



Instructions For No. 78290 Digital Caster/Camber Gauge

- 1) Find a level place to set up your front end. This unit reads camber and caster very accurately. Unlevel ground will affect that accuracy. SEE BELOW IF GROUND IS NOT LEVEL.
- 2) Attach the gauge to the spindle. Be sure that the surface you attach to is machined square to the spindle and doesn't have any nicks or burrs. **BE SURE WHEELS ARE POINTED STRAIGHT AHEAD WHEN SETTING CAMBER.** Rotate the gauge until the small vial on the top of the gauge shows level.
- 3) **CAMBER:** Turn on the **AccuLevel™**. Camber is read directly on the display to $.1^{\circ}$ ($1/10^{\circ}$). Be sure the display is not flashing. This indicates it is in Caster Mode - **CASTER** see below. Push **CASTER** button to exit Caster and get into get into Camber Mode - steady display reading. See separate **AccuLevel™** instructions if needed. On the left side of the display a **▲** pointing up indicates negative camber (top of tire in). A **▼** pointing down indicates positive camber (top of tire out). Race cars usually use negative camber on RF and positive camber on LF. This is helpful when using small camber numbers - less than 1° .
- 4) **CASTER** is measured digitally on this version - up to 45° negative or 45° positive. First turn the wheels 15° to the right when setting the RF or 15° left when setting LF. (NOTE: THIS IS DIFFERENT THAN WHEN USING VIAL GAUGES WHICH USE 20° . IT IS IMPORTANT TO TURN THE WHEELS EXACTLY 15° FOR MAXIMUM ACCURACY.) Rotate gauge until it is level.
- 5) Turn on the **AccuLevel™** and push the **CASTER** button. The display will flash on and off to indicate caster is being measured. Push **ZERO** - display now reads 0° . Now turn the wheels back past center to 15° the opposite way - for a total of 30° (AGAIN THIS IS DIFFERENT THAN WHEN USING VIAL GAUGES). Rotate the gauge again to level and read the caster directly on the display to $1/10^{\circ}$. (Some previously models required you to double this number - NOT with this version.)
- 6) Adjust the caster and camber as needed. Each time you make a change bounce on the front end to settle the suspension. **NOTE:** Adjusting the caster may have an effect on the camber and vice versa. Double check settings. Tighten all bolts when done.

IF GROUND IS NOT LEVEL :

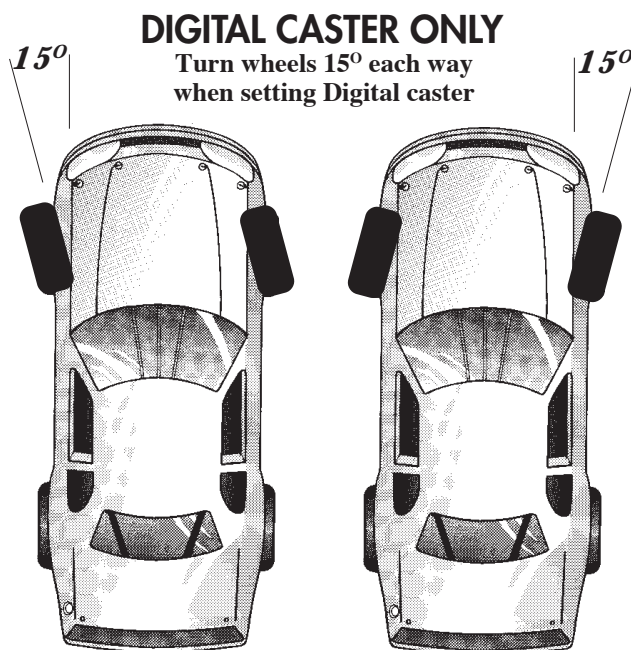
Before checking camber remove **AccuLevel™** and place on ground parallel to axle centerline. If it does not read 0.0° push "**ZERO**". Replace **AccuLevel™** in gauge and proceed as above. This must be done on each side of the car and will compensate for non-level ground. Push "**ZERO**" again to go back to normal (absolute) operation.

See separate instructions for **AccuLevel™** if needed. It can be removed and used for other measurements. Simply slide **AccuLevel™** out (it's held in place with magnets).

NOTE: If display flashes on and off **AccuLevel™** is in Caster mode and will not read absolute angles correctly. Push **CASTER** button to exit Caster Mode.

Warning:

Do Not leave the gauge in the hot sunlite or store in a place over 120° F. The digital display may not be readable. Once it cools down the digital display should be visible again.



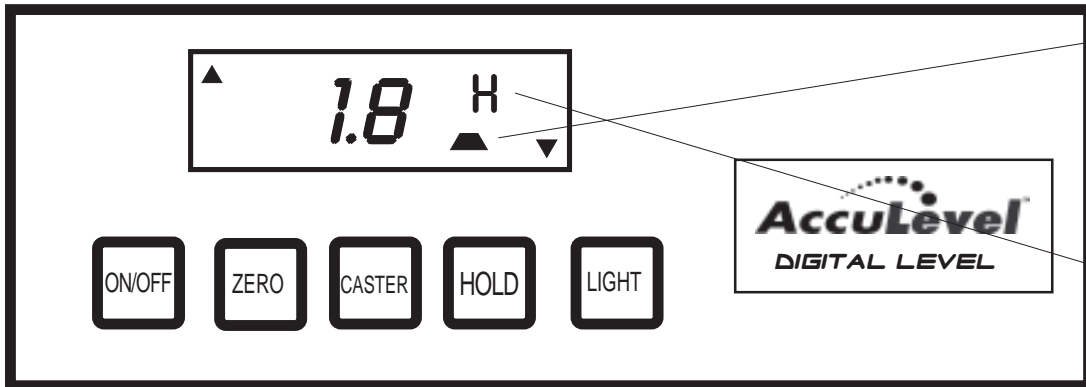
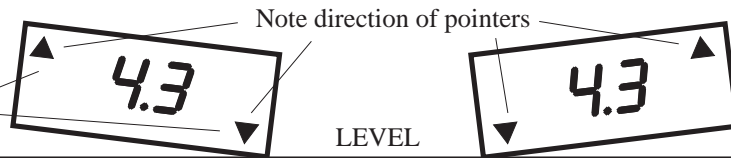


AccuLevel™ (ver. 4)

Digital Level Measurement
from 0.0° to 90.0°

Pointers on display - ▲ -
show direction of tilt.

(If AccuLevel™ is used for measuring
very small angles - under 2° - this feature
will tell you which way the tilt is)



Must be on
display for
normal use.
Push **ZERO**
if it is not.

H will ONLY be
on if the unit is
Holding a reading
or in calibration

NOTE: This Ver. 4 AccuLevel™ has 2 modes of operation. 1) In Normal angle measurement mode the display is steady. 2) In Caster Mode the display flashes (and will not measure absolute angles). Push CASTER button to exit Caster mode and go back to Normal angle measurement.

Turn on: Push ON/OFF. AccuLevel™ shuts off automatically after 15 minutes to save battery life. Batteries should last a year or more in normal use. See back side for battery door. Replace with 2) AAA alkaline batteries. **Recalibrate when you change batteries** (see below).

Zero: AccuLevel™ maintains its zero when shut off and **DOES NOT REQUIRE ZEROING.**

Compare one angle to another: The ZERO button is ONLY used to compare one angle to another. Place AccuLevel™ on a surface and push ZERO. The display will go to 00.0 and ▲ will disappear from display. Move to a different surface to compare the difference. Push ZERO again to return to normal use.

To hold a reading: Push HOLD and release. The display will show H and flash. When H stops flashing (approx. 5 sec.) the reading is held on the display. Push HOLD again to go back to active reading. **NOTE:** AccuLevel™ MUST be held absolutely steady during this 5 seconds.

To CALIBRATE: Place AccuLevel™ on a reasonably level surface (does not need to be perfectly level). Turn on, then push ON/OFF again and hold for 5 seconds until unit shuts off. Turn unit on again and -1- will appear on the display. Now push ZERO. -1- H will begin to flash and in a few seconds -2- will appear. **Turn unit around 180° in the same spot** and push ZERO again. -2- H will begin to flash and in a few seconds normal readings will reappear. Calibration is now complete.

CASTER (CASTER): AccuLevel™ will display front suspension Caster when used in a specially designed Caster/Camber gauge (see Longacre catalog or website). See gauge instructions for details.

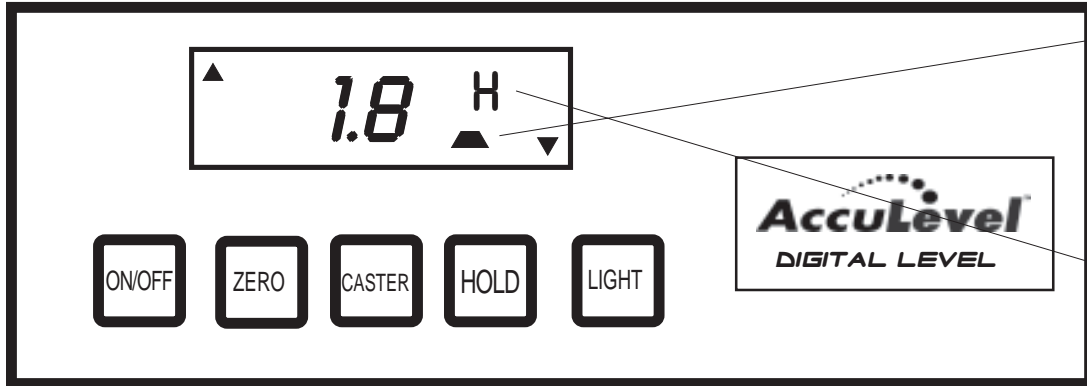
DISPLAY BACKLIGHT (LIGHT): AccuLevel™ Ver. 4 has a display back light.

Do not drop the unit. Keep it clean and dry and avoid strong electrical or magnetic fields. Do not push 2 buttons at once. If it will not be used for several months remove batteries.



AccuLevel™ (ver. 4)

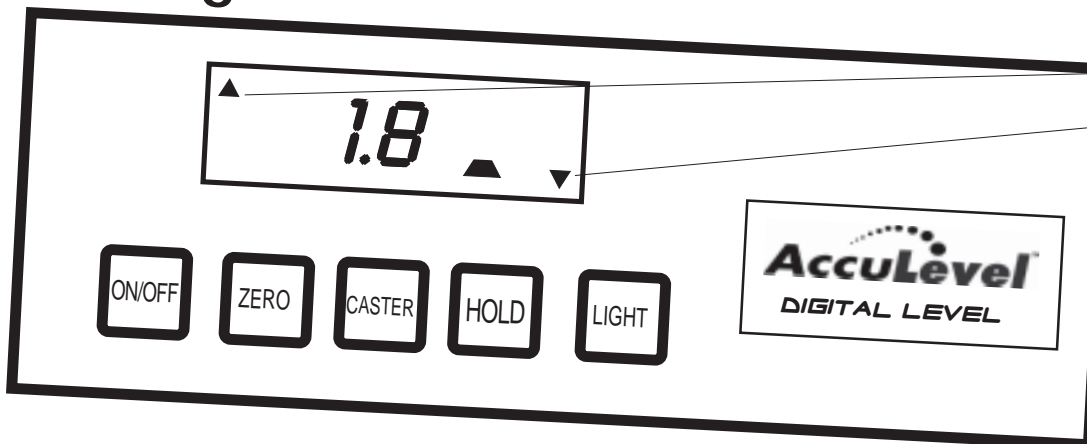
Digital Level Measurement from 0.0° to 90.0°



Must be on display for normal use. Push **ZERO** if it is not.

H will ONLY be on if the unit is Holding a reading or in calibration

Negative Camber Positive Caster

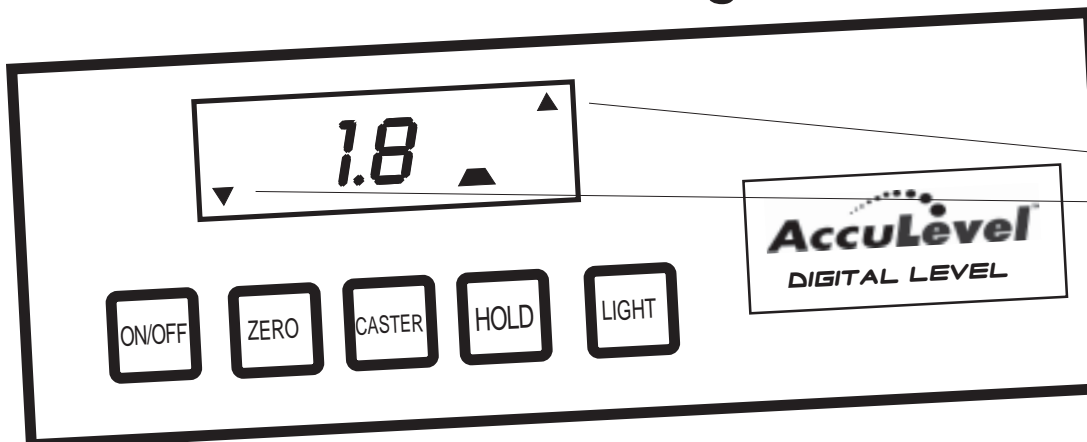


Indicates **NEGATIVE** Camber

OR

POSITIVE Caster

Positive Camber Negative Caster



Indicates **POSITIVE** Camber

OR

NEGATIVE Caster