

“Using New Technology To Improve Cruise Accuracy”

Presented by: Jon Aschenbach

Resource Supply, LLC

PO Box 663

West Linn, OR 97068

503-521-0888



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Using New Technology: 3 Areas

- **Acreage Determination**
 - GPS Receivers
- **Tree Count**
 - RD1000 BAF Scope
 - Bosch lasers for reprod plots
- **Tree height**
 - TruPulse 200, 200X (2D Missing Line)
 - TruPulse 360B, 360R (3D Missing Line)



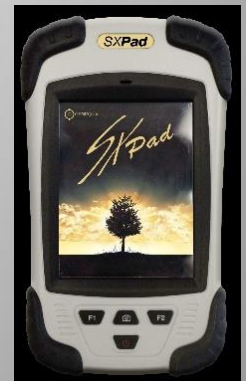
Variable Plot Cruising: What's Most Important

1. Acres
2. Tree Count
3. Tree Height
4. Species
5. Form Factor
6. Diameter



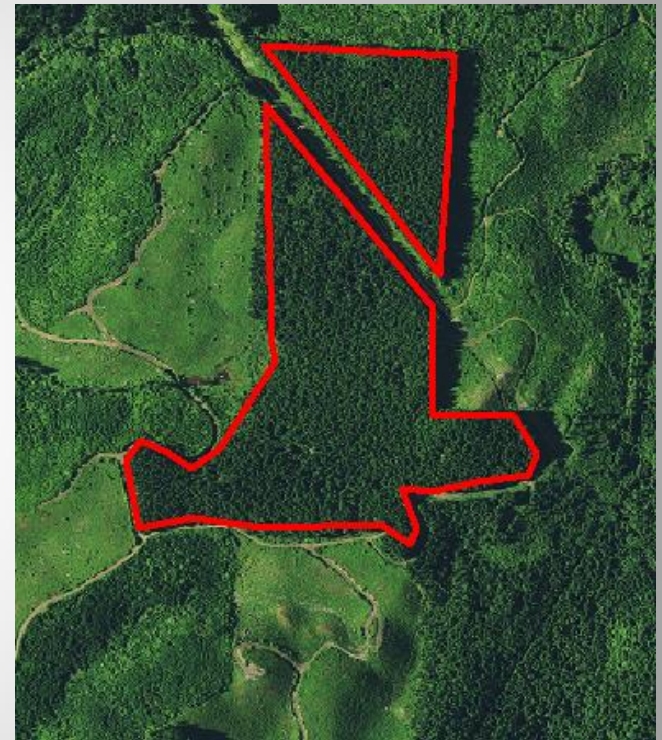
GPS Accuracy – The Equipment

- **Best: Sub-meter accuracy**
 - EOS Arrow 100
 - Trimble H7
 - SXBlue II GNSS
- **Better: 1-3 meter Accuracy**
 - Garmin GLO
 - MobileMapper 20
- **Good: 2-5 meter accuracy**
 - Nautiz X8
 - SXPad



Determining Unit Acreage

- Use GPS
 - GPS can help you find the cruise unit
 - GPS provides easy, fast acreage
 - Accuracy is usually within a few 10th s of an acre
 - Stratify out roads, brush holes, etc.
 - Use GPS Offsets with a Laser Rangefinder



Tree Count – No Room For Error

- Sight at 16 feet, not DBH
 - Trees rounder at 16'
 - Better back light
- Estimate count when approaching plot
 - Never miss a tree behind another tree
- Tree Count on Count Plots Is Still Important



Tree Count

- **RD1000 BAF Scope**
 - Clearest View of Sample Trees
 - Simple to use. (no little bars)
 - Best Unit under dark canopy
 - \$700 less expensive than Relaskop™
 - Stabilizes fast
- **Clean, Calibrated Relaskop™**
 - Very versatile
 - Hard to use under dark, dense canopy in the winter

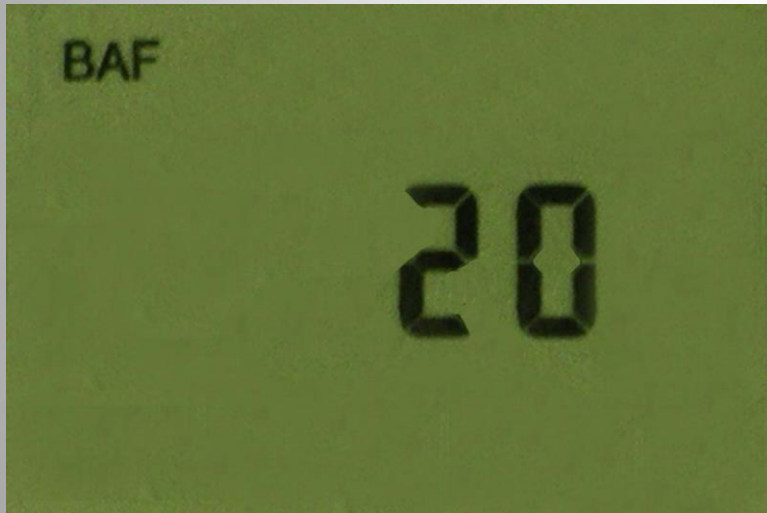


RD-1000 Modes of Operation

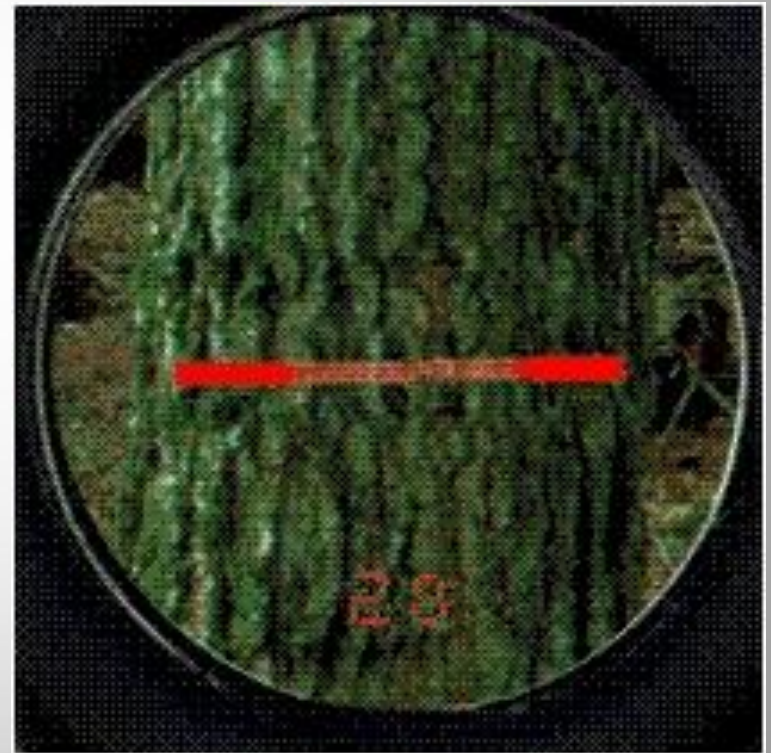
- **BAF – Projects Basal Area Factor (BAF 1-127)**
- **IN / OUT – Built-in Limiting Distance calculation.**
- **DIAMETER – Measure diameter of a tree at any point on the bole**
- **HEIGHT / DIAMETER – Height to a specific diameter.**

BAF – (Basal Area Factor)

LCD



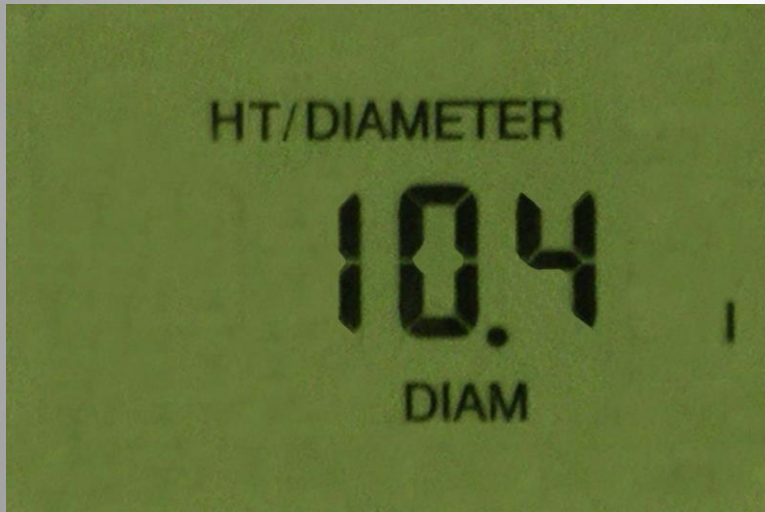
Heads Up Display



Measurement bar length
adjusted for slope

DIAMETER Mode

LCD



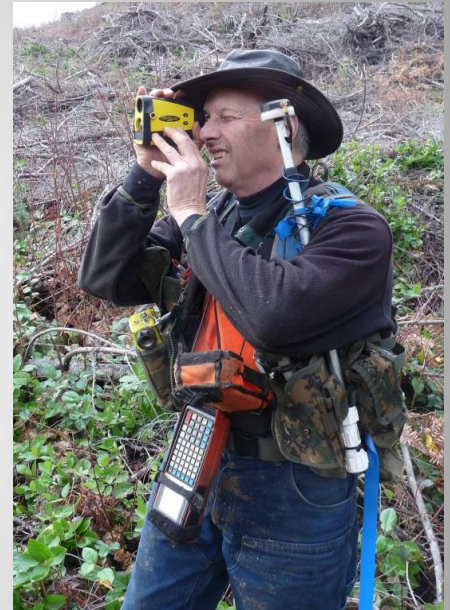
Heads Up Display

Display shows DIAMETER when the trigger is released



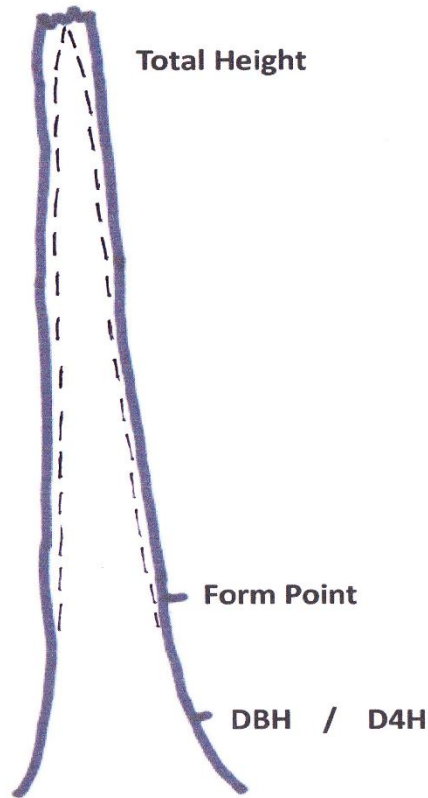
Measuring Tree Height Accurately

- Laser Rangefinders
- Tree Height Mode
- 2D Missing Line Mode
 - Leaning trees facing you or going away
- 3D Missing Line Mode
 - Leaning trees; any direction

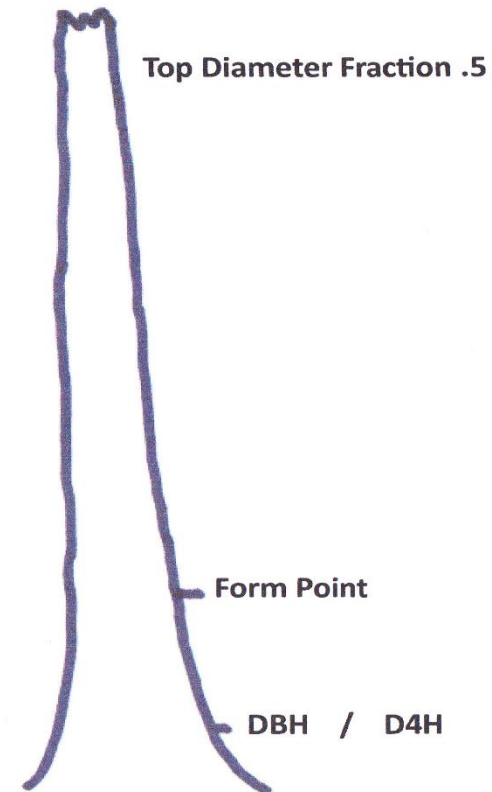


Define the Shape Of The Tree

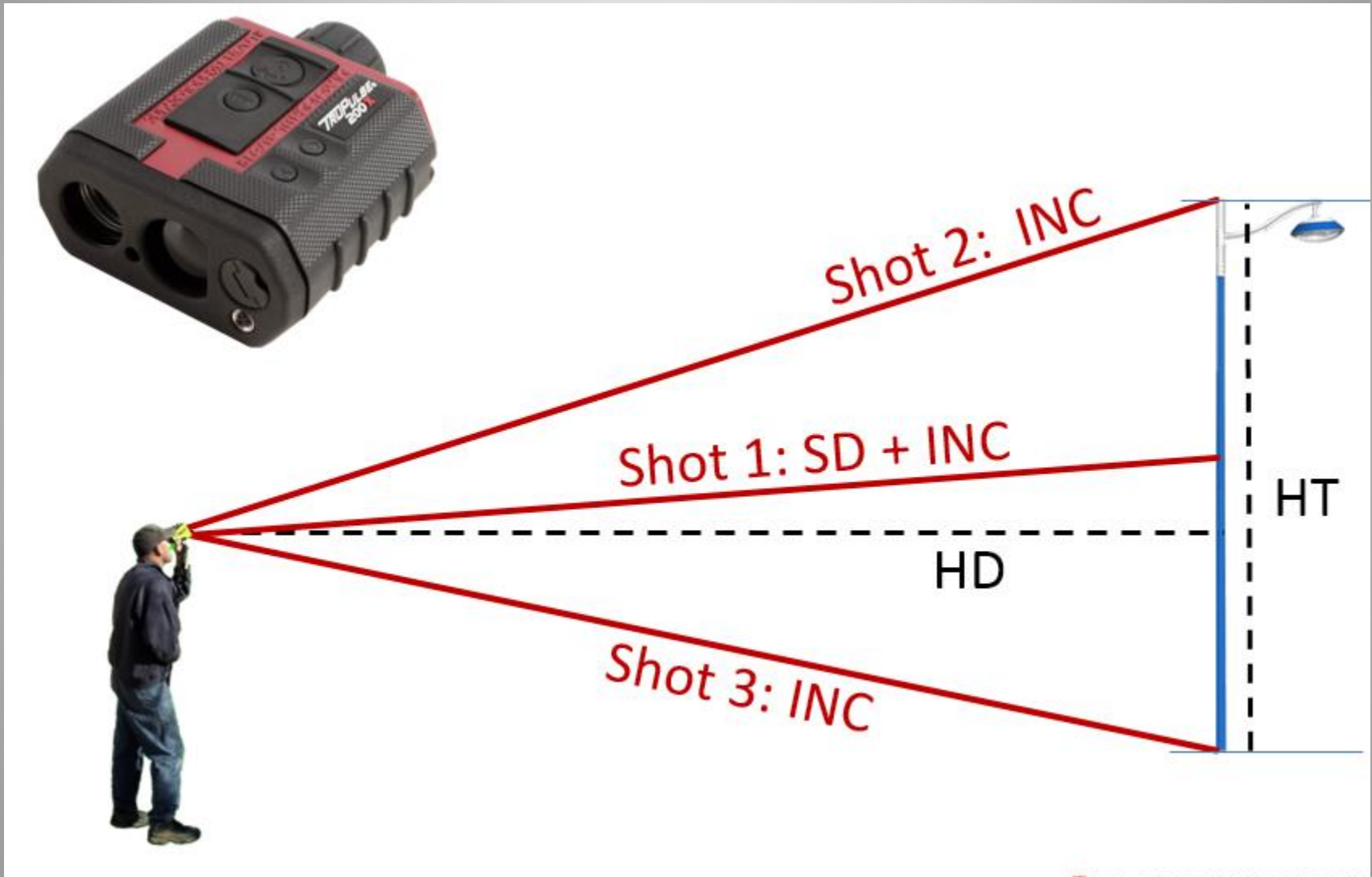
How To Ruin A Cruise



How Not To

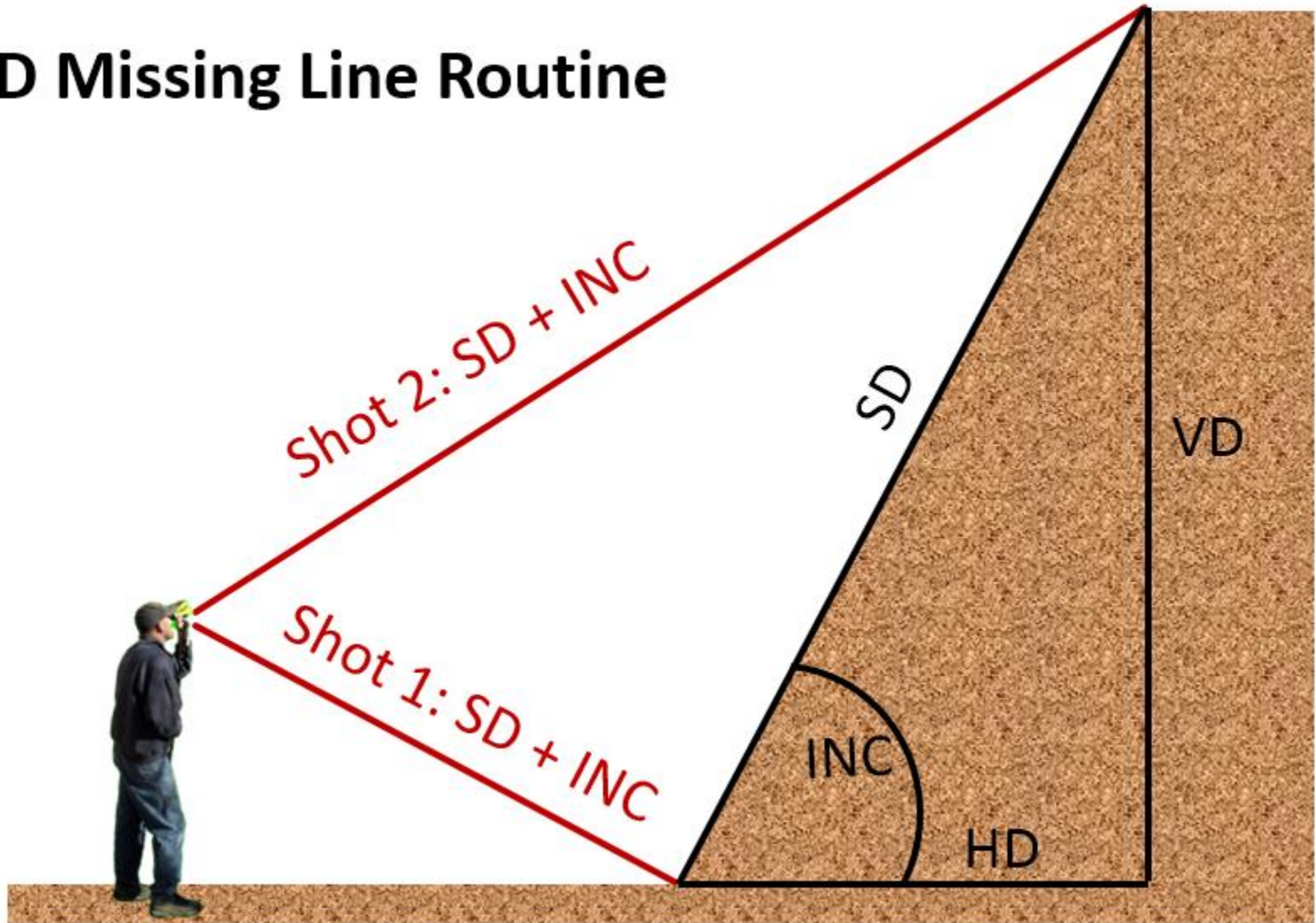


Three Point Height Routine

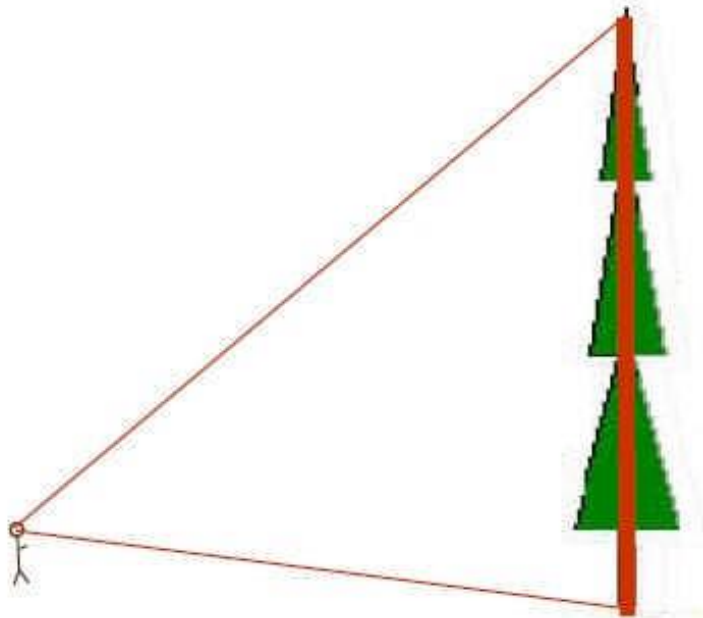


2D Missing Line Routine

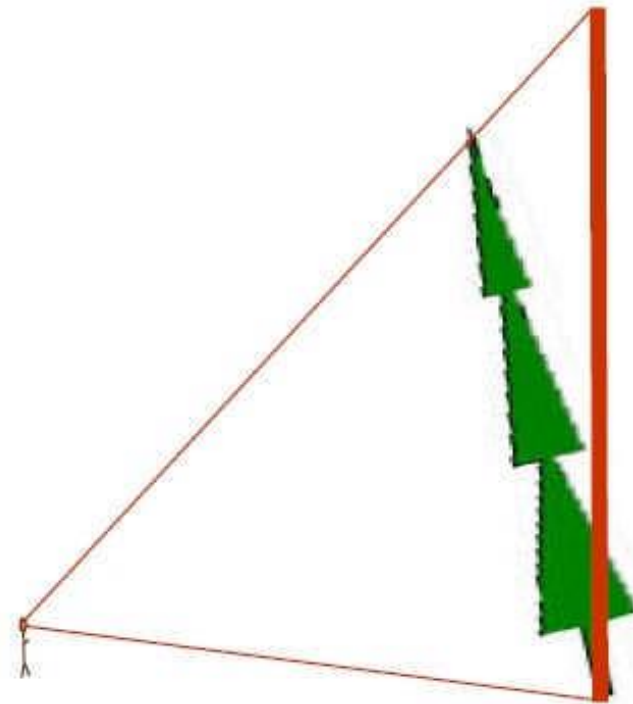
2D Missing Line Routine



Leaning Trees – Use Missing Line Mode

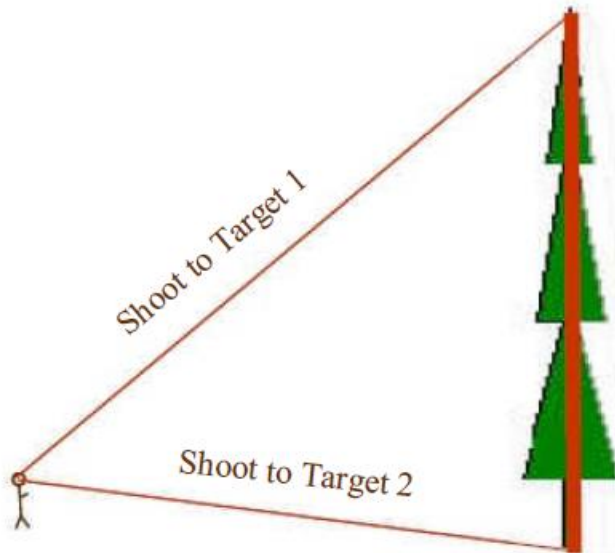


Three Point Height Measurement works fine with normal trees.

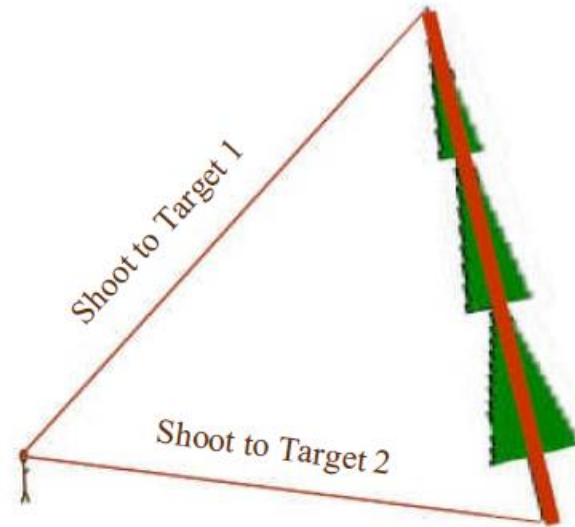


The Three Point Height Measurement overstates the tree height when the tree is leaning toward the cruiser

3D Missing Line Routine



Tree height is accurate using "Missing Line Mode" on the TruPulse 360B



Tree Height for leaning trees is still accurate using "Missing Line Mode" with the TruPulse 360B

How To Ruin a Cruise – How Not To

- Relaskop fogged up, dirty, or out of calibration
- Acres by guess, string box, pacing, or sellers acres
- Tree Height to wrong point on bole of tree
- Tree Height Classified in number of logs
- Use RD1000 for in/out trees and Tree Diameters
- Acres by GPS traverse (internal or external traverse)
- Tree Height to proper point on bole of tree
- Tree Height measured to nearest foot

Conclusion

- If you want to save money – Don't Cruise
- If you want to MAKE money, Measure Acres, Trees, and Tree Count accurately
- Available instruments are accurate to Plus/Minus 2%
- Use the latest technology- it's easy

Thanks!

For all your Cruises, may your:

- **Equipment last forever**
- **Batteries never die**
- **Satellites be high in sky**



Miles the GPS Dog

Jon Aschenbach

Resource Supply, LLC

PO Box 663

West Linn, OR 97068

503-521-0888

jon@resourcesupplyllc.com