

## Echo Meter Touch 2 Car Bracket

**WARNING:** Follow all local, state and federal laws while using the Echo Meter Touch 2 Car Bracket on a moving vehicle. Restrictions or requirements for mounting this device on your vehicle may vary from state to state. Obey all legal requirements that apply in the area where you plan to use this device.

### Introduction

The Echo Meter Touch 2 car bracket is designed to mount the Echo Meter Touch 2 module onto a vehicle for **low-speed** transect monitoring of bats.

The bracket is coated with a durable epoxy powder finish which will tolerate inclement weather. It features a pump-action mounting cup allowing for quick attachment to the vehicle and a lift tab for easy and quick release. The angle of the Echo Meter Touch module can also be adjusted.

The Echo Meter functions at speeds at or below 32 km/h (20 mph). If you run the transect at too high a speed, you will outrun the bat calls. For both device effectiveness and safety, do not exceed 20 mph when the car bracket is mounted on your vehicle.

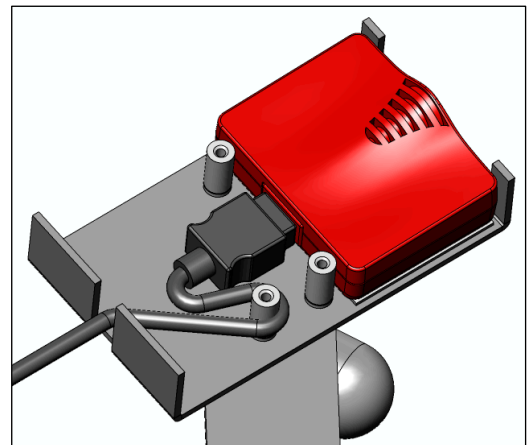
Before mounting the bracket, read and observe the vacuum cup manufacturer's specifications (enclosed) with respect to "Contact Surface and Environmental Conditions. Note also the service, cleaning, and storage requirements.



**WARNING:** The vacuum cup is manufactured by Wood's Powr-Grip. Read the instructions and warnings for the vacuum cup on the last page of this guide prior to reading the mounting instructions set forth below. Follow the manufacturer's instructions and warnings when mounting and using the vacuum cup.

### Installing the Echo Meter Touch Module

1. Remove the top portion of the bracket by unscrewing the two ridged finger screws. Do not lose the screws.
2. Insert the module as shown below. The bracket is designed to fit both Android and iOS modules.
3. An extension cable (not included) is needed to connect the Echo Meter Touch module to your mobile device. See the section at the end of this guide for where to find recommendations. Wrap the cable, as shown, around the post closest to the cable's exit to reduce the risk of the cable becoming unattached during use.
4. Reattach the top cover and hand tighten the two ridged screws. When first inserting the screws, the top cover and base may need to be squeezed together slightly to compress the foam and allow the screws to engage.



## Mounting Location

The bracket can be mounted on any flat and shiny, nonporous surface, including glass. At low speeds (i.e. at or below 20 mph) wind noise should not present a problem as it is not significant at that speed or lower and occurs at lower frequencies than bat echolocations. It is possible to minimize the noise by experimenting with bracket placement relative to the air flow of your vehicle. Facing the unit forward or backwards relative to the vehicle's travel does not make a large difference in noise. With respect to any location on the vehicle, make sure that the bracket will not come into contact with any person, vehicle, or physical object that the vehicle passes. Also, never adjust or modify the bracket while the vehicle is in motion.



## Mounting Instructions

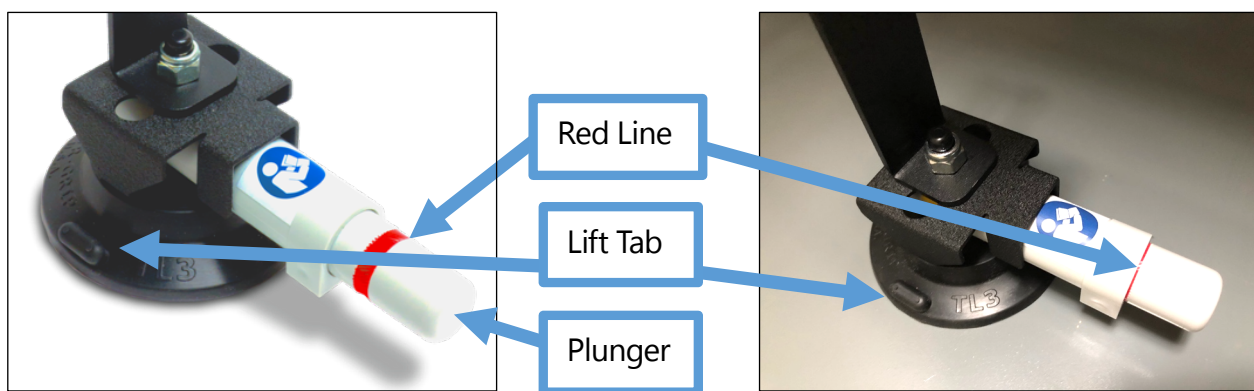
1. Remove the cover from the base of the vacuum pad.

**WARNING:** Clean and dry the mounting on the vehicle area prior to installation.

2. Place the bracket in the desired location.

**WARNING:** Only mount the bracket to horizontal surfaces. Do not mount the bracket on the side of the vehicle or any vertical or inclined surface. Attempting to use the bracket on a vertical or inclined surface will reduce the load capacity of the vacuum cup.

3. Pump the plunger with your finger until the plunger stays in the sleeve with no red line visible.



**WARNING:** Before operating the vehicle with the bracket attached, check the Plunger to make sure the cup is securely attached. If the red line appears, pump the Plunger until the red line is hidden again. When operating a vehicle with the bracket mounted, make frequent stops in a safe location so that you can exit the vehicle and check the plunger to make sure the cup remains securely attached. Pump the Plunger as needed to make the red line hidden. Do not inspect the bracket or attempt to pump the Plunger while the vehicle is in motion.

4. After mounting the bracket and the echo meter, if you need to adjust the angle of the meter, loosen the large plastic T-nut on the back of the bracket and retighten with the desired angle. Again, do not attempt to adjust the angle while the vehicle is in motion. Make adjustments only when the vehicle is fully stopped in a safe spot.
5. As an extra precaution, after you have attached the bracket to your car, tightly fasten a rope, bungee cord, or other tether to the stem of the bracket. Secure the other end of the rope or car to a safe location on the vehicle. The rope or cord will reduce the risk of the bracket's being lost or hitting anything in case the bracket becomes detached during travel. The secondary restraint of the rope or cord is also

recommended because the red line on the Plunger should not be monitored while the vehicle is in motion.

6. Run the extension cable from the echo meter through an open sunroof or window and attach to your mobile device inside the vehicle.

**WARNING:** Tape down and secure all loose cables or wiring. An open window or sunroof increases the risk of injury in the event of an accident or rollover. The driver and every passenger must wear a seat belt and shoulder harness whenever the vehicle is in motion to reduce the risk of serious injury.

7. Secure the mobile device in the car.

**WARNING:** Turn the screen off or mount the mobile device out of the driver's line of site.

8. The bracket is now ready for use.

**WARNING:** The bracket is intended for use below 20 mph. Do not use the bracket at any higher speed. If you are finished collecting data and need to operate the vehicle at a higher speed, stop and remove the bracket before proceeding at any higher speed. Make sure that all vehicle manufacturer warnings are fully observed. Make sure that the vehicle driver and every passenger is wearing a seat belt and shoulder harness whenever the vehicle is in motion. Hands and feet should never be placed through the roof or window while the vehicle is in motion

9. Remove the bracket by lifting on the Lift Tab with your fingers.

**WARNING:** Do not leave the bracket attached to a vehicle when not in use.

## Cable and Adapter Compatibility

Please visit [www.wildlifeacoustics.com/products/echo-meter-touch-2/specifications/devices](http://www.wildlifeacoustics.com/products/echo-meter-touch-2/specifications/devices) for a complete list of compatible adapters and cables to connect your device to the Echo Meter Touch in the bracket.

## Warranties, Limitation of Liability.

Seller agrees to sell to Buyer the Echo Meter Touch 2 Car Bracket that complies with the specifications set forth in these instructions. SELLER DISCLAIMS ALL OTHER EXPRESSED OR IMPLIED WARRANTIES WITH RESPECT TO THE PRODUCT, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

Seller's exclusive liability for shipment of nonconforming Product or for breach of warranty under this Agreement is expressly limited to, at Seller's option, (i) replacement, within a reasonable period of time, of the nonconforming Product at no additional charge to Buyer; or (ii) refund of the purchase price if already paid. In no event will either party be liable to the other party for any consequential, special, punitive, or exemplary damages of any kind. IN NO EVENT WILL SELLER BE LIABLE TO BUYER, OR TO BUYER'S OFFICERS, EMPLOYEES OR REPRESENTATIVES, OR TO ANY THIRD PARTY, FOR ANY INDIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES OF WHATSOEVER NATURE (INCLUDING, BUT NOT LIMITED TO, LOST BUSINESS, LOST PROFITS, DAMAGE TO GOODWILL OR REPUTATION AND/OR DEGRADATION IN VALUE OF BRANDS, TRADEMARKS, TRADENAMES, SERVICE NAMES OR SERVICE MARKS) WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY) OR OTHERWISE.

# SMALL VACUUM CUP INSTRUCTIONS



## SPECIFICATIONS

### Product Description

Vacuum cups use vacuum to mount loads temporarily or to lift and carry loads, as follows: A manual pump removes air from between the rubber pad and the contact surface; a red line on the pump's plunger serves as a vacuum indicator; a check valve allows the user to repump the cup without removing it from the contact surface; and a release mechanism allows the cup to disengage completely.

MODEL	PAD	NOMINAL DIA.	MAX. LOAD CAPACITY*
TL3AMB TL3PB1 TL3TH	TL3	3" [8 cm]	15 lbs [7 kg]
TL3PH1304			
RF36HG	RF36	3" x 6" [8 cm x 15 cm]	40 lbs [18 kg]
LJ45AM LJ45AMB LJ45AMP LJ45AMC LJ45HG LJ45PB1	LJ45	4½" [11 cm]	40 lbs [18 kg]
LJ45PHC <sup>1</sup>			10 lbs [5 kg]
LJ45PH128RC <sup>1</sup>			8.8 lbs [4 kg]
LJ45PH155 <sup>1</sup>			8.9 lbs [4 kg]
LJ45PH3025 <sup>1</sup>			6.7 lbs [3 kg]
LP6FH LP6HG LP6RH	LP6	6" [15 cm]	70 lbs [32 kg]
TL6AMB TL6AM TL6FH TL6HG TL6PB1 TL6RH TL6TD	TL6	6" [15 cm]	70 lbs [32 kg]
TL6PH128RC <sup>1</sup>			8.8 lbs [4 kg]
TL6PH155 <sup>1</sup>			8.9 lbs [4 kg]
TL6PH3025 <sup>1</sup>			6.7 lbs [3 kg]

\*Maximum Load Capacity includes a 3:1 safety factor and requires the following: attachment on clean, smooth, nonporous flat surfaces; a minimum vacuum level of 17½" Hg [-59 kPa]; and a friction coefficient of 1. This rating is based on tests of new vacuum cups attached to the upper, horizontal surface of static objects in ideal conditions. Many factors can reduce the capacity, including: attaching cups on vertical or inclined surfaces to lift a load or to mount a load; dynamic loading (eg, mounting loads on moving vehicles); or attaching loads that apply leverage to the cup. See [www.WPG.com](http://www.WPG.com) for more information.

### Contact Surface and Environmental Conditions

Use the cup on clean, relatively smooth, nonporous surfaces, at temperatures from 10° to 120° Fahrenheit [-12° to 49° Celsius]. Moisture or contaminants can reduce the slip resistance of the cup. The red-line indicator may not perform reliably at elevations above 5000 feet [1524 meters]; see Service.

## OPERATION

### To Attach

- Clean the contact surface and, if needed, the face of the vacuum cup (see Cleaning). CAUTION: Test the cup for staining or deformation of surfaces with light colors or soft coatings.
- Position the cup so the red line will be visible if it should appear while the cup is attached.

- Pump the plunger until the cup attaches completely. When the red line is hidden, the cup is ready for use.
- Check the plunger frequently to make sure the cup remains securely attached. If the red line appears, pump the plunger until the red line is hidden again (see WARNINGS).  
<sup>1</sup>CAUTION: The user must be able to monitor the red line and repump the plunger whenever the cup is in use. If not, a secondary restraint may be needed to protect mounted equipment.

### To Release

- Secure the load.
- Pull a release tab until the cup disengages completely.  
CAUTION: Remove the cup when not in use. If the cup remains attached to a hot surface (eg, in direct sunlight) for an extended time, the rubber pad could bond with the surface, resulting in damage to the surface or to the pad when it is removed.

## MAINTENANCE

### Service

Regularly make sure the vacuum cup's air filter is in place. If not, discontinue use until the filter is replaced. Since aging and wear reduce the capacity of the rubber pad, it should be replaced at least once every 2 years or whenever damage is discovered. If the cup does not function normally, the cup face may be dirty or damaged, or the pump may require service. First clean the cup face according to the directions to follow. If the problem persists, contact an authorized dealer or visit [www.WPG.com](http://www.WPG.com) for assistance.

### Cleaning

- Remove the air filter from the cup face.
- Use a clean sponge or lint-free cloth to apply soapy water or another mild cleanser to the cup face; see WARNINGS and [www.WPG.com](http://www.WPG.com) for more information. CAUTION: To prevent liquid from contaminating the pump, hold the cup face-down or cover the suction hole in the filter recess.
- Wipe all residue from the cup face.
- Allow the cup to dry and reinstall the air filter.

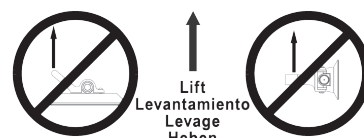
### Storage

Store in a clean, dry location out of direct sunlight. Protect the cup face from damage using the pad cover (when supplied) or another appropriate means.

## WARNINGS

Failure to observe WARNINGS could damage the vacuum cup or the load, or cause injury to the user.

- Do not use the cup to support loads that exceed the Maximum Load Capacity or the effective capacity (see SPECIFICATIONS).
- Do not use the cup to support a person.
- Do not use the cup to support loads which could injure people if the cup disengages unexpectedly.
- Do not place the cup face against surfaces which could damage the sealing edge of the rubber pad.
- Avoid conditions that could cause the cup to slip or to disengage prematurely, such as: contaminants, cuts or scratches in the cup face or contact surface; applying the cup to porous materials; or applying pressure against the cup edge.
- Do not use the cup when the red line is visible. If the red line reappears frequently, discontinue use and see Service.
- Do not allow anything to interfere with free movement of the plunger while the cup is attached.
- Do not touch any release tab while using the cup.
- Do not leave the cup in use and unattended.
- Do not use harsh chemicals (such as solvents or gasoline) or unauthorized rubber cleaners and conditioners to clean the cup.



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Products are manufactured under an ISO 9001 quality management system

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