Training Lesson: Wireless Laser Measuring

Revision: 062112-01

Leica DISTO™ D330i

The Value of Wireless Measuring

Site dimensions are calculated and then transmitted wirelessly to the tablet PC with the Leica Disto d330i Bluetooth Laser Measuring Device. The major benefits of laser measuring are:

1. **To Reduce the Amount of Time Required to Input Dimensions Into** FloorWizard – The use of lasers to capture the dimensions of an area will dramatically reduce the amount of time required to perform a measure. Wireless laser measuring will reduce the time even more. With the technique that we describe in this document, you will no longer need a tape measure. There will be no more: tapes hung up on the power cord behind the sofa; no more lamps or decorative table-top items knocked over; no more pictures knocked off the walls: and, a greatly reduced need to move items out of the way.

2. **To Eliminate Mis-Reads of the Tape Measure** – Upon the push of a button on the face of the laser device, the measured length will be sent directly into the system. The user no longer has to accurately read the tape measure and accurately record the value into the computer. Our measuring experience is that users will occasionally make errors reading the tape or inputting the data into the fields of FloorWizard.

3. **To Impress Your Customers** – Measuring personnel who use lasers are viewed by their customers to be more professional and customers have more confidence that the job is being measured accurately.

4. **To Improve Measurement Accuracy** – Measuring personnel that have never used a laser generally fear that the device will mis-measure. While a false read is possible, the laser will warn you via an audible beep and a display message when there is no read. And through FloorWizard dimensional editing, if a bad shoot occurred, you will know there is a problem. The laser that FloorSoft supports has a guaranteed accuracy of .06 inches in 650 feet (1.5mm in 198m)!

Initial Tablet PC Setup Procedure for Wireless Laser Measuring

Installation of the FloorWizard Wireless Laser Communication Package

The FloorWizard Wireless Laser Communication Package must be installed on each computer that will be using a wireless laser. Please follow these steps to complete the installation:
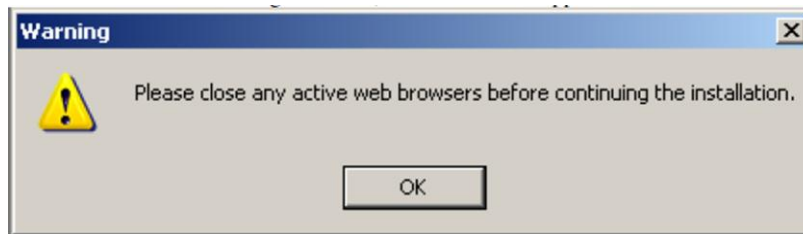
1. Upon your next visit to the Logon page (see below), just click the "**Run Updates**" button.
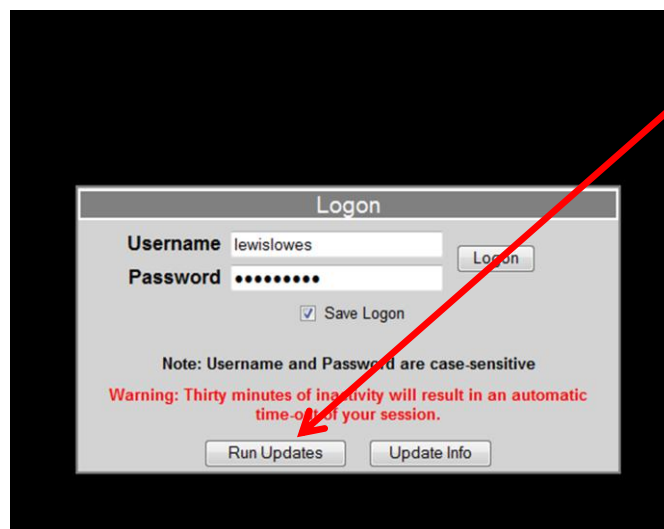
2. Choose the "**Run**" option to the next prompt (see below) and respond affirmatively to any other prompts that may appear:

A second similar window will appear. When it does, click run again. You should see the following dialog box next:

Close all Internet Explorer windows and click "**OK**". The Internet Explorer windows must be closed before continuing to use the Wireless Laser. Your computer should reboot automatically.

Pairing the DISTO™ D330i Laser with Windows 7 PC

Before you start measuring with the wireless laser, the DISTO™ needs to be paired the with your computer. In order to do this please start the program

1. Click **Start > Control Panel > Devices and Printers**

2. Make sure that the Bluetooth hardware on your PC is enabled. Choose "**Add a Device.**" After a few seconds all Bluetooth devices in accessible area will be displayed. Please select your DISTO™ and double click on it.
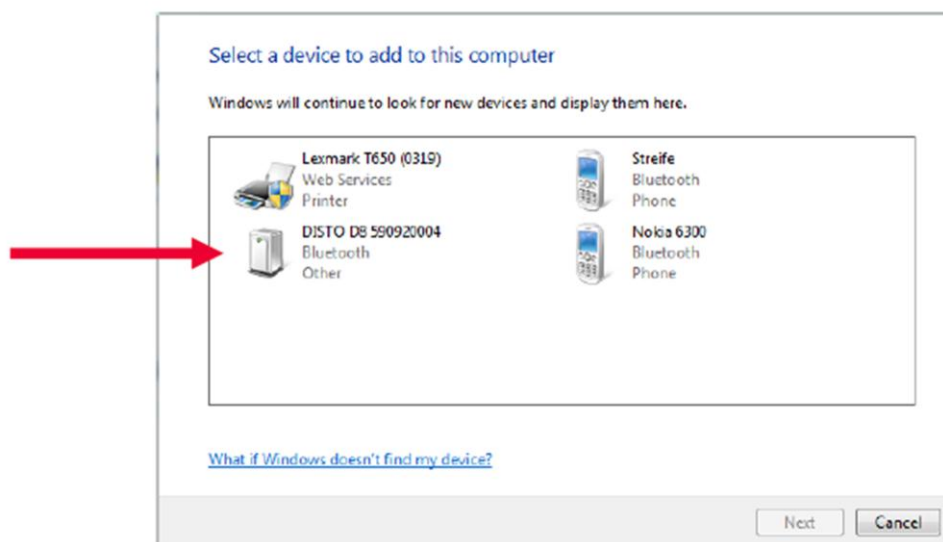
3. You will be asked for the pairing option. You have to click on the second listed option for "**Enter the device's pairing code**".
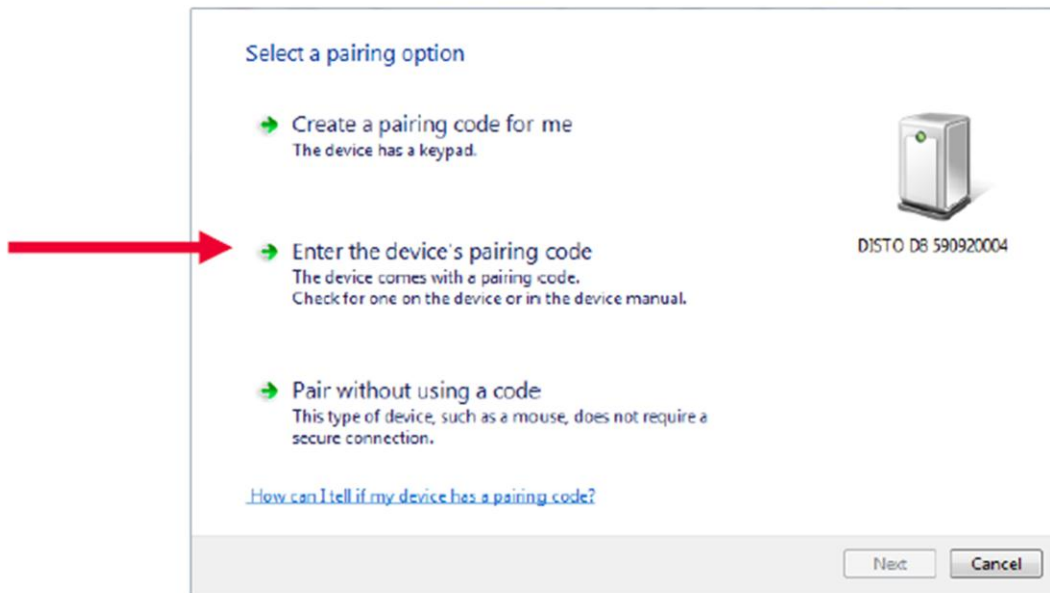

4. You have now to enter the pairing code which is always "**0000**".
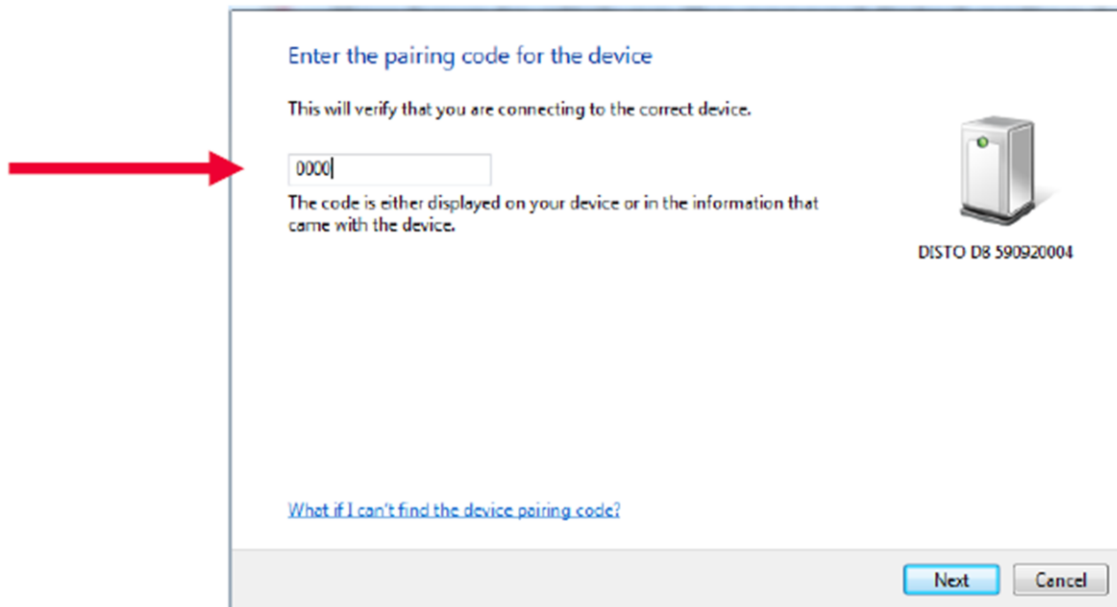
6. The instrument will be shown as being paired in the list of devices.

Required Settings for Leica DISTO™ D330i

1. **Reference Point** - There will be an Icon of the device in the upper left corner of the display. This Icon will be showing you which end of the device is the starting point for measurement. Be sure it is measuring from the back of the laser. Refer to your laser setup manual to adjust this setting.
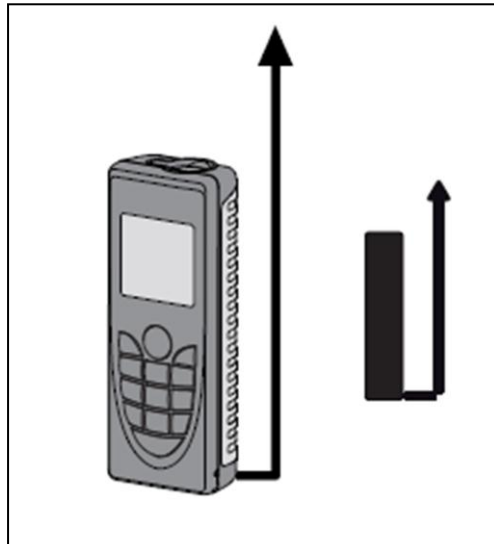
2. **Units** – **FloorWizard** is configured to receive dimensions from the laser in the following 2 formats only:
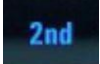
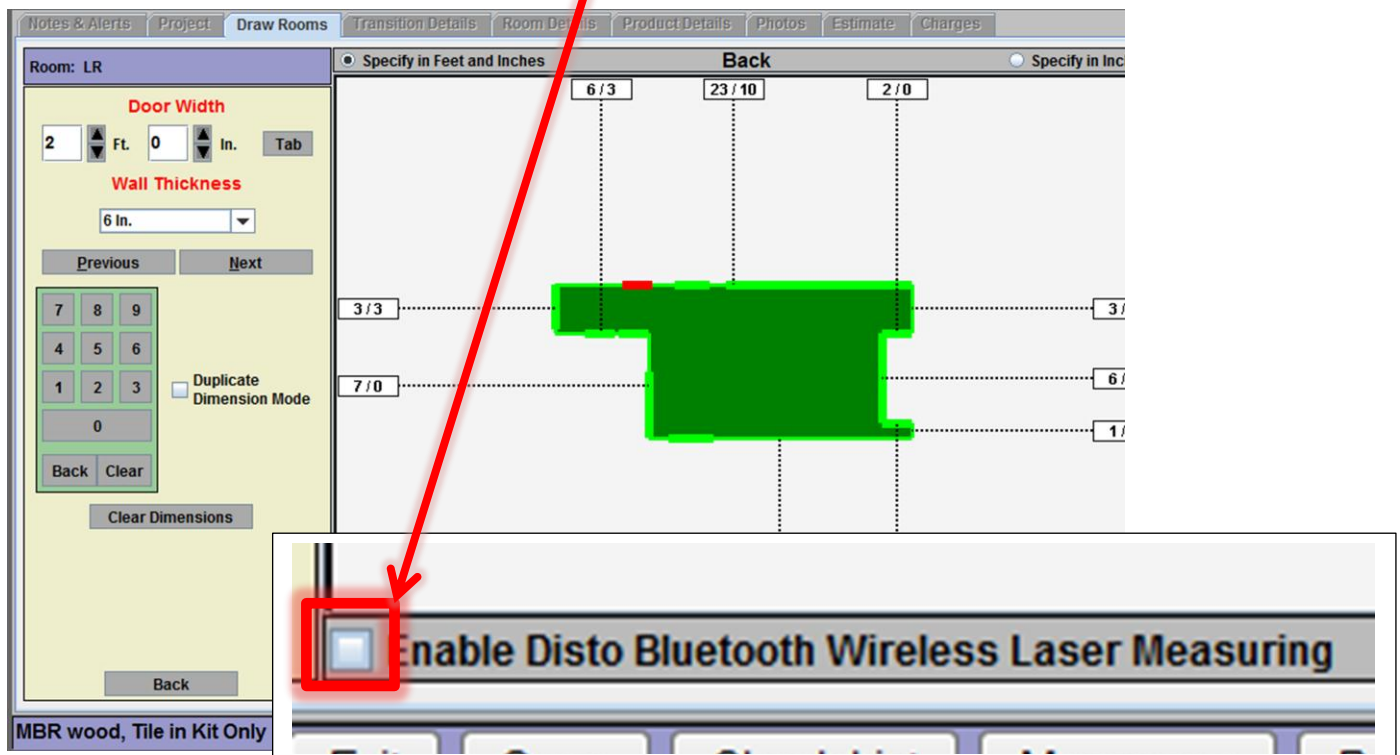Imperial Users – **0' 00"** $1/32^{nd}$ (0ft 00in $1/32^{nd}$ in)

Metric Users - **0.0000 m** (0m 00mm $1/32^{nd}$ mm)

# Connect the Leica D330i Wireless Laser to Tablet PC

Follow these Steps:

1) Push the Red ⬛ button

2) Push the Blue 🔵 button

3) Click the "**Draw Rooms**" tab, then click the "**Specify**" button, then click the "**Enable Disto Bluetooth Wireless Laser Measuring**" checkbox. See below:

4) Push the blue `2nd` button

Notes & Alerts | **Project** | **Draw Rooms** | **Transition Details** | **Room Details** | **Product Details** | **Photos** | **Estimate** | **Charges**

Room: LR

⦿ Specify in Feet and Inches   **Back**   ○ Specify in Inc

Door Width

2 ▲▼ Ft.   0 ▲▼ In.   Tab

Wall Thickness

6 In. ▼

| Previous | Next |

7	8	9
4	5	6
1	2	3
0		

☐ Duplicate Dimension Mode

Back | Clear

Clear Dimensions

Back

MBR wood, Tile in Kit Only

6 / 3   23 / 10   2 / 0

3 / 3   3 /

7 / 0   6 /

                                         1 /

☐ Enable Disto Bluetooth Wireless Laser Measuring

With the laser powered on as described above, and upon the check of the box, the user will hear 1 beep from the laser. The Bluetooth Icon will stop flashing. This signals that the laser and tablet PC are now both connected and ready to measure.

If communication Between **DISTO™** and PC is not established:

➢ The laser can time out waiting for the communication to be established. This is signaled by the loss of the flashing Bluetooth Icon. To retry, push the ⬛ CLEAR OFF button, then the ⬛ button and the 2nd button again. The flashing Icon should return. If too much time passes between the power-up of the laser and the clicking of the check box, the laser may actually turn itself completely off.

➢ Did you run the Updates from the Logon page of **FloorWizard**?

➢ From the Control Panel, did you set up your laser as a Bluetooth device?

➢ Some computers have a switch on the back to switch on wireless systems. Check to be sure that if you have one, it is in the "On" position.

Measuring a Highlighted Segment

After you have sketched the room (Draw Tab), click on the **Specify** button. The system will display your room and 1 wall will be highlighted in red.

FloorWizard doesn't care which wall segment, door, or opening you decide to measure first. The first unspecified segment found in the top left quadrant of the grid will be highlighted by default. However, you can begin measuring anywhere you like; simply click the desired starting point, and proceed to gather and transmit the dimension.

The text box for entering / reviewing the dimension will be highlighted with a gray or blue background. See below:
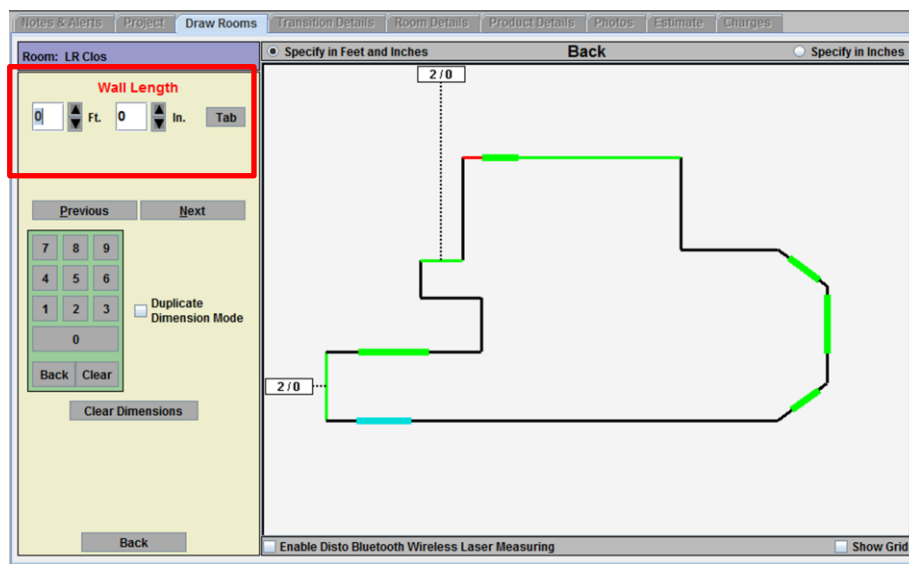
To shoot the highlighted wall, position the back of the laser at the start point of the wall and push the large red [ON/DIST] button on the laser. This will produce a continuous beam of red laser light and is your pointer. Once the pointer is on the target, push the [ON/DIST] button again. This locks the measurement and presents it on the display of the laser. Upon the push of the [+] button on the laser, this dimension will be transferred wirelessly to the PC and **FloorWizard** will index to the next wall/door, etc. to be measured. Repeat process for the next item to be measured. If you shoot a wall and want to go back and shoot it again, push the [−] button on the laser. This will index you backwards to the previously measured item.

⚠ **WARNING:**
Looking directly into the beam with optical aids (e.g. binoculars, telescopes) can be hazardous.

Precautions:
Do not look directly into the beam with optical aids.

⚠ **CAUTION:**
Looking into the laser beam may be hazardous to the eyes.

Precautions:
Do not look into the laser beam. Make sure the laser is aimed above or below eye level. (particularly with fixed installations, in machines, etc.)

By the Numbers:

1) Press [ON/DIST] to turn on laser beam

2) Place base of **DISTO™** against start point

3) Aim Laser at end point

4) Press and release [ON/DIST] (Result is the distance from BASE of **DISTO™** to end point of laser beam)

5) Press the [+] button to transmit the measurement to your PC and Index clockwise to the next unmeasured object.

6) Repeat steps 1-5 until all segments and specifiable objects have been measured.

7) (Optional) Press the [−] button to index counterclockwise to the desired object.

Tips on Measuring with a Laser:

1. Take a pack of sticky note paper with you on all jobs. Keep at least one stuck to the face of your computer for quick access. These small pieces of paper can be attached to corners that turn away from you or used between doors to give you a point to shoot at with the laser.

2. Always measure from Wall to Wall. It is not necessary to measure from the back of the door jam, as the width of all doors and openings can be specified individually.

3. Lasers do not measure distances < 7 inches (18cm). Teach yourself to estimate walls that are < 7 inches (18cm) so that you will not have to use a tape measure on these walls. Also, estimate a little long…the **FloorWizard** dimensional editing will take care of this upon assembly of the room onto the floor plan.

4. Lasers depend on reflection of the beam back to the laser. If you are shooting to a window glass, a curtain or some other surface that is transparent or will diffuse the light, the beam will not be reflected and you will not get a read.

5. We also have some suggestions regarding the use of the holster. We suggest that when you begin measuring that you push the flap that covers the laser completely down into the holster, i.e. to get it out of the way while you are continuously placing and removing the laser from the holster. Further, we suggest that you place the back of the laser into the holster first since it is somewhat pointed and easier to slide into the hole.

Changing the reference point (multifunctional endpiece)
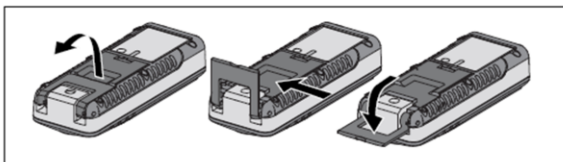
The instrument can be adapted for the following measuring situations:
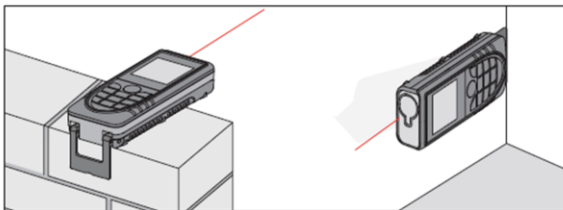
- For measurements from an edge, fold out the positioning bracket until it locks in place at a 90 degree angle.
- For measurements from a corner, open the positioning bracket until it locks in place, then push the positioning bracket lightly to the right to fold it out fully.

A built-in sensor automatically detects the orientation of the positioning bracket and adjusts the zero point of the instrument accordingly.

Troubleshooting Wireless Laser Issues

Issue Description	Probable Cause	Recommended Action
Laser displays error code "Error"	Hardware error	Switch on/off the device several times. If the message still appears, then the laser is defective
Laser displays error code 156	Traverse tilt greater than 10 degrees	Hold the laser without any transverse tilt
Laser displays error code 160	Main tilt direction, angle too	Measure angle up to max 45
Laser displays error code 204	Calculation error	Repeat procedure
Laser displays error code 220	Laser has become defective	We ship a new laser immediately; customer returns damaged laser to FS for a discount on the purchase.
Laser displays error code 240	Data transfer error	Repeat procedure
Laser displays error code 242	No Communication	The unit has a defective Bluetooth radio. Leica will need to receive the unit to further
Laser displays error code 245	2nd button pressed although no Bluetooth connection exists	Establish Bluetooth connection
Laser displays error code 252	Temperature too high	Cool down laser
Laser displays error code 253	Temperature too low	Warm up laser
Laser displays error code 255	Receiver signal too weak,	Use target plate
Laser displays error code 256	Received signal too strong	Target too reflective
Laser displays error code 257	Wrong measurement, background brightness too high	Darken target (measure in different lighting conditions)
Laser displays error code 260	Laser beam interrupted	Repeat measurement
Laser displays error code 290	Laser has become defective	Contact system administrator; laser must be returned to Leica for servicing
Laser is dropping connection	User has large fingers and is clicking the more than the + or - keys.	Test with user and make them look directly at the key they are pressing and then verify results.
Laser is not getting the correct answer	The laser may have been changed to measure from the front; check Icon on laser.	Change laser to measure from rear; it should always be set this way.
Wireless laser does not connect to tablet	Radio switch is turned off	Check Switch
Wireless laser does not connect to tablet computer	2nd button or BT got clicked	If only the 2nd button got clicked off, clicking it back on will restore operation. If BT button got clicked off (or is flashing), you will have to re-establish the connection.
Wireless laser does not connect to tablet computer	Laser batteries are low	If the battery indicator on the d330i is at 2 bars, the batteries need to be replaced.
Wireless laser does not connect to tablet	Forgot to push the Bluetooth	Push Bluetooth button.
How do I register my laser	Warranty	Go to www.leica-geosystems.us on the top tab

| Laser connects to tablet (Bluetooth Icon is solid) but data will not go to FloorWizard | Wrong unit of measure | Should be set to FF' II" and 1/32, 1/5; for Metric Users, any Metric UOM will work. |