

SMARTTOOL™ Builder's Angle Finder

FIG. 1



CONTROLS: (see fig. 1)

- 1 **ON/OFF** - If left idle for 6 minutes, SMARTTOOL™ will automatically shut off.
- 2 **HOLD** - Push to "freeze" and "unfreeze" display readings.
- 3 **LISTEN & LEVEL AUDIO** (🔊) - Push to activate and de-activate the beeper. Beeper will sound at level and plumb.
- 4 **CALIBRATE** (see Calibration Procedures)
- 5 **% IN/FT** - Push to change the display units: Degrees (°), Slope (%), Pitch (in/ft).

25.5° 47.7% 5 3/4 in/ft

Pitch readings are in 1/8 in/ft increments. Plus and minus signs indicate when the pitch is slightly more (+) or slightly less (-) than the pitch shown on the display.

Note: The % IN/FT button 5 can be used even when the display is in HOLD. This feature is a convenient way to convert angles from one unit to another. For example a 5 in/ft roof pitch measurement can be converted to 25.5° for setting up cuts on a chop saw.

LCD DISPLAY:

Display reads right side up when SMARTTOOL™ is upside down!

- 6 **UP/DOWN ARROWS** - Left and right indicators point toward level or plumb (whichever is closer). Indicators get shorter as SMARTTOOL™ gets closer to level (0°) or plumb (90°).
- 7 **LOW BATTERY** (🔋) - Low 9V battery indicator. Replace battery within 24 hours.
- 8 **DIGITAL DISPLAY** - Display readout of current measurement.
- 9 **LISTEN & LEVEL AUDIO** (🔊)
- 10 **% IN/FT MODES** - Indicates measurement "mode": Degrees (°), Slope (%), Pitch (in/ft).

BATTERY INSTALLATION:

(Battery included)
Remove back cover (see illustration). Attach 9-volt battery to terminals and replace the cover. (see fig. 2)

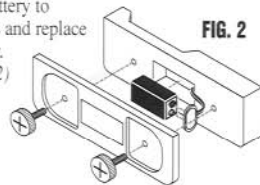


FIG. 2

CALIBRATION PROCEDURES:

PROCEDURE FOR LEVEL:

To calibrate, place SMARTTOOL™ on a flat surface. Wait 10 seconds. Push and hold the CALIBRATE button for 2 seconds. (CAL1) will appear briefly on the display.



Rotate SMARTTOOL™ end-for-end. Wait 10 seconds. (see fig. 3)

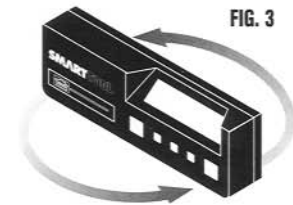


FIG. 3

Push the CALIBRATE button again. (CAL2) will appear briefly on the display.



SMARTTOOL™ has now been calibrated for level.

OVERHEAD MEASURING FOR LEVEL:

If you need to read the display upside down, you must calibrate the top surface of the angle finder.

Repeat the steps described above except the SMARTTOOL™ should be upside down. (See fig. 4)

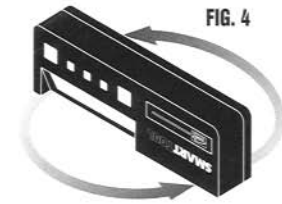


FIG. 4

PROCEDURE FOR PLUMB:

Place SMARTTOOL™ against a flat vertical surface with the LCD display at the bottom, and away from the surface. Wait 10 seconds. Push the CALIBRATE button. (CAL1) will appear briefly on the display.

Rotate SMARTTOOL™ edge-for-edge along its long axis (i.e. LCD display is still at the bottom, but is now against the flat vertical surface.). The display should face away from you. Wait 10 seconds. Push the CALIBRATE button again. (CAL2) will appear briefly on the display. (see fig. 5)

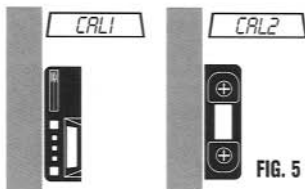


FIG. 5

Repeat the steps for plumb above except with the LCD display at the top. Now the SMARTTOOL™ is calibrated for plumb.

Note: If the CALIBRATE button is pushed when SMARTTOOL™ is not near level or plumb, the display will show - - - and SMARTTOOL™ will ignore the calibration attempt.

Note: We recommend checking calibration daily, after a rough fall or if there has been a significant temperature change, $\pm 20^\circ\text{F}$, since the previous calibration. To check simply follow the above procedures without depressing the CALIBRATE button. If the readings are more than .1 apart, then the SMARTTOOL™ should be recalibrated.

INSTALLATION IN A MACKLANBURG-DUNCAN I-BEAM LEVEL:

Your SMARTTOOL™ Angle Finder is designed to fit into an M-D American brand level (6000 Series or 6500 Magnetic Series, lengths 24" to 96"). Simply remove the back cover, place the front assembly into the hand