TRAIL TECH ®

STRIKER
QUICK-START

1. POWER OVERVIEW

Striker operates on the internal 3.0V watch type battery (#CR2032). If possible, install Striker to the vehicle's electrical system. Striker is polarity independent and has safeguards to avoid draining the vehicle battery. See the POWER CONNECTION section for more info.

Installing the power wire enables a brighter backlight, longer sleep timer, and the voltage and temperature indicator LED's.

Included Handlebar Mount

Aluminum Protector Mount (optional)

2. MOUNT STRIKER:

Striker is made to be bolted to the vehicle. Use the included handlebar mounts, or refer to the manual.

3. VEHICLE SENSORS:

Refer to the sensor installation sections. You should install the wheel sensor, engine temperature sensor, and vehicle power connection.

Power Wire

Temperature Sensor (varies)

Wheel Speed Sensor (varies)

4. INDICATOR LIGHTS:

Striker has two colored LED lights at the top. They are activated when temperature goes above the threshold, or voltage goes below threshold, to warn you about potential problems with your vehicle. The left LED is yellow, the right LED is red. When the voltage is low the LED will flash, if the temperature is high then the LED will turn on solid. Set custom thresholds in the DATA SETTING MODE.
Set the thresholds to 0 to turn them off.

5. SLEEP MODE:

If Striker sees no activity (either wheel movement or a button press) for 5 minutes, it will enter sleep mode and only display the clock. Sleep mode will end when any activity is noticed. During sleep mode Striker is using the internal battery and will not draw down vehicle power.

6. MAINTENANCE ICONS AND LO BATTERY:

There are two separate maintenance timers: a WRENCH and an OIL CAN. Set the mileage in DATA SETTING MODE, then Striker will countdown the miles. When the mileage countdown reaches 0, the icon is displayed. If the internal watch battery voltage gets too low, then Striker displays a LO icon.

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7. BUTTONS:

Striker has three screens. Press MODE to toggle between them.

YELLOW
LED

RED
LED

LEFT BUTTON
Start stop watch

MODE BUTTON
Switch screens

RIGHT BUTTON
Backlight

RESET TRIP DATA:
<LEFT> + <MODE> = HOLD TO RESET VALUES FOR:
Max Speed, Distance, Ride Time, Stop Watch, Max Engine
Temperature, and Max Voltage.
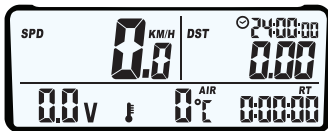
ADJUST TRIP DISTANCE:
<MODE> + 3 sec = ENTER ADJUST MODE
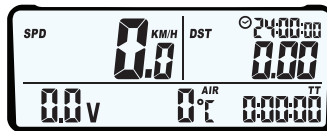<LEFT>, <RIGHT> = SCROLL VALUE

8. SCREENS:

Striker has 3 screens, press MODE to cycle between screens. Hold all three buttons to enter data setting mode.

SCREEN 1

- Speed
- Trip Distance
- Clock
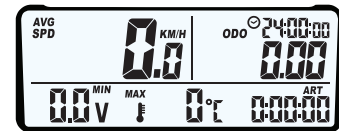- Voltage
- Engine Temperature
- Ride Time

SCREEN 2

- Speed
- Trip Distance
- Clock
- Voltage
- Air Temp
- Stop Watch (TT)

Average speed can be set to show on screen 2 rather than screen 3, see DATA SETTING MODE.

SCREEN 3

- Avg Speed
- Max Speed
- Odometer
- Clock
- Accum. Ride TIme
- Max Voltage
- Min Voltage
- Max Engine Temp

Striker alternately displays min/max voltage and avg/max speed every 2 seconds.

9. DATA SETTING MODE :

HOLD DOWN ALL 3 BUTTONS to enter data setting mode.
Adjust one setting at a time, then move on to the next one.

<LEFT>   = Scroll value.
<MODE> = Move to next data setting screen.
<RIGHT> = Move to next digit in data setting mode.

ORDER OF SETUP MODE:

1. Speed and Distance Format	*M/H or KM/H*
2. Wheel Size	*See MEASURE WHEEL SIZE section*
3. Time Format	*12H or 24H*
4. Time of Day	*12:00:00*
5. Temperature Unit of Measure	*°F or °C*
6. Temperature Indicator	*Yellow Indicator*
7. Temperature Indicator Danger	*Red Indicator*
8. Voltage Indicator	*Yellow Indicator*
9. Voltage Indicator Danger	*Red Indicator*
10. Oil Maintenance	*Distance Countdown*
11. Care Maintenance	*Distance Countdown*
12. Average Speed Screen	*Show on Screen 2 or 3*
13. Distance Resolution	*Show 1 or 2 Digits After Decimal*

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SENSORS
INSTALLS

POWER CONNECTION:

**FOR USE ON 6-400 VDC/VAC SYSTEMS ONLY!**
Striker will operate in the range of 6-400 VAC/VDC, but will not draw enough power to drain a vehicle battery. Use a volt meter to confirm 6-400 VDC/VAC. Striker is polarity independent, so it cannot be installed backwards.

Fuse: Introducing a fuse into the circuit before electronics is always a good idea. *Use a 1 amp fuse with Striker (not provided).*

System Tap: It is possible to tap into the vehicle electrical system anywhere in the circuit. Possible points are at the lights, ignition, or CDI. When tapping into the electrical system, connect to a circuit protected by fuse.

MX Bikes: Most do, but some motocross bikes do not have 12 volt power. If there is no vehicle battery or capacitor, connect power wire to ignition power leads from stator. Use caution, as this is a high voltage option.

Power Wire
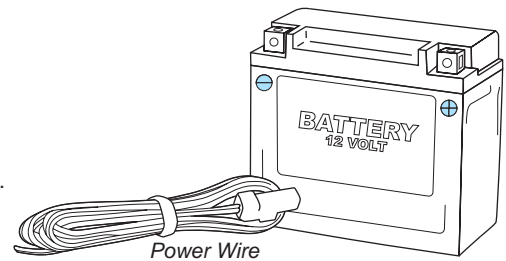
SENSORS:

The Striker sensors plug securely into Striker using waterproof connectors. They are different sizes (you cannot plug a sensor into the wrong connector.)

Temperature Sensor: The temperature sensor is mounted in the radiator hose or cylinder head.

Power Cable: The power wire connects anywhere in the vehicle's electrical circuit, or straight to the battery terminals.

Speed Sensor: The speed sensor is mounted to the brake caliper on the wheel. Without the speed sensor mounted, Striker cannot display speed or gather distance data.

Remote Switch: Connect the handlebar remote switch accessory (sold separately) to this connector. The remote switch mirrors the buttons on the main unit, for accessibility closer to the hand while riding.

Ambient Temperature Sensor

Wheel Sensor

Vehicle Power

Remote Switch

Engine Temperature Sensor
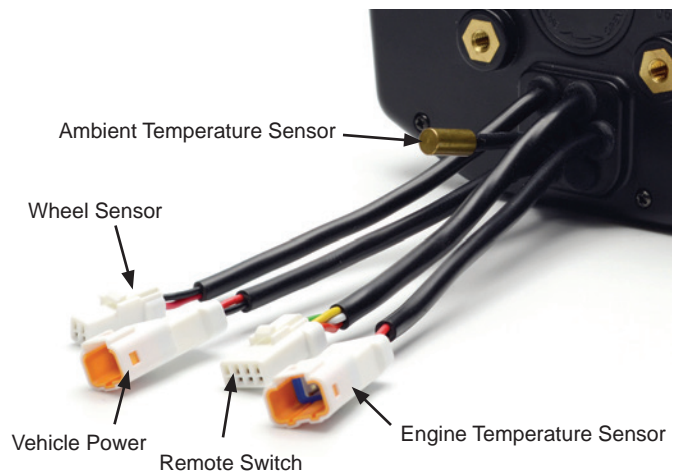
REMOTE SWITCH (OPTIONAL):

The remote switch is a powerful tool that moves Striker's buttons to the handlebar grip. The buttons on the remote switch control Striker by mirroring Striker's button functions.

The remote switch is an optional accessory, not included in kits.

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TEMPERATURE SENSOR
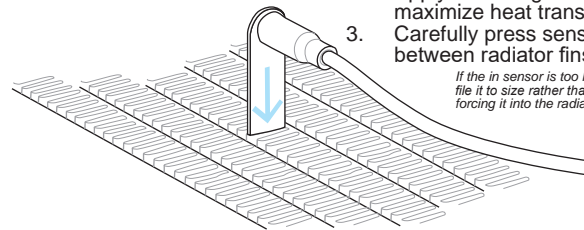## INSTALLS

TEMPERATURE SENSORS:

Most Striker kits contain a model-specific temperature sensor. Installing the temperature sensor enables temperature readouts on Striker. Alternative sensors are available.

Vehicles cooled with water use sensors to measure the fluid temperature, while air-cooled machines take the cylinder head's temperature at the spark plug. The radiator fin sensor is the easiest installation for water cooled applications.

Radiator Fin Sensor Installation:

1. Confirm correct size.
2. Apply thermal grease to maximize heat transfer.
3. Carefully press sensor between radiator fins.
   If the in sensor is too large, file it to size rather than forcing it into the radiator.

Radiator Hose Sensor Installation:

Tighten

Mark & Cut

1. Drain fluid.
2. Measure inner diameter of hose *before* cutting.
3. Mark hose.
4. Cut hose.
5. Slide on hose clamps.
6. Install sensor & tighten hose clamps.
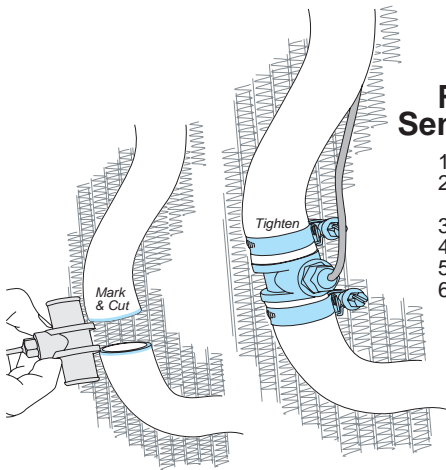
CHT Cylinder Head Spark Plug Sensor Installation:

Sensor replaces crush washer

1. Remove crush washer from spark plug.
2. Replace with temperature sensor.
3. Re-install spark plug.
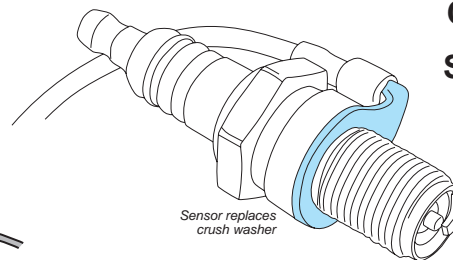
CVT Sensor Install:
(Continuously Variable Transmission)

200ºF+ Warning: CVT Belt wear occurs more rapidly at high temperatures.

Let the belt cool down to increase lifespan.

1. Drill 13/64" (5mm) hole in hard plastic CVT exhaust.
2. Thread sensor into hole.
   The sensor threads are M6x10.
3. Use high temp RTV (silicone gasket sealer) to seal case cover.
   Not included in kit.
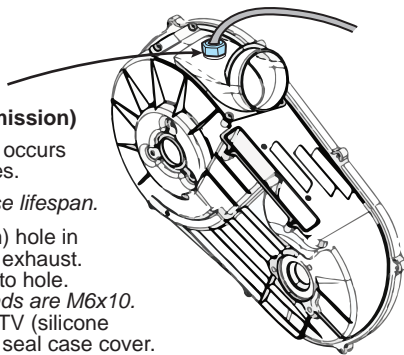
Screw Sensor Installation:

1. Remove radiator pressure relief bolt.
2. Replace with temperature sensor.

![Trail Tech logo] **TRAIL TECH**®
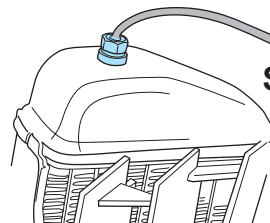
WHEEL SENSORS
INSTALLS

KTM WHEEL SENSOR

Trail Tech wheel sensors work with the KTM and Husqvarna OEM install location.

Screw the wheel sensor into the OEM caliper position. Insert the black magnet into the pre-drilled hole in the rotor and secure with the retainer clip.
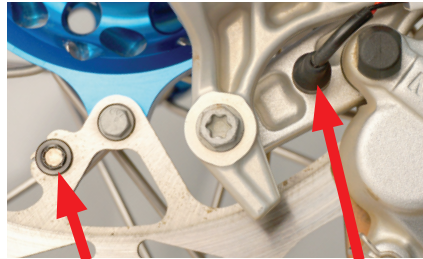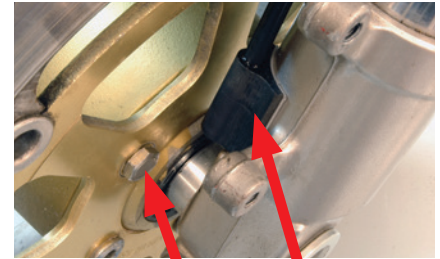
KTM Magnetic Retainer

KTM OEM Wheel Sensor Position

CONVENTIONAL FORK SENSOR

If the fork is close to the brake rotor, then the VHB fork sensor can be used. Peel and stick the sensor to the fork.

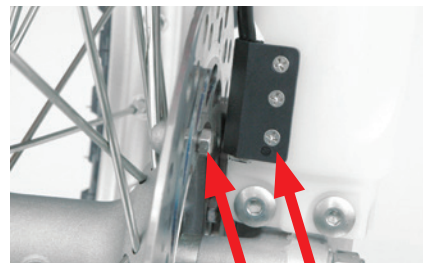Try to have the tip of the sensor about 1/2 inch away from the magnet in the rotor.

Rotor Bolt Magnet

Conventional Fork VHB Wheel Sensor

INVERTED FORK WHEEL SENSOR

If there are fork guards next to the brake rotor, then the fork guard wheel sensor can be installed as shown.

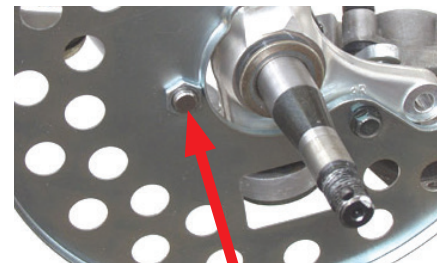Try to have the tip of the sensor about 1/2 inch away from the magnet in the rotor.

Rotor Bolt Magnet

Inverted Fork Wheel Sensor

ROTOR SHIELD WHEEL SENSOR

For UTVs and quads with a rotor shield, position the sensor there.

Drill a 3/8" hole and use the jam nuts to secure the sensor to the rotor shield. Use loctite rather than over-tightening the jam nuts.
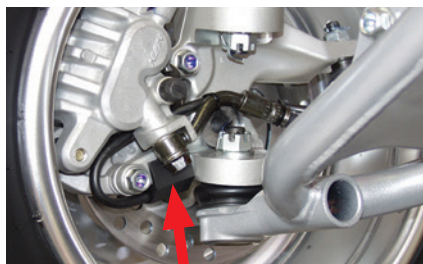
Rotor Shield Wheel Sensor

BRAKE CALIPER WHEEL SENSOR

Some ATVs require mounting the wheel sensor directly to the brake caliper.

Drill a 1/8" hole through the caliper mount, then use the self-tapping screw to secure the sensor.
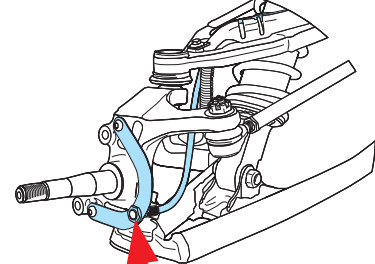
Brake Caliper Wheel Sensor

C-BRACKET WHEEL SENSOR

Some kits include a metal C-bracket to help mount the sensor, as shown.

Use the jam nuts to secure the sensor to the C-bracket. Use loctite rather than over-tightening the jam nuts.

C-Bracket Wheel Sensor

MAGNET INSTALLATION:

Install a magnet on the brake rotor to trigger the speed sensor each wheel rotation.

Remove one of the stock rotor bolts and install the magnetic rotor bolt as shown, do not overtighten past 10 ft-lb of torque. If the magnetic bolt will not work, the kit includes a spare magnet that can be installed into one of the rotor spaces. Use the included retainer clip or epoxy such as JB Weld to secure.

Magnetic Rotor Bolt

Magnetic Retainer or Spare Magnet

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WHEEL SENSORS
SETUP

WHEEL SENSOR TEST:

Test for correct sensor/magnet placement before permanently mounting.

1. Set the vehicle on a stand so that the front (left) wheel spins easily.
2. Plug the wheel sensor cable into the computer.
3. Install the magnetic bolt.
4. Hold the sensor in place on the caliper mount by hand. While someone watches the computer, roll the wheel. If the computer does not register, move the magnet or sensor and try again. There should be 1/2" or less gap between the sensor and magnet.

Do not mount so that the magnet passes the middle section of the sensor. Either the sensor will not register at all; or the sensor will register twice, causing a "double trigger" effect (computer displays twice the true speed.) If a double-trigger is unavoidable, divide the wheel size setting in the computer by 2 to correct the problem.
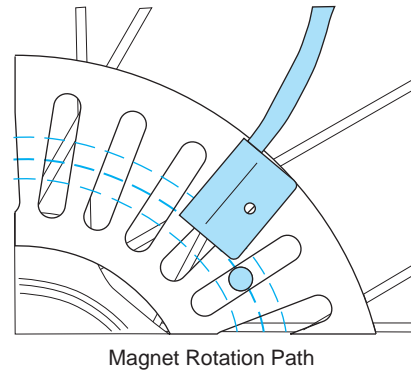
Magnet Rotation Path

MEASURE WHEEL SIZE:

Knowing your exact wheel size it critical for the wheel sensor to calculate correct speed and distance data.

When comparing calibration to GPS data, use a long straight section of road with no tight corners or small vertical movements.

Method 1: Ruler
Find the circumference of front wheel by measuring its diameter in millimeters. Multiply the Wheel Diameter by 3.14. The result is your wheel size.

Wheel Size =
Wheel Diameter(mm)
x3.14

Diameter
x3.14

Method 2: Rolling
On a flat surface, mark the tire sidewall and the ground with a marking pen. Roll the wheel until the mark on the tire completes one revolution and is back on the ground. Mark the ground at this location. Measure the distance between the marks on the ground in millimeters (multiply inches by 25.4 to convert to mm). Use this number for your wheel size. For accuracy, the rider's weight should be on the bike when making the measurement.
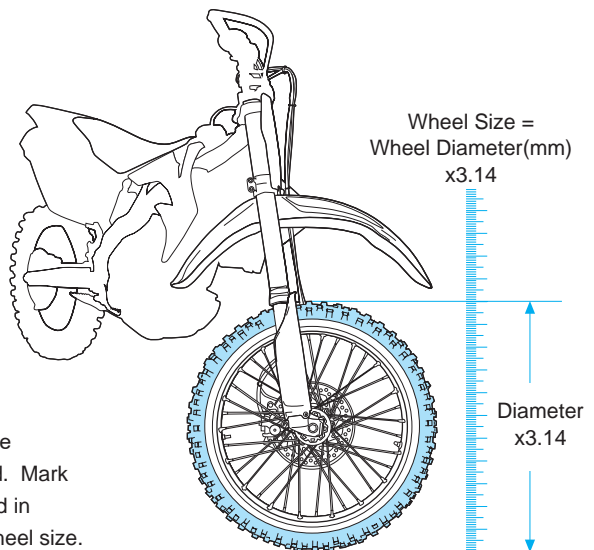
Method 3: Distance Measurement
This is the most accurate method.
1. Set the wheel size to 2110mm (motorcycle) or 1675 (ATV).
2. Find a length of road where the distance is known.
3. Ride the distance, noting how far the computer reads (i.e. the road is known to be 5 miles and the computer shows 4.95 miles.)
4. Use the numbers to solve for X in the following equation:

$$(\text{new wheel size}) = \frac{(\text{actual miles}) \times (\text{current wheel size})}{(\text{current miles})}$$

$$X = \frac{5 \times 2110}{4.95} \quad \Rightarrow \quad X = \frac{10550}{4.95} \quad \Rightarrow \quad X = 2131$$

Generic/Average Sizes:
Motorcycle: 2110 mm
ATV: 1675 mm

Wheel Size:
Enter the number you calculate from one of the above formulas into setup mode.