehicle's two-way radio will be simultaneously broadcast over the vehicle's loudspeaker (the BETA™ remote amp must be connected to the two-way radio as outlined in its manual). If the horn ring is wired as shown and the horn ring is pressed, an "airhorn" siren tone will be generated by your vehicle's loudspeaker.

PA (Public Address) - When the rotary knob is in the PA position, public address functions are operational. Messages may be broadcast over the vehicle's loudspeaker when the BETA1 microphone is in use. The volume level of PA transmissions is controlled by the volume adjustment screw. If the horn ring is pressed while the rotary knob is in this position, an "air horn" siren tone will be generated by your vehicle's loudspeaker. This tone is generated until the horn ring button is released.

MAN (Manual Siren) - When the rotary knob is in the MAN position, pressing the horn ring generates a tone that rises in pitch to a pre-set level. This tone is generated for as long as the horn ring is pressed.

HF (Hands Free Operation) - When the rotary knob is in the HF position, the siren functions of the BETA I are placed in a stand-by mode. Siren tones are activated by a single "tap" on the vehicle's steering wheel horn ring button (if the vehicle's horn has been wired to the BETA I). The first "tap" produces a Wail

tone (a steady, rise and fall tone). A second tap produces a Yelp tone (a fast, rise and fall tone). A third tap produces a Piercer™ tone (an extremely fast, rise and fall tone). The next tap returns the siren to a Wail tone and the cycle repeats itself. Two quick, successive taps will stop the siren.

WAIL (Wail Tone) - When the rotary knob is in the WAIL position, a steady, rise and fall tone is produced. A single tap on the vehicle's steering wheel horn ring button (if the vehicle's horn has been wired to the BETA1), changes the siren tone to a Yelp pattern (a fast, rise and fall tone). A second tap, and the siren returns to a Wail tone. Please note that the BETA1 microphone will override the siren function.

YELP (Yelp Tone) - When the rotary knob is in the YELP position, a fast, rise and fall tone is produced. A single tap on the vehicle's steering wheel horn ring button (if the vehicle's horn has been wired to the BETA1), changes the siren tone to TONE3. A second tap and the siren returns to a Yelp tone.

TONE3 (Piercer™ Tone in default configuration) - When the rotary knob is in the TONE3 position, an extremely fast, rise and fall tone is produced. Pressing on the steering wheel horn button (if the vehicle's horn has been wired to the BETA1), changes the siren tone to a simulated air horn tone for as long as the button is pressed. Releasing the button causes the siren to return to the Piercer™ tone.

Volume Adjustment Screw

The Volume Screw controls the volume of public address function. Volume is increased by rotating the screw in a clockwise direction and decreased by rotating the screw in a counter-clockwise direction. The volume screw has no effect on any siren tones produced.

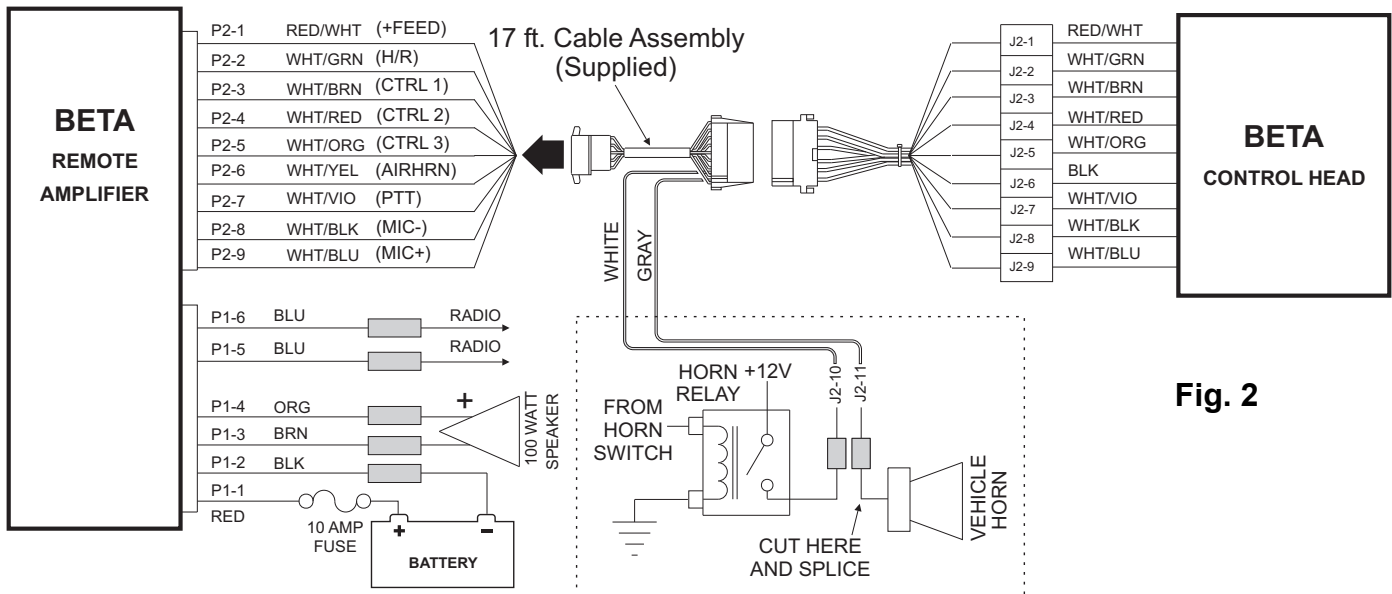


Fig. 2

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!

SPECIFICATIONS	
Input Voltage	10 TO 32 Volts
Input Current (OFF)	0ma
Input Current	500ma (max.)
Output Voltage	8.6 volts to 30.6 volts
Output Current	500ma (max.)
Operating Temperature	-30c to +60c
Operating Humidity	95% Non Condensing
Output Short Protection	500ma Poly Fuse

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CAUTION

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