

Congratulations on your purchase of the revolutionary ZIPLEVEL EZDepth, designed to accelerate your work without a laser and rod man or endless trips out and into the cab. EZDepth is only possible by using the core of the pressurized, bubble free ZIPLEVEL High Precision Altimeter. EZDepth installs in minutes with more precision than alternatives costing more than 10X as much. If you have any questions about installation or operation, please contact Technidea Corporation by phone at 760-480-4740 or email: info@ziplevel.com.

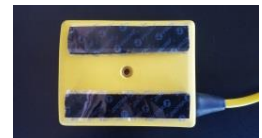
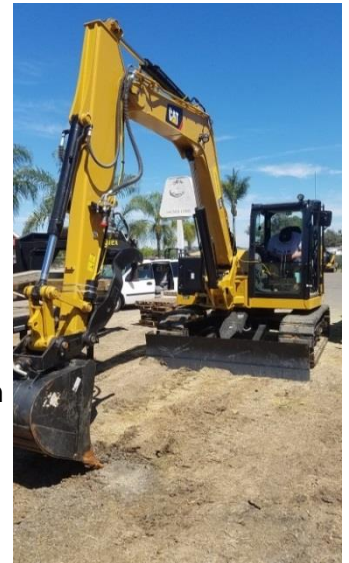
WARNING – AVOID SERIOUS INJURY OR DEATH. Before working near or attaching the ZIPLEVEL EZDepth to any equipment be sure that the equipment is safely secured to prevent movement with the stick, boom and all other movable parts safely supported and secured with the engine off.

INSTALLATION

- 1) Unpack the following:
 - a. Armored sensor/cord/display with boot assembly.
 - b. 7' of stainless strap with two attachable screw clamps.
 - c. 12 releasable black nylon cord ties.
 - d. 12 Velcro cord ties for use in cab and alternative to c.
 - e. Two black display Velcro mounts.
 - f. Display mount T-bracket with screw & 2 screw clamps.
 - g. ZIPLEVEL User Guide.



- 2) Uncoil the Cord and starting at one end, pinch the Cord with fingers and move to the other end to remove twists from the Cord.
- 3) Locate and clamp the black sensor as close as possible to the bucket pivot to minimize error with stick angle. The sensor is usually secured to the side of the stick a few inches above the pivot using two clamps cut from the stainless strap with the screw clamps. BE SURE THAT THERE IS PROPER CLEARANCE FOR FULL TRAVEL OF BUCKET, GRAPPLE AND ANY OTHER MOVING PARTS TO AVOID DAMAGE TO THE SENSOR AND STRAPS.
- 4) Route the Cord on the under side of the hydraulic lines and secure at appropriate intervals with the releasable nylon wraps and clip off excess. When possible, it is best to secure the Cord to a line that stays reasonably cool. If it must be attached to a warmer line then be sure the same line is used on both the stick and boom.

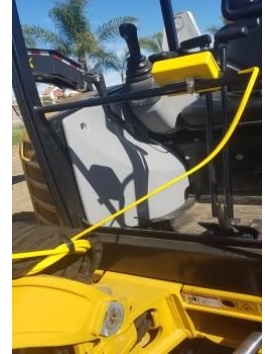


- 5) Determine best position for mounting the display in the cab for easy viewing while operating the boom. You may easily route the Cord via rubber cushioned window or door seals on closed cabs.

Although the Display is water resistant, be sure to keep the Display sheltered or covered from rain exposure at all times. There are at least three mounting options:

- a. An open cab and some closed cabs allow use of the T-bracket and clamps to a bar.
- b. Alternatively, the two Velcro strips can secure the display to a flat surface such as a window, panel or other flat surface.
- c. If neither of the above options is practical, you may combine some of the included installation hardware with a wide variety of your own creative mounting methods that may or may not include use of the 1/4 – 20 insert on the back of the display.

- 6) Put any excess Cord into a 6” or appropriate diameter coil and tie wrap beneath an array of hydraulic lines or other appropriate location near the display but preferably out of direct sunlight and free from vibration or movement. **BE SURE TO ALLOW ENOUGH CORD SLACK BETWEEN THE BOOM AND CAB FOR BOTH VERTICAL AND LATERAL MOVEMENT OF THE BOOM.**



OPERATION

A quick review of the ZIPLEVEL User Guide shows that the EZDepth is a very powerful technology capable of full range one button zero, easy on site elevation calibration, extremely high precision, unlimited ranges and numerous functions including the optional Bluetooth SmartLink to smart devices up to 100 away. Note that the ZIPLEVEL PRO-2000 User Guide shows the Display (Measurement Module) and Cord linked to what we are using as a sensor concealed in the hub of the Base Unit Reel. As configured for EZDepth, readings move positive with downward sensor movements and negative when moved upward.

QUICK START

- 1) **POWER UP** - Press the ON/OFF key to activate. The EZDepth will shut off after four minutes without a key press or inactivity.
- 2) **CALIBRATE** – This simple three step procedure is a good initial procedure that is not usually required again except after a factory service or if vertical measurements must be very precise and/or may have changed over time.
 - a. Place the stick and top of the bucket vertical with teeth down and press CAL key for 2 sec. to enter CAL. The display will flash [0].
 - b. Touch the tip of the longest bucket tooth to the top of the plumb Unipod or precisely cut 4.00’ timber attached to supporting plywood or other base. Press CAL momentarily. The Display will alternate [] and 0 until it locks onto the value when it will flash [4].
 - c. With the attitude of the stick and bucket unchanged, move the same tooth of the bucket vertically down to touch the plywood base next to the Unipod or timber and momentarily press CAL. The display will alternate between [] and 4 until it locks on and displays normal calibrated elevations.
- 3) **ZERO** – Place the bucket and stick vertical or in the desired attitude for most accurate readings at the zero benchmark and press the ZERO key for 2 sec. When the display stops flashing it will have locked onto your benchmark zero.

- 4) DIG & MEASURE – Measurement tips:
 - a. During slow steady movements, the display may lag slightly behind the actual depth.
 - b. For most accurate readings you may need to pause movement for one to two seconds at the same stick/bucket attitude used for zero.
 - c. Keep the bucket tooth down or at your desired zero/measurement attitude and beware that your actual depth will be more shallow than indicated with the stick in a more horizontal attitude than the zero attitude. You can measure and record or remember the deviations with the excavator on a large level surface and mentally correct while digging.
 - d. For surfaces not level or sloped trenches, use a ZIPLEVEL or grade laser to set stakes, a visible string or rope line next to the excavator for a zero reference to dig a constant depth below the reference line.

POWERFUL BUILT-IN FEATURES (See User Guide for details.)

- 1) ELEVATION – Preset any elevation including Mean Sea Level (MSL) elevations at your initial reference benchmark. Press the RES & SCALE keys together for 2 seconds to enter function and use keys starting with HOLD for the least significant digit and use keys moving counter clockwise around the keypad for the more significant digits. The ZERO key controls up and down.
- 2) CARRY FUNCTION – Lets you preserve your initial benchmark plane over multiple moves of the excavator. At your initial benchmark (usually ahead of the excavator), press the HOLD key. While HOLD is showing on the display, press the ZERO key for 2 seconds to enter the Carry Function where a leading “C” preceding the most significant digits alternates with the least significant digit display. Any preset ELEVATION will show on the display. Alternatively, you may press MARK and ZERO keys together for 2 seconds to zero the display at your benchmark reference. Movement procedure:
 - a. Before moving the excavator, place the bucket tooth on the initial benchmark and press the HOLD key.
 - b. With HOLD showing on the display, move the excavator ahead (the benchmark is usually behind), rotate the bucket tooth back onto the benchmark (usually behind) and press the ZERO key.
 - c. Once HOLD disappears from the display then rotate the boom forward and resume digging.You may repeat the HOLD/ZERO “leap-frog” over any distance or elevation without loss of your original benchmark plane IF you are precise in locating your bucket at the benchmarks. To escape the Carry Function press the ZERO key for 2 seconds.
- 3) RECORD – Press the REC + MARK keys for 2 seconds to save up to 137 measurements in memory by pressing HOLD. Readings are saved as Postions, Px along Sequences, Sy. Press the MARK key for 2 seconds to increment to a new Sequence. A new Sequence could be an new leach line trench. Exit Record by pressing REC + MARK keys for 2 seconds. Reading can be viewed using the INSPECT function or saved/graphed real time on a smart device using the optional ZIPLEVEL SmartLink.

4) ZIPLEVEL SMART LINK

This option communicates elevation data to a paired smart device as far away as 100’ using low energy Bluetooth for storage or instant sharing of data graphs of 3D graphs with staff, customers or others. The SmartLink allows the following:

- 1) DUMP – Allows transfer of RECORD DATA saved in ZIPLEVEL to smart devices.
- 2) RECORD – Watch tables and graphs evolved as data is recorded.

- 3) MONITOR – Continuous real time movements as frequently as 3x per second can be logged to a data page and graph while digging.
- 4) ZIPLLOT (Pat. Pend.) – Import a satellite map or take a job site photo and populate it with elevations taken at specific points. A powerful and intuitive way to document and share your work.

SERVICE AND WARRANTY

The ZIPLEVEL EZDepth should not normally need a system pressure recharge for 4+ years unless damaged or defective. The last recharge date is located on the bottom of the display beneath the protective yellow boot. The display should flash “Cord” on the display when in need of a recharge.

The ZIPLEVEL EZDepth is protected by the same one year component and two year prorata recharge warranty as the ZIPLEVEL PRO-2000. Loaner units are available for at nominal cost with free round trip shipping during the typical one to two day service turn around. Go to ziplevel.com/service for more details and service return information. Please contact us at info@ziplevel.com or call 1-760-480-4740 for assistance.

TECHNIDEA[®]
CORPORATION

760.480.4740 Office
info@technideacorp.com Email
3134 Heritage Rd. Walla Walla, WA 99362 USA