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Installation Guide: X-Ecutor™ Siren Control Head Console/Flush Mount

Automotive: Sirens/Switches

Safety First

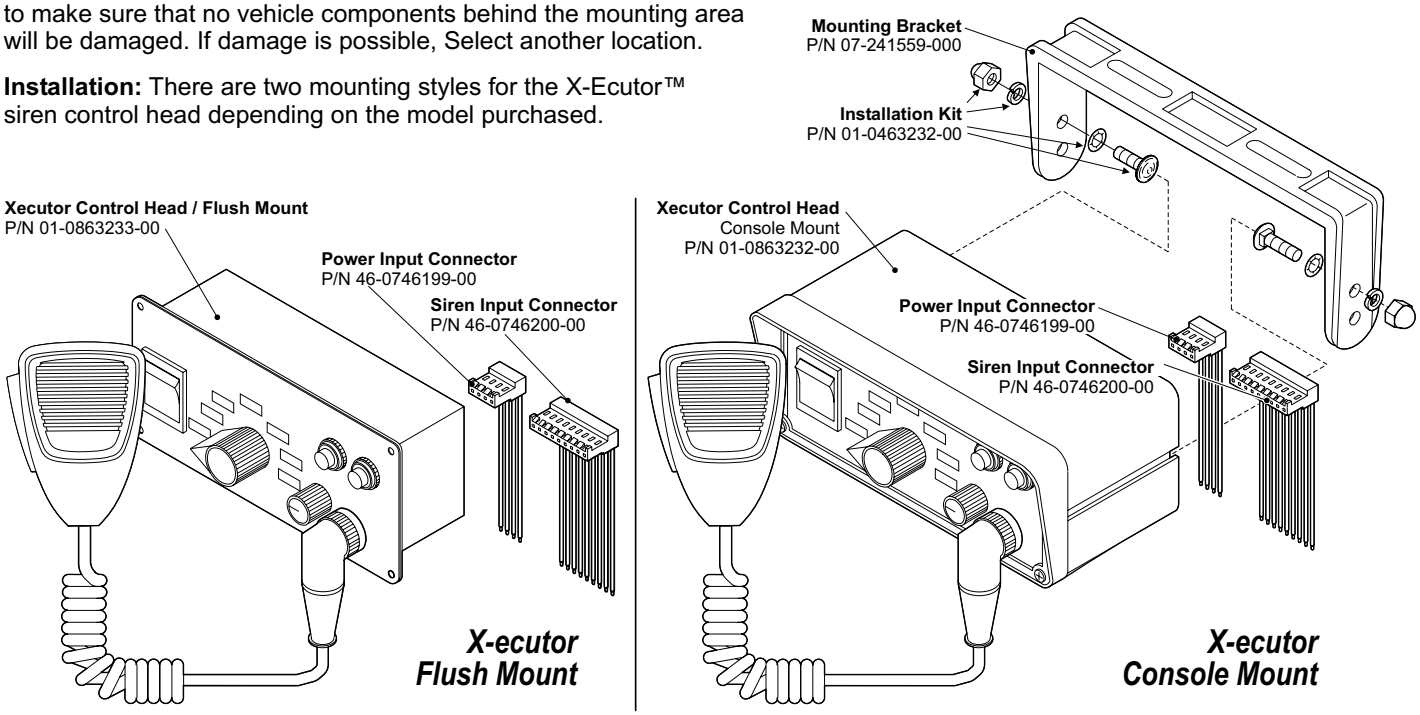
This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained 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.
- 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 any 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 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 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.
- 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.
- If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.
- Do not attempt to activate or control this device in a hazardous driving situation.
- 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!

Form No.13535B (110900)

Important: Mounting will require drilling. It is absolutely necessary to make sure that no vehicle components behind the mounting area will be damaged. If damage is possible, Select another location.

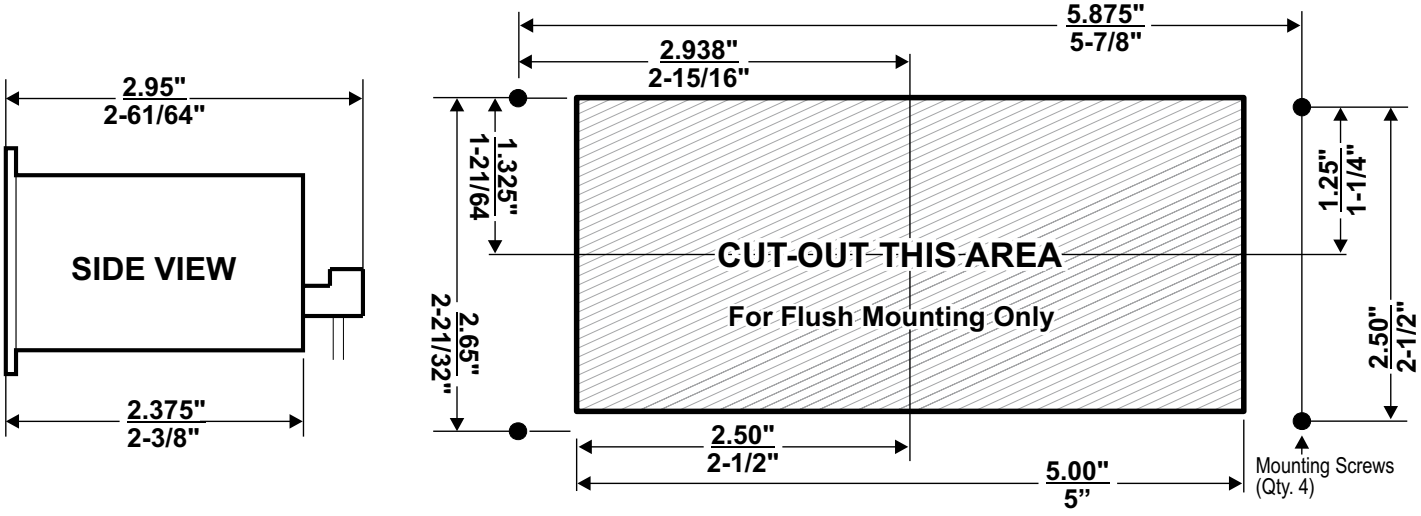
Installation: There are two mounting styles for the X-Ecutor™ siren control head depending on the model purchased.



Flush Mount: The flush mount unit can be mounted in a console or other location. Using the measurements below, cut the hole for the control head, then slide the unit in. Mark and drill the four mounting holes for the customer supplied mounting hardware.

Console Mount: The console mount unit has a bail strap that can be attached under the dash. Follow the diagram above for assembly of the bracket. You will need to supply the screws that attach the bracket to the vehicle.

Read Before Installing: Do not install this product or route any wires in the deployment area of your airbag. Equipment mounted or located in the airbag deployment area will reduce the effectiveness of the airbag 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.



IMPORTANT: *Template not to scale. Measurements given in Decimals and Fractions are for convenience. For an accurate measurement and installation you should use the decimals.*

Connecting the Power & Ground Wires:
RED (Power) and BLACK (Ground)

NOTE: Use the Wire Size Chart below to find the correct gauge wire to use for your application.

1. Insert the Power Input Connector into it's port on the Siren Control Head.
2. Extend the RED / Positive (+) and BLACK / Negative (-) wires to the vehicles main power source.

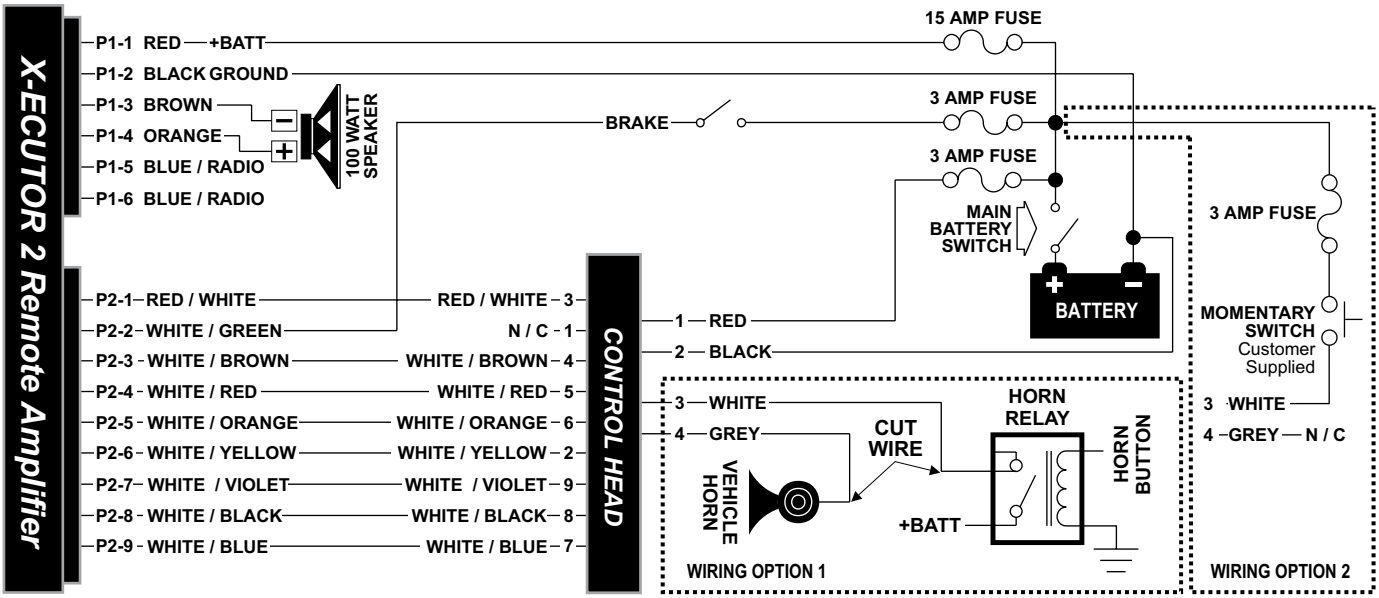
   WARNING: All customer supplied wires that connect to the POSITIVE (+) terminal of the battery must be sized to supply at least 125% of the maximum operating current & be fused "at the battery" to carry that load.
3. Install a 5 amp fuse block (customer supplied) on the end of the RED (+) wire.

   Note: *Remove the fuse from the fuse block before connecting any wires to power.*
4. Connect the fuse block wire to the POSITIVE (+) terminal of the main power source. There must not be more than 2 ft. of wire between the fuse block and the power source. The wire between fuse and power is "unprotected", do not allow this wire to come in contact with any other wires.
5. Connect the BLACK (-) wire to the vehicles main ground.

Connecting to Siren Amplifier:

Plug the 9 pin connector assemblies into their respective headers on both the control head and the X-ECUTOR 2 Amplifier. With the proper length wires (Customer Supplied / 20 AWG or Larger), extend the wires from the control head to the amplifier matching the wire colors.

WIRING DIAGRAM



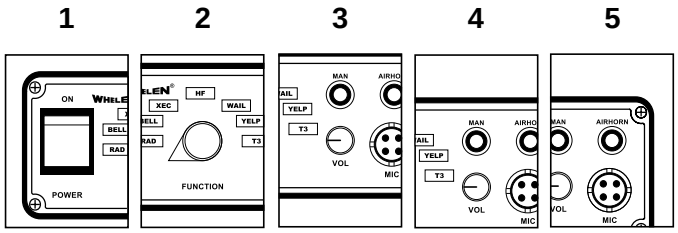
Specifications

Input Voltage	*12.5 VDC*
Input Current	*3 AMPS Max.*
Input Fuse	*3 AMPS*
Operating Temp.	*30º - 60º*
Storage Temp.	*40º - 70º*
Humidity	*99% Non Condensing*

CAUTION
Loud siren noise can cause hearing loss.
Minimize exposure. Close windows when using.

Recomended Wire Size: *(For Power and Ground)*

Amplifier		***Control Head***	
For 5 Ft. of Wire	*18 AWG*	**For 6 Ft. of Wire**	*22 AWG*
For 8 Ft. of Wire	*16 AWG*	**For 9.5 Ft. of Wire**	*20 AWG*
For 13 Ft. of Wire	*14 AWG*	**For 15 Ft. of Wire**	*18 AWG*
For 20 Ft. of Wire	*12 AWG*	**For 24.5 Ft. of Wire**	*16 AWG*
For 32 Ft. of Wire	*10 AWG*	**For 39 Ft. of Wire**	*14 AWG*



Operating the Controls:

Power Switch (1)

This switch has two positions. Down (Off) & Up (On). When this switch is Off, the unit will not function. When the switch is On, the siren is functional and may be activated at the operator's discretion. *NOTE: If the unit is connected to the vehicle's horn ring circuit, the vehicle horn is disabled when the power switch is in the ON position.*

Rotary Knob (2)

The Rotary Knob controls the siren functions. There are 7 positions that may be selected. Each position and its function is outlined under "Rotary Switch Operations".

Volume Knob (3)

The Volume Knob controls the volume of Public Address function. Volume is increased by rotating the knob in a clockwise direction. Rotating the volume knob in a counter-clockwise direction decreases the volume produced by these features. The volume knob has no effect on any siren tones produced.

Man Button (4)

The Manual button generates a variety of tones, depending on what position the rotary knob is in. For further explanation of this button's function, refer to Rotary Switch Operations.

Horn Button (5)

Holding the AIRHORN button on, generates an AIRHORN tone whenever the siren is powered up.

Rotary Switch Operations:

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 (Unit must be connected to the two-way radio as outlined in the amplifiers manual).

With the Rotary Switch in the RAD Position:

- Activating the HORN RING results in the AIRHORN tone until the HORN RING is released.
- Pressing the AIRHORN button will result in an AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button results in the AIRHORN tone until the MAN button is released.
- Activating the BRAKE signal has no effect.

XEC (Manual Siren) - When the rotary switch is in this position the siren is in a standby state where no tones have been activated, but is waiting for another action to be taken by the operator. This position is often the best choice when manual operation of the siren is desired.

With the Rotary Switch in the XEC Position:

- Activating the HORN RING will result in the XEC tone ramping up to the peak frequency and ramping down when the HORN RING input is released.
- Pressing the AIRHORN button will result in the AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button will result in the XEC tone ramping up to peak frequency and ramping down when the MAN button is released.
- Activating the BRAKE signal will make the XEC tone ramp down very quickly.

BELL (Yelp Tone) - When the rotary switch is in this position the siren is in a standby state where no tones have been activated, but is waiting for another action to be taken by the operator. This position is used when BELL operation of the siren is desired.

With the Rotary Switch in the BELL Position:

- Activating the HORN RING produces a BELL tone.
- Pressing the AIRHORN button produces an AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button produces a BELL sound.
- Activating the BRAKE signal has no effect.

HF (Hands Free Operation) - When the rotary knob is in the HF position, the siren functions are placed in a stand-by mode. Siren tones are activated by a single tap on the MAN button or a single tap on the vehicle's steering wheel horn ring (if the vehicle's horn has been wired to the HORN RING input). 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.

With the Rotary Switch in the HF Position:

- Activating the HORN RING will result in the HF cycle as described above.
- Pressing the AIRHORN button will result in the AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button will result in the HF cycle as described above.
- Activating the BRAKE signal has no effect.

WAIL (Wail Tone) - When the rotary knob is in the WAIL position, a steady, rise and fall wail tone is produced.

With the Rotary Switch in the WAIL Position:

- Activating the HORN RING will change the siren tone to a YELP tone (a fast rise and fall tone). Activating the HORN RING a second time returns it back to a WAIL.
- Pressing the AIRHORN button will result in an AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button will change the siren tone to a YELP tone (a fast rise and fall tone). Pressing the MAN button again returns it back to a WAIL.
- Activating the BRAKE signal has no effect.

YELP (Yelp Tone) - When the rotary knob is in the YELP position, a fast, rise and fall tone is produced.

With the Rotary Switch in the YELP Position:

- Activating the HORN RING will change the siren tone to the T3 tone. Activating the HORN RING a second time returns it back to a YELP tone.
- Pressing the AIRHORN button will result in the AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button will change the siren tone to the T3 tone. Pressing the MAN button a second time returns it back to a YELP tone.
- Activating the BRAKE signal has no effect.

T3 (Piercer™ Tone) - When the rotary knob is in the T3 position, an extremely fast, rise and fall tone is produced. May be used for HI / LO and auto sequence in some applications.
(See Amplifier Manual)

With the Rotary Switch in the T3 Position:

- Activating the HORN RING will result in the AIRHORN tone until the HORN RING is released.
- Pressing the AIRHORN button will result in an AIRHORN tone until the AIRHORN button is released.
- Pressing the MAN button will result in the AIRHORN tone until the MAN button is released.
- Activating the BRAKE signal has no effect.

MICROPHONE - Whenever the unit is powered on, activating the microphone (pressing the switch on the side of the mic.) will shut down any other siren functions & enable public address operation regardless of the rotary switch position or any other switch or input.