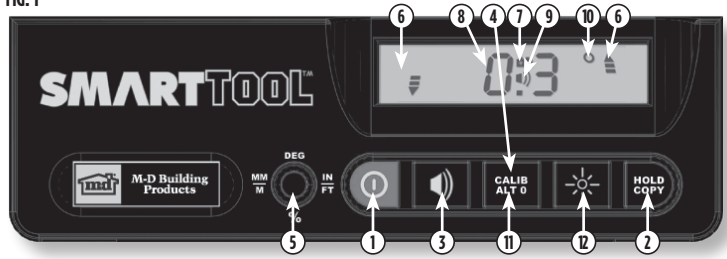


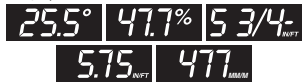
# SMARTTOOL™

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** **DIRECTIONAL LISTEN & LEVEL AUDIO** Push to activate and de-activate the beeper. Directional Beep rate increases as 0°, 90°, the copied angle, or the ALT 0 angle is approached and changes tone when the angle is passed.
- 4 CALIBRATE** (see Calibration Procedures)
- 5 MODE BUTTON** - Push to change the display units: Degrees (°), Slope (%), Pitch (in/ft, digital in/ft, mm/m).



Pitch readings are in 1/8 in/ft increments.

**Note:** The °, %, pitch button 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 5-3/4 in/ft roof pitch measurement can be converted to 25.5° for setting up cuts on a chop saw. Each + or - indicates about 1/24 inch.

## 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°) or copied angle.
- 7 LOW BATTERY** - Low 9V battery indicator. Replace battery as soon as possible.

- 8 DIGITAL DISPLAY** - Display readout of current measurement.
- 9** **DIRECTIONAL LISTEN & LEVEL AUDIO**
- 10 ° % in/ft MODES** - Indicates measurement "mode": Degrees (°), Slope (%), Pitch (in/ft, digital in/ft, or mm/m).
- 11 ALTERNATE ZERO** - ALT 0 allows you to set any angle as a 0° reference. Set the new 0° by pressing "HOLD/COPY" then "CALIB ALT 0". The display shows "alt" then "-0-" then the new 0°. A dot flashes above the decimal point and "alt 0" flashes every 5 seconds while in "alt 0" mode. Beep, °, %, and in/ft continue to function as normal. Discontinue "alt 0" mode by pressing "HOLD/COPY", "CALIB ALT 0", or "ON/OFF".
- 12 BACK LIGHT** - Push to activate display back light. (turns off after 1 minute to conserve battery life).

## ANGLE COPY

To copy angles, place unit on angle to be copied. Press the Hold/Copy button. Push the

Listen and Level Audio button. Level will begin beeping. The "copy" angle will remain frozen on the display. A beep will sound when the unit is returned to this exact angle.

To remove the unit from the angle copy mode, push the Hold/Copy button or the Listen and Level Audio button. This operation will return the unit to the regular mode.

## BATTERY INSTALLATION (Battery included)

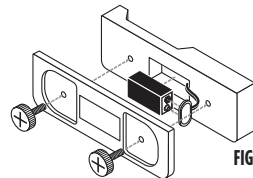


FIG. 2

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

## GEN 3 CALIBRATION PROCEDURES

To read accurately, SMARTTOOL™ must be calibrated through all eight calibration steps. 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. If CAL ALL appears on the display, SMARTTOOL™ needs to be calibrated through all eight calibration steps.

**Note:** We recommend checking calibration daily, after a rough fall, or if the temperature has changed by more than 20° F (11° C) since the previous calibration.

To check calibration, carry out the Steps 1-8 calibration procedures (WITHOUT DEPRESSING THE CALIB ALT 0 BUTTON). If the readings vary by more than 0.1 deg. then SMARTTOOL™ should be recalibrated.

**Step 1:** Place SMARTTOOL™ on a flat surface with the display facing you. Turn it on and push and hold the CALIB ALT 0 button for 2 seconds until CAL appears on the display. The current angle and "UP" will appear alternately. Wait until the unit beeps and flashes CAL 1 and then proceed to step 2.



**Step 2:** Turn the SMARTTOOL™ so the display is facing away from you (steps 1 - 4 must be in the exact same spot on the flat surface). Wait until the unit beeps and flashes CAL 2 once.



**Step 3:** Turn the unit upside down so the word "UP" now is right side up. Wait until the unit beeps and flashes CAL 3 once.



**Step 4:** Turn the unit so the display is away from you still in the upside down position. The word "UP" should be right side up. Wait until the unit beeps and flashes CAL 4 once.

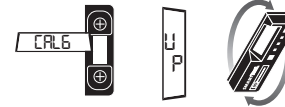


**Step 5:** Turn the SMARTTOOL™ vertical so the word "UP" reads correctly. Place the SMARTTOOL™

against a vertical surface with the display toward you until the unit beeps and flashes CAL 5 once.



**Step 6:** With the word "UP" still right side up, place the SMARTTOOL™ so the display is away from you. (steps 5 - 8 must be in the exact same spot on the vertical surface) Wait until the unit beeps and flashes CAL 6 once.



**Step 7:** Turn the SMARTTOOL™ so the word "UP" is right side up. Place the SMARTTOOL™ against the vertical surface with the display facing you. Wait until the unit beeps and flashes CAL 7 once.



**Step 8:** With the word "UP" still right side up, place the SMARTTOOL™ so the display is away from you. Wait until the unit beeps and flashes CAL 8 once. The calibration is now complete.



## MAINTENANCE

The following tips will ensure that your SMARTTOOL™ is kept in top condition.

- The SMARTTOOL™ is weather and water resistant. Should SMARTTOOL™ be splashed with mortar or other construction site residue, lightly spray or wipe clean with a damp cloth. Do not immerse the SMARTTOOL™ in water.
- ABS polymer surfaces should be cleaned with a mild liquid soap and water.
- We advise you to store SMARTTOOL™ away from extreme temperatures below 20°F (-4°C) or higher than 140°F (60°C).

## ONE YEAR LIMITED WARRANTY

If within one year from the date of original purchase, the SMARTTOOL™ fails to function

because of defects in materials or workmanship, M-D will, at its option, either repair or replace such components provided the original purchaser:

- Call 1-405-528-4411 for a Return Authorization Number.
- Returns the SMARTTOOL™ postage paid and insured to M-D at the address set forth below. M-D is not responsible for any damage incurred to the components while in transit to M-D.
- Include a brief explanation describing why the SMARTTOOL™ is inoperable or how the component was damaged.
- Send the materials to:  
M-D Building Products, Inc.  
Service Center Authorization  
4041 N. Santa Fe  
Oklahoma City, OK 73118

This warranty does not cover damage resulting from accident, misuse or abuse, water, tampering, servicing performed or attempted by unauthorized agencies, or units that have been modified in any fashion. If the components do not perform as warranted herein, the original purchaser's sole remedy will be the repair or replacement of the components as provided above. In no event will M-D be liable for damages, lost revenue, lost wages, lost savings or any other incidental or consequential damages, domestic or international, rising from the purchase and use or inability to use the components, even if M-D has been advised of the possibility of such damages. Except as provided herein, M-D makes no warranties, express or implied, including without limitation, the implied warranties of merchantability and fitness for a particular purpose, with respect to the components. All warranties for the components, express or implied, are limited to the warranty period set forth above. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights. You may also have other rights, as indicated above, which vary from state to state.