

PRODIM

PROLINER 4.X USER MANUAL



Measure it all!

**Professional Dimensioning
for Production Improvement**

Confidential

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Disclaimer

The influence of the operator on the measuring process is dominant, making him fully responsible for accuracy and safety. While using the Proliner he must ensure that no one is allowed near the cable or the control box while the pen is in use. Create a safe working environment before starting a measurement. Ensure the Proliner is positioned stable to prevent falling, never let go of the pen while measuring. Ensure no one is standing too close or walks through the measuring wire. A broken cable or dropped pen can cause rapid and unpredictable retraction of the cable which can severely injure anyone it might contact. Incorrect use might cause damage to the Proliner which is not covered under warranty, and could also cause damage to people or object, which is the user's responsibility.

We advise to make control measurements once in a while to ensure accuracy. The Proliner is a precision measuring machine. Let only by Prodim trained personnel work with the Proliner.

Recycling

Prodim International is proud to be an environmental friendly company. Therefore Prodim encourages it's customers to send back all unnecessary old Prodim products so we are able to recycle and together we reduce the waste volume.

Content

The manual might discuss or show content that is not available for your acquired Proliner configuration. The content of this manual may change without notice. Any submission regarding the content of this manual can be sent to helpdesk@prodim-systems.com.

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INTERACTIVE MANUAL

This manual is an interactive PDF. Save the file to the computer and open it with a PDF reader to use all interactive features. Click on the  to open an example movie of the function.

 Indicates that there is not yet a movie available for this function.

[Click here](#) at all times to return to the index.





Proliner



Remote control



Scanners



Cleaning cloth



Forms



Battery charger



Power adapter with cable



Battery



USB stick



Prodim touch screen pen

1.1 Introduction

The Proliner is an advanced measuring device. The quality of the measurement and the final output greatly depends on the working method of the operator. Measuring methods are taught during Prodim Training sessions.

In general, there are a few aspects that are particularly important:

Stability of the Proliner and object:

- o Make sure both the Proliner and object are not moving.
- o Do not move Proliner or object before you are completely done and you are ready to save.
In situations where you need to move the Proliner, see LEAP discussed in Chapter 3.7.
- o Make sure the Proliner can't fall or tip over. Pay extra attention to the placement when using the tripod.

Measuring head and wire:

- o The measuring head and wire have to be able to move without any interference (operator, objects, Proliner).
- o The measuring wire should be in a straight line from measuring head to pen tip when recording points.

Measuring pen:

- o Hold the pen firmly and safely, make sure you don't let go of the pen. Pay attention when changing grip. Letting the pen slip can cause damage to the device which is not covered under warranty.
- o If you are using a scanner, hold it perpendicular to the surface you are measuring and make sure the red screw is pointing away from the Proliner to prevent interference with the measuring wire.
- o If you are using a scanner, please remove the scanner before closing the foldable measuring unit.

Settings:

- o The operator needs to be able to choose the correct general settings and measurement settings.
- o Understanding concepts as projection and compensation is essential for choosing the measurement settings.

Remote control:

- o Use the remote control properly. Do not hold button 2 when scanning; press to start and press again to stop.

Measurements need to be performed properly!

The quality of the measurement and the final output greatly depends on the working method of the operator. Ideal measuring methods are taught during Prodim Training sessions.

1.2 Maintenance

General Care

The Proliner is a tough machine, even so it needs to be taken good care of it at any given time.

We advice to keep the Proliner machine clean and out of dust. If possible, make use of the official backpack and/or flight case when transporting or storing the machine.

Cleaning the measuring wire

The measuring wire should be cleaned at least once a week with the provided piece of dry dust-free cloth, nothing else.

Always start a measurement before cleaning the measuring wire to activate the maximum wire length alarm and don't extract the wire any further if you hear the alarm. We advise to clean the measuring wire with two persons. One person takes the measuring pen and extracts the wire until the alarms starts to beep and the other person cleans the wire.

Don't use lubricants, detergents or chemicals!

If cleaning the wire alone, make sure the wire doesn't collect dirt on the floor.

[Watch the video](#)



Calibrating touch screen

A. You can recalibrate the Proliner screen by holding the touch screen uninterrupted for 20 seconds and following the on screen instructions.

B. You can also access recalibration by entering the Manager, clicking 'Setup' and choosing 'Calibrate Screen'.
If your touch screen doesn't work properly you can also plug a mouse in one of the USB portals.

Maintenance or repair

If the Proliner has to be repaired or is in need of maintenance, please fill in [the repair form](#) on our website before shipping the Proliner.

Measurement support

In need of support with an ongoing project or measurement, or questions about your Proliner? Contact Prodim Helpdesk: helpdesk@prodim-systems.com or helpdesk@prodimusa.com.

1.3 Proliner alarms

To protect the Proliner hardware and (the accuracy of) your measurement the Proliner is equipped with alarms. Pay attention to the alarm signal as they help you protect your measurement and machine.

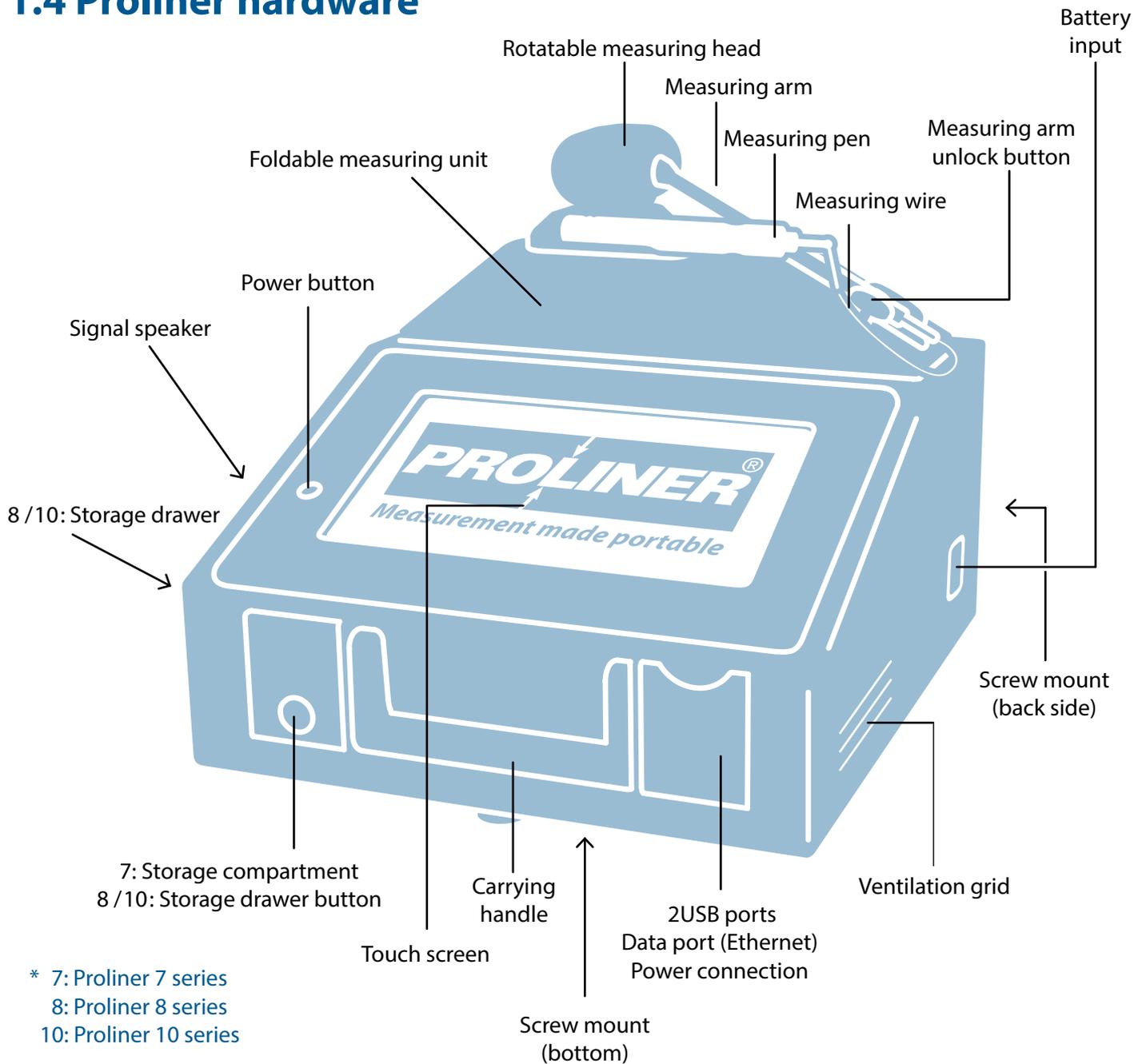
Rotation Alarm beeps repeatedly when trying to over-rotate the measuring head.

Maximum wire length Alarm beeps repeatedly when approaching the maximum wire length.

Battery life Alarm beeps repeatedly when battery life runs low.

Elevation alarms Alarm beeps repeatedly if the angle of the measuring arm approaches the boundaries (minimum and maximum) wherein the Proliner measures correctly.
Elevation alarms can be turned on/off in the general settings.

1.4 Proliner hardware



Watch the video



1.5 Remote control

The remote control is used to operate the Proliner during a measurement. The remote control has four buttons:

•

1) Point mode

Press once to record a single point. When the next point is recorded, the Proliner will automatically draw a line between the measured points.

••

2) Continuous mode

Start - stop button continuous mode. Once pressed, the Proliner will register approximately ten points per second until the button is pressed again. Don't hold the button!

•••

3) Create new contour or layer

Press this button to end a measured contour and add a new contour. The first point to be measured won't be connected to the previous. **Hold** this button to create a new layer.

••••

4) Delete the last point or contour

Press button 4 to delete the last measured point, empty contour or layer. **Hold** the button to remove the last measured contour (including all the points in that contour).



Point - Line - Contour - Layer

A measurement consists of points, lines, contours and layers.

Point: A point is measured by **clicking** the number 1 button on the remote control or created during editing.

Line: A line is automatically created between two measured points or created during editing.

Contour: A contour can be a large collection of lines but also just a single point. When measuring, contours are defined by **clicking** the number 3 button on the remote control.

Layer: A layer consists of contours. When measuring, layers are defined by **holding** the number 3 button on the remote control.

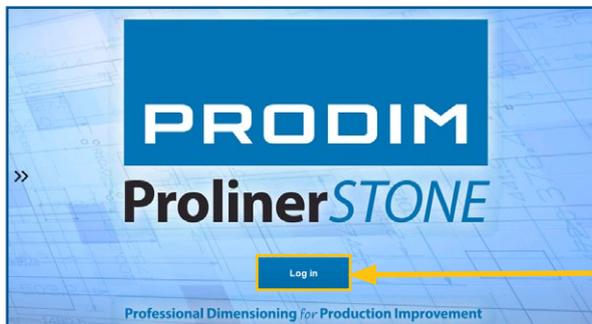
[Watch the video](#)



2.1 Login screen

After starting up the Proliner you will first see the initial loading screen followed by the login screen.

Login screen



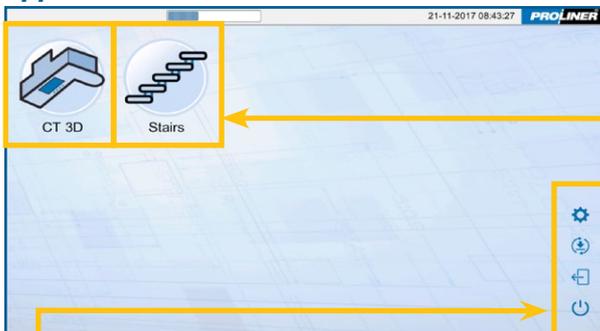
Press the login to proceed to the app screen.

2.2 App screen

SHOWN CONTENT

Depending on your specific Proliner configuration apps, functions and options might be different from the content shown or discussed in this manual.

App screen



The app screen displays main Proliner functions and industry-specific apps that are available to you.

Apps are dedicated to the project that the icon displays. The available functionalities within the app and Proliner measurement settings are tuned to the application for easy and accurate measurement.

Start an app by clicking the icon and continue to the home screen.



Manager

Advanced machine settings, diagnostic and manual software upgrades of the Proliner can be found here. Access it only under Prodim supervision.



Update*

This function enables you to automatically update the Proliner software and licenses via internet. Update procedure:

1. Connect the Proliner to the internet using an Ethernet cable.
2. Push the update button to start the automated update procedure.
3. Follow the on screen instructions.



Logout

Press to return to the login screen and select a different industry.



Shut down

Press to switch off the Proliner. **Recommended to use this button to shut down the Proliner.**

Watch the video



* From Proliner 4.1 onwards there is also the possibility to update via Bluetooth. See Appendix C

2.3 Home screen



Battery indicator



The battery indicator tells you how much power the battery has left. Approximately at 20% battery level left, the alarm signal for the battery life will sound.

Wrench



By clicking the wrench at the top, you will enter the General Settings.

Date and time



Click on it to adjust the date and time.

Proliner logo



When pressing the Proliner logo (upper right corner), the screen will rotate 180°. Enables the operator to see the Proliner screen properly, when the Proliner is positioned on its backside.

Measure

Opens measurement menu.

Open

Open files stored on the Proliner or from an external device.

Transfer

Opens transfer window.

About

Here you will find the serial number and software version of your Proliner and Prodim contact details.

Setup

Opens the general settings. Also accessible at all times by clicking the wrench.

Exit

Exit home screen and go to app screen.

In the bottom left the name is shown to whom the device is licensed. Disclaimer will lead to the agreed user's license agreement.

2.4 General settings

General*

Units

Set units to millimetres or inches.

Language

Select a language from the drop down list.

Flash

Enable to make the screen flash when pressing a button.

VNC

Enable to be able to connect to a network or computer. (note: screen rotation is disabled when VNC is enabled)

Elevation alarms (horizontal and vertical elevation)

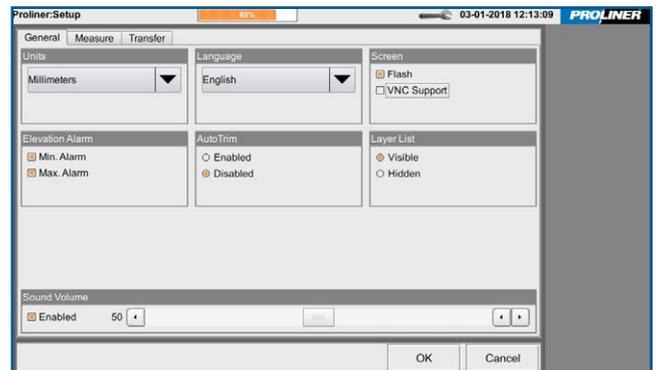
Alarm beeps repeatedly if the angle of the measuring arm approaches the boundaries wherein the Proliner measures at maximum accuracy.

AutoTrim

Enable to be able to auto trim corners when holding the number one button.

LayerList

Enables layer list. Layer list can be shown by clicking >> at the left side of the measure and edit screens.



Measure*

Tolerance

Set the default interpolation tolerance of the Proliner.

Max. Arc Radius

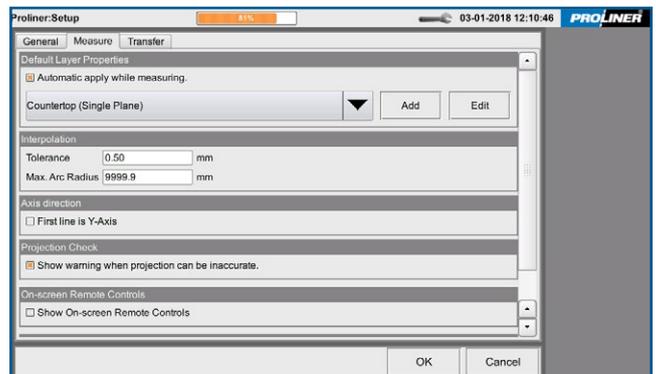
Set the maximum radius of an arc.

Axis Direction

If enabled the first measured line will be the Y-axis instead of the X-axis.

Projection Check

If enabled Proliner shows warning if projection plane might be inaccurate.



Transfer

Here you can select the file formats for your export. In settings you can change the relevant settings for that specific file format.

Transfer is discussed in Chapter 5.

* The Proliner 4.1 and onwards versions feature extra General and Measure settings. See Appendix D

3.1 Proliner set-up

Proliner

Check

It is important to check if you have everything you need, we advice you to always bring:

- o The Proliner measuring device.
- o Charged batteries/power cable.
- o The Proliner remote.
- o Proliner pen/add-on.

Position

When measuring on-site, it is important to choose the ideal position for your Proliner, to:

- Maximize the reach of the machine.
- Minimize problems with obstacles or blind spots.

It is convenient to have the screen of the Proliner facing the object.

Stability

Make sure the Proliner is stable at all times during measuring.

TIP: Mount the Proliner on a tripod for better reach and stability!

Screw mounts can be used to attach the Proliner on a tripod.

They are positioned at the bottom and back side of the Proliner.

Level

The Proliner does not need to be levelled. This applies to all Proliners.

Object/Area to measure

Check

It is wise to check the object/area to measure before actually starting measuring, to identify potential problems or important details to be registered.

Position

It is better to measure close to the Proliner, but not too close to prevent interference with the Proliner case.

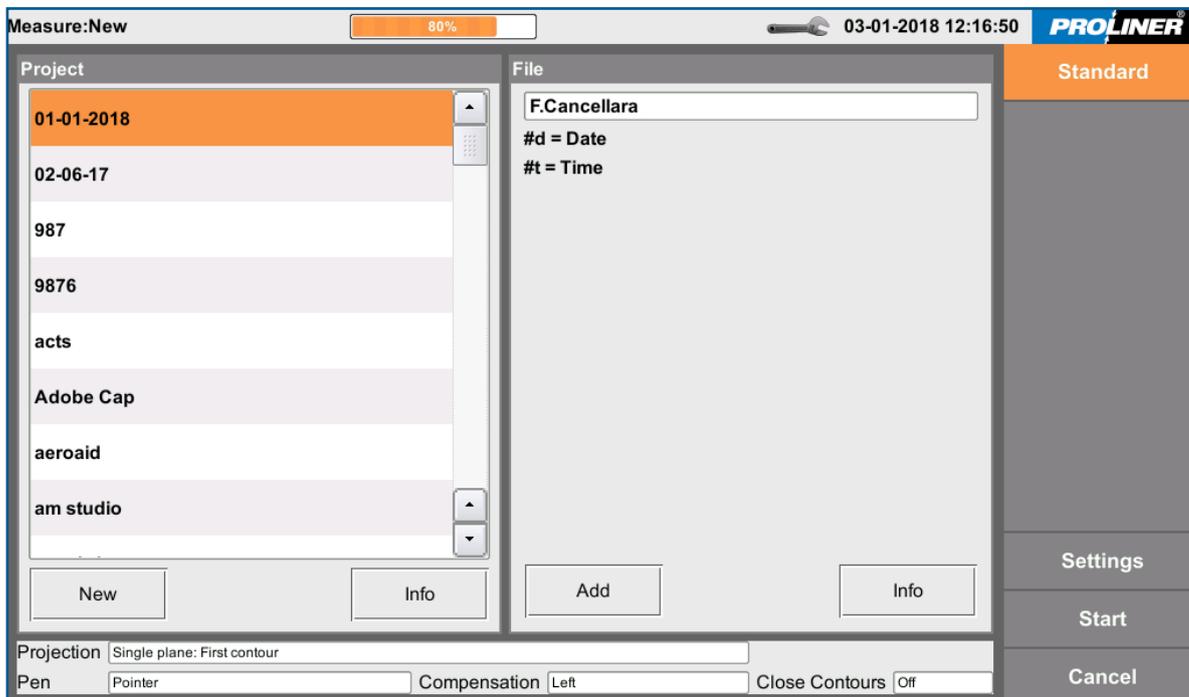
Stability

Make sure the object you want to measure is stable and can't move.

SAFETY

The operator is responsible for his own, and others safety. Make sure: to create a safe work environment; the Proliner is placed stable to prevent falling; you hold on to the pen.

3.2 Starting a measurement



1. Project

You can create a new Project (New) and add information (Info) about the Project, such as date, customers name and address. A Project can exist out of multiple measurements, all these measurements will have the same project information.

2. File (measurement)

You can create a new File (measurement) and add information for that specific measurement, such as material, parts and remarks. A file is part of a Project and will include the Project information and the measurement information.

3. Check (measurement) settings

Before starting the actual measurement, it is important to:

1. **Check** the current settings in the bottom of the screen.
2. If needed to **change** the settings, click on the Settings button on the right side.

4. Start

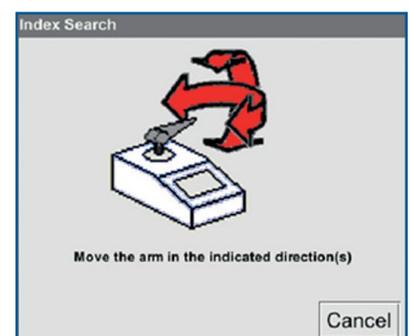
When everything is set, press: START

5. Zero-index

A pop up screen will appear (shown right). It wants you to (zero) index the machine by moving the black measuring arm on the Proliner Up-Down and Left-Right. When finished you are ready to start taking your measurements.

ZERO-INDEX

Hold the measuring arm **and** pen in one hand during the zero-indexing to ensure the measuring wire is completely retracted.



3.3 Measurement settings

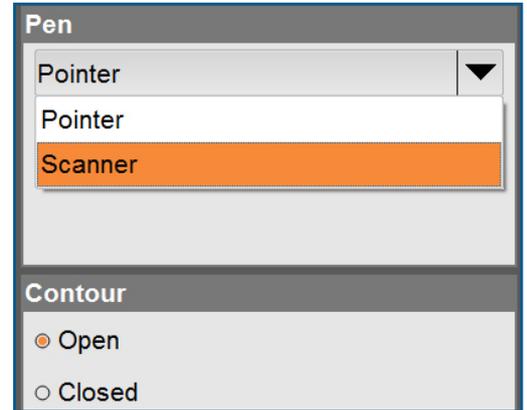
There are 4 measurement settings:

- 1- Pen type
- 2- Contour
- 3- Compensation
- 4- Projection

3.3.1 Pen Type

The operator has to specify which pen or add-on is going to be used. By default there are 2 pens installed on a Proliner:

- Pointer:** to be selected when only the measuring pen is used.
- Scanner:** to be chosen when any scanner add-on is attached to the measuring pen.



3.3.2 Contour

- Open:** the shape is left as measured. (recommended to use)
- Closed:** the program will automatically connect the first and last points measured in a contour.

3.3.3 Compensation

Set the compensation setting, choose either:

- Left:** Compensation is set to left.
- None:** The measurement won't be compensated.
- Right:** Compensation is set to right.

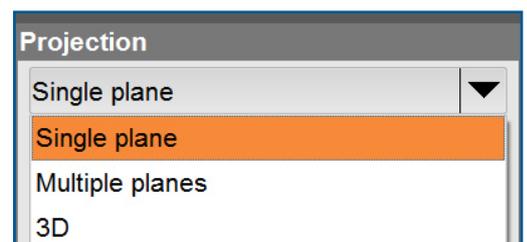


Compensation is explained in Appendix A.

3.3.4 Projection

Set the projection setting, choose either:

- Single plane:** Use one projection plane for the entire measurement.
- Multiple planes:** Use a separate projection plane for each layer in a measurement.
- 3D:** There is no projection in 3D measuring. (only available for Proliner 3D devices)



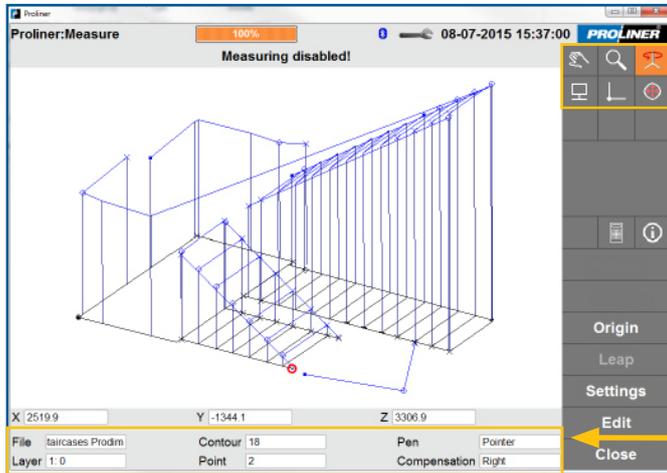
Projection is explained in Appendix B.

Watch the video



3.4 Measuring screen

Measurement screen



Navigation functions and display settings

Active in measuring and editing screen.

Measurement settings

Check your current settings and keep track of the progress of the measurement.

Origin

Allows to set or change the x-axis of the drawing. Aligns the measurement on the screen.
To Use: Select two points that will define the direction of the X-axis.

Leap

Opens Leap menu. Leap is explained in chapter 3.7

Settings

Opens measurement settings. Check or change settings before, during or after the measurement.

Edit

Go to the Edit screen.

Close

Close the measurement screen and return to the home screen.
The Proliner will ask to save any unsaved progress.

3.5 Navigation functions



Pan - Move the measurement by pressing on the screen and moving it around.



Zoom - Zoom in by moving down on the screen and zoom out by moving up.



Rotate - Rotate the measurement by pressing the screen and moving around.



Top view - The measurement will be shown on top view for the selected layer.
Using the origin of the selected layer to align.



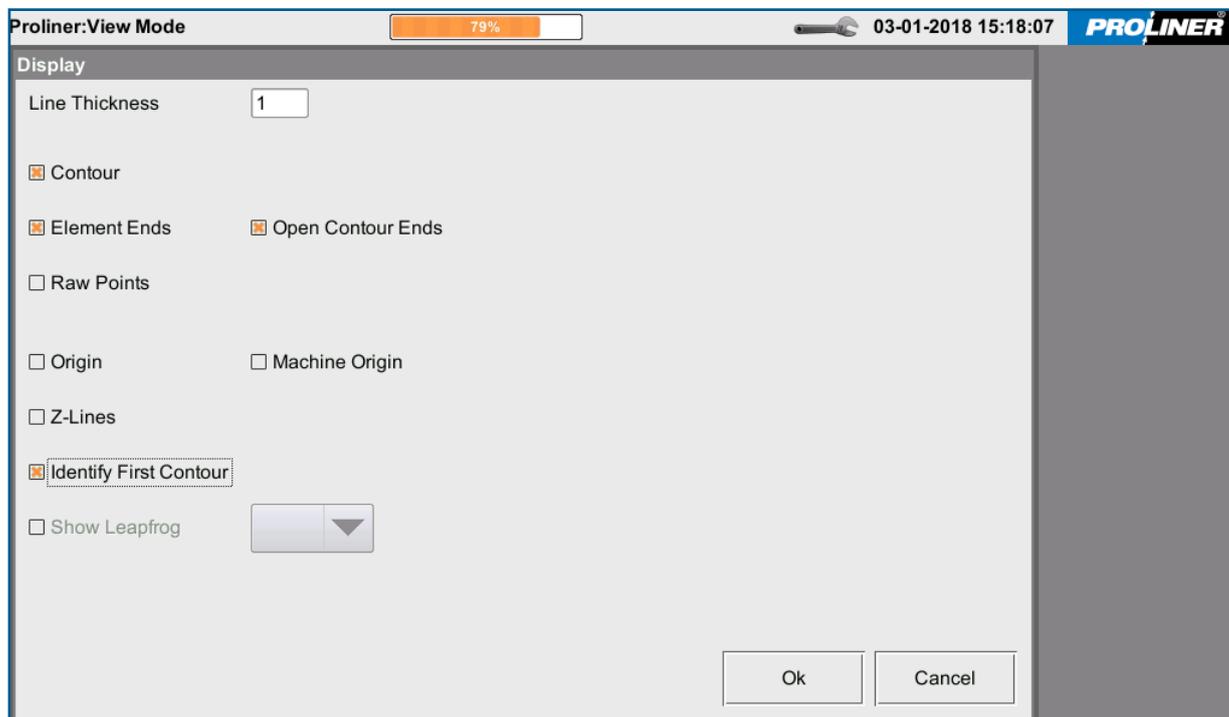
View all - Shows the measurement exactly fitted on the screen.



Display settings - Various settings for what is displayed - see next page



3.6 Display settings



Display settings only changes the way the measurement is displayed on the screen. It won't change the measurement itself!

- Line Thickness** Change the line thickness on screen.
- Contour** Shows the compensated measured contour.
- Element Ends** Shows the end of every element.
- Open Contour Ends** Shows if a contour isn't closed.
- Raw Points** Shows the raw 3D points, which are not interpolated or compensated.
- Origin** Shows the first measured point of the drawing. Used to align the measurement or as a baseline for some draw functions.
- Machine Origin** Shows the position of the Proliner during the measurement.
- Z-Lines** Shows height-lines between the Raw Points and the 2D Contour.
- Identify First Contour** Shows you the first contour as a light grey dashed line.
- Show Leapfrog** Shows the points taken for a leapfrog measurement (when present).

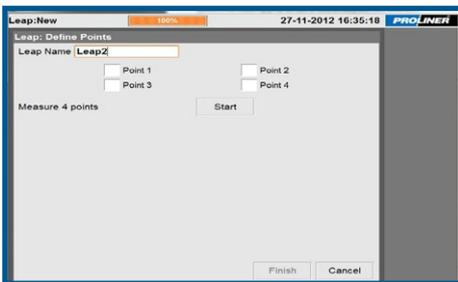
3.7 Leap (repositioning)

The Proliner leap function has been developed to give users an unlimited reach for measuring large objects and surfaces as well as for measurements that cannot be completed from a single Proliner position. Special leap-pods are used to serve as reference points and to be able to connect measurements.

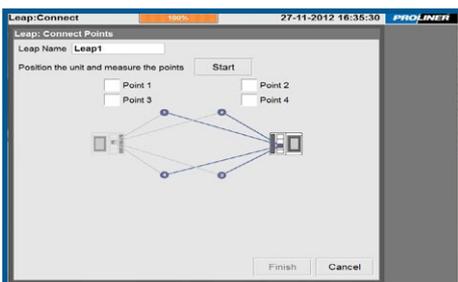
You are able to create a leap at any moment by clicking LEAP in the measurement menu. Proliner will ask you to capture the position of the 4 pods.

Note that the pods and the Proliner are always positioned in a stable position and:

1. Pods are not to be placed close to each other;
2. Pods are not to be placed in a single line;
3. Pods are not to be placed in a symmetrical shape.



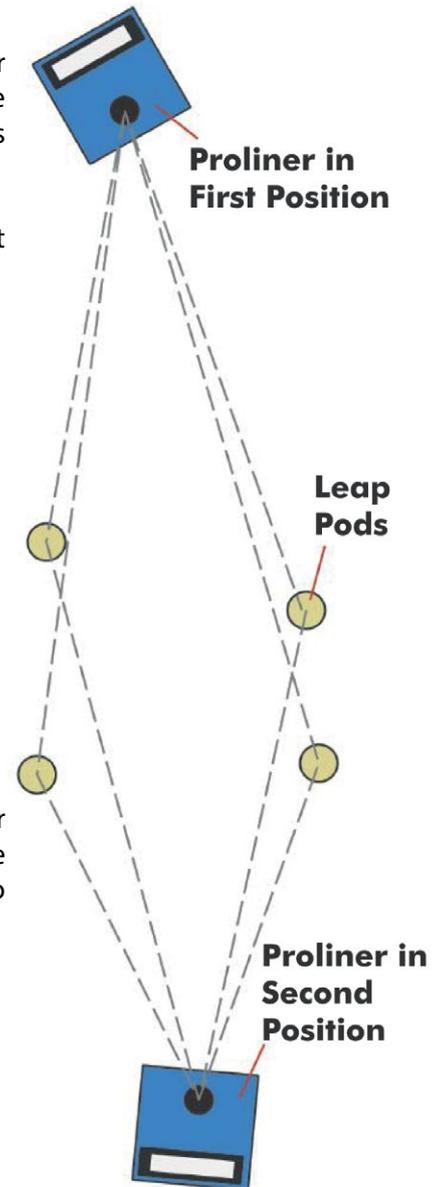
After the position of the 4 pods have been recorded, you can move the Proliner to its new position. At the new position, the Proliner will ask you to capture the position of the pods again (the order you record the 4 points is NOT important) to accurately determine its own new position.



You can now continue with the measurement. These steps can be repeated as often as necessary. There is no limit to the number of times you can leap. However your accuracy might suffer from a large number of leaps.

TIP: Markings instead of pods!

If it is not possible to place pods (on a wall for example) you can make your own markings to serve as one of more leap reference points.



[Watch the video](#)



3.8 Measuring in 5 steps

The measurement of a kitchen counter top serves as an example for a quick measurement in 5 steps:



STEP 1 - POSITIONING

Ensure that the Proliner is fixated and placed in a stable position and all measuring points can be reached.



STEP 2 - PROJECTION PLANE

We are using first contour projection for this project. *Determine the projection plane by measuring at least three points in the first contour.*



STEP 3 - MEASURE THE OUTSIDE CONTOUR

Measure the wall and the outer rim of the kitchen block. *Measure the situation outside the counter top to determine the required off set to align the counter top perfectly with the wall.*



STEP 4 - MEASURE THE INNER CONTOUR

Measure cabinets, cut-outs, sinks, cranes and all other data required.



STEP 5 - THE FILE

Edit the drawing, make notes and export your measurement as DXF.

[Watch the video](#)



4.1 Checking settings

HIDDEN MENUS

Anytime a button has a white triangle in the lower left hand corner, that button has a drop down menu featuring more commands. To access the menu, push and hold the button.



Projection

Projection

Projection

Selecting this function will allow you to change the projection settings on your Proliner. This is not often changed during editing because projection settings are set at the start of the measurement. *Projection is discussed in Appendix B.*

Compensation

Compensation

This function will allow you to change your compensation. Enable raw points to check the compensation. Compensation can be changed for a contour, layer or the entire measurement. *Compensation is discussed in Appendix A.*

Tolerance

Tolerance

Selecting this function will allow you to change the interpolation tolerance. Changing the tolerance may result in less accurate drawings and a different number of shown measured points.

Origin

Origin

This function will allow you to set or change the x-axis of the drawing. The origin is used to align the drawing for easier editing and exporting and as a baseline for some drawing functions. To Use: Select two points that will define the direction of the X-axis.

It is recommendable to check your measurement settings before starting editing. Compensation mistakes can be fixed during editing, mistakes concerning Projection may lead to remeasuring the project.

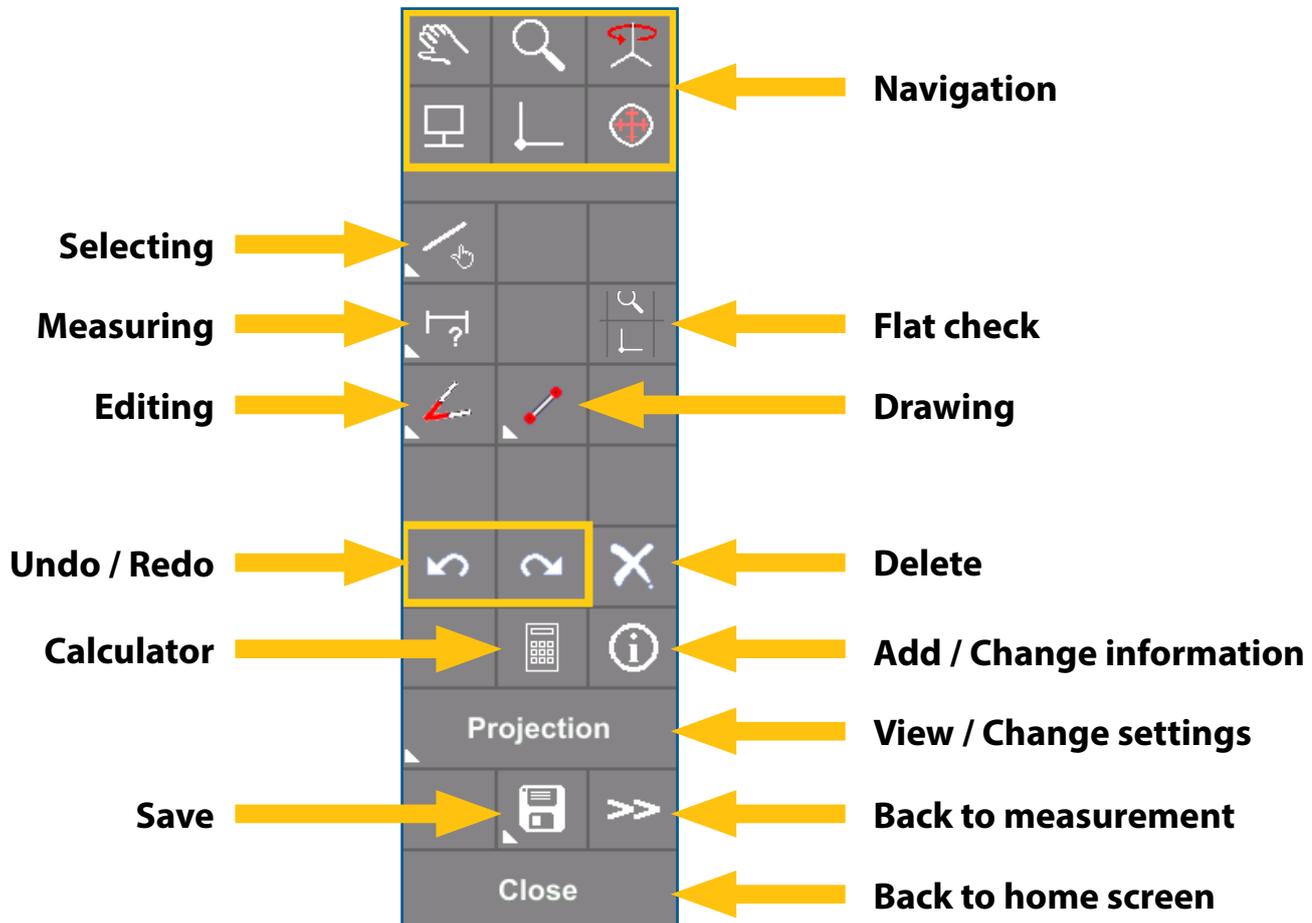
Enable raw points (display settings) to check your compensation and if needed change the compensation. Click compensation, select the wrongly measured segment and change compensation from left to right, right to left or remove the compensation.

CHECK BEFORE EDITING!

We advice to only start the editing of the measurement once it has been fully completed and the measurement settings have been checked.

4.2 Edit menu

Editing and checking measurement with on-board tools.



- 
Undo / Redo  *Go a step back or forward in your editing, multiple undo's are possible.*
 To use: Click to undo or redo.
- 
Delete  *Delete single or multiple lines.*
 To use: Select the elements you want to delete and press the delete button.
- 
Calculator  *Make a calculation during editing.*
 To use: Select calculator and enter values.
- 
Information  *Add or edit the measurement information.*
 To use: Select information button and enter the required information in the text fields.
- 
Save  *Save your progress.*
 To use: Select save, save as or save selection function.
- 
Back  *Go back to the measurement.*
 To use: Press button, zero-index the machine and continue your measurement.

Important! If continuing a measurement, make sure both the Proliner and object haven't been moved in the meanwhile. Some of your editing progress might be lost if continuing a measurement.

4.3 Selection functions

The buttons in the “selection tools group” are used to select single or multiple elements. The selection is highlighted in red. Deselect by clicking the selection or clicking ‘clear’ at the bottom of the screen.

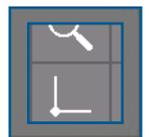
-  **Select line**  Touch a single line to select it, touch a selected line to deselect it.
-  **Select drag box**  Drag a box, every element that’s entirely within the drag box will be selected.
-  **Select contour**  Touch a line from the contour to select the complete contour at once.
-  **Select layer**  Touch a line from the layer to select the complete layer at once.



4.4 Measuring functions

Buttons in the measuring group are used to verify accuracy and check dimensions. The measurement data will be displayed in the grey toolbar at the bottom of the screen.

-  **Measure line**  Finds measurements of straight lines or linear distances.
To Use: Touch first point and touch the second point.
Left to right: horizontal, vertical, and point to point measuring.
-  **Find Radius**  Finds the radius of an arc.
To Use: Touch an arc.
-  **Measure Angle**  Lets you measure angles.
To Use: Select the first line of the angle. Select another line of the angle.
-  **Measure Layer Angle**  Lets you measure the angular difference between two layers.
To Use: Select a point on the first layer. Select a point on the second layer.
-  **Measure Chain**  Measures the total length of the selected (continuous) lines.
To Use: Select line to begin and select line to end chain measurement.
Keep in mind the lines need to be measured in one contour to be able to use ‘measure chain’.
-  **Measure Area**  Gives you the square inches of any closed shape on a single layer.
To Use: Touch a closed contour.
-  **Measure Z-Lines**  Gives the length of the Z-lines. Shows the distance between actual points gathered and projected points on the layer.
To Use: Selecting the tool activates the z-lines. Touch a z-line to measure the Z-Lines.
-  **Flat check**  Compares the z-values of all points selected. Can be used to check the flatness of a surface.
To Use: Selecting the tool activates the z-lines. Select at least three points and press ‘view’ in the bottom of the screen. View and export the z-values of all selected points, standard deviation, average and maximum.



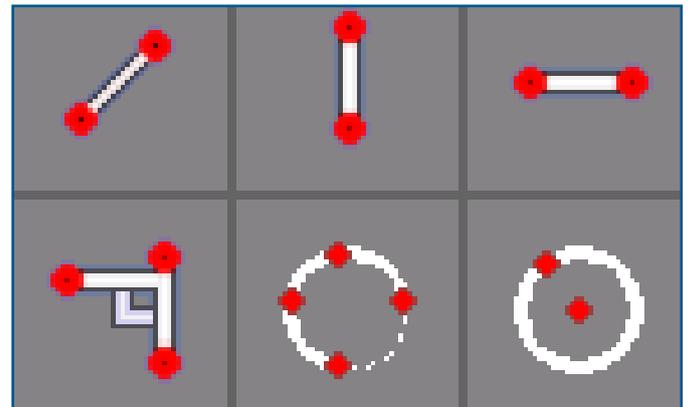
4.5 Editing functions

Buttons in the editing group all make changes to measured lines. This includes trimming, joining, splitting and offsetting.

- 
-  **Trim** 
Extends lines to their intersection and it trims off any extras.
To Use: Touch the end of the first line and touch the end of the second line.
 -  **Fillet** 
Rounds corners to a specific radius.
To Use: Touch the end of the first line and touch the end of the second line. Radius can be changed in the box at the bottom of the screen.
 -  **Tangential** 
Create a perfect tangent to connect the elements.
To Use: Touch the contour point that you want to make tangential. You can set the maximum deviation in the box at the bottom of the screen.
 -  **Split element** 
Splits a line evenly using the number of specified points.
To Use: First determine the number of points you need and enter it into the box at the bottom of the screen. Touch the line you want to add the points to.
 -  **Split from point** 
Splits a line using one point set to a specific distance.
To Use: First determine the distance you want to offset the point and enter it into the box at the bottom of the screen. Touch the line near the end you want to offset the point.
 -  **Break on intersect** 
Uses the intersection of two lines to break one line into two line segments.
To Use: Select the line you want to break, then select the line you want to break it with.
 -  **Offset** 
Offsets lines with a specific distance.
To Use: Touch near the line you want to offset, on the side and the direction you want the offset line. Touch again on the side you want to offset. Distance can be changed in the box at the bottom of the screen. To keep the old line, check the box in the grey menu at the bottom of screen.
 -  **Extend line** 
Extends one line so that it will intersect with another line.
To Use: Select the line you want to extend, then select the line you want to extend to.
 -  **Modify radius** 
Change the radius of an arc.
To Use: Select an arced element, enter the new value for the selected radius.
 -  **Assign colour** 
Assign a colour to elements.
To Use: Select the elements you would like to colour, select the colour.
 -  **Layer name** 
Uses to change or add the name of a layer.
To Use: Select a layer and enter name.

4.6 Drawing functions

Buttons in the drawing group all create new geometry. This includes drawing lines, arcs, circles, rectangles and angles.



Line

Draws lines: (from left to right) point to point, vertical or horizontal.

To Use: Select a point where you want the point to start. Select the point where you want the line to end. In horizontal and vertical settings lines will snap to the correct axis. The axis is based on the placement of the ORIGIN in the drawing.



Perpendicular line

Draws a line perpendicular to the selected line.

To Use: Select the start point of your line. Select the line your point is on. Select the line you want the new line to extend to.



Draw line at angle

Draws a line at a relative angle.

To Use: Enter the angle in the grey toolbar at the bottom. Select a line to use as a reference. Select a point on that line to act as a start point. Select the side of the line you want the angle to appear on.



Level line (Only available for Proliners with an inclinometer)

Draw a line on a drawing that shows a level reference.

To Use: Select a start point. Select an end point. The line will be drawn in level to the "ground" in relation to the rest of the drawing.



3 Point arc or circle

Draws a circle through selected (at least 3) points.

To Use: Select the start point of the arc. Select the end point of the arc. Select at least one point on the middle of the arc. Select draw centre to draw the centre of the circle. Select new contour to make the drawn circle a new contour. When finished select Apply.



2 Point Circle

Uses 2 points to create a circle (centre, radius).

To Use: Select the point to be used as a midpoint. Select the point to be used as end of the radius or enter the radius in the box in the grey toolbar.

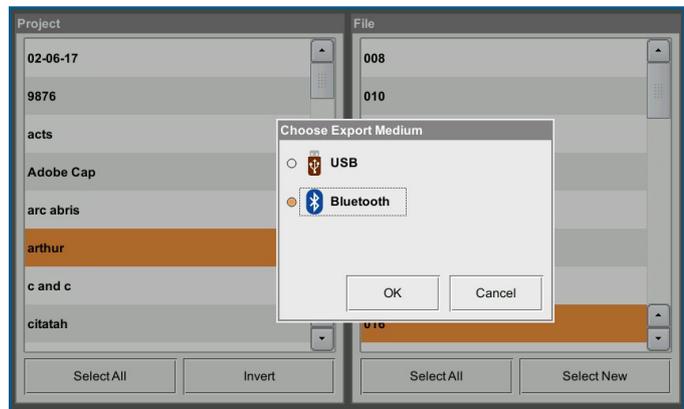
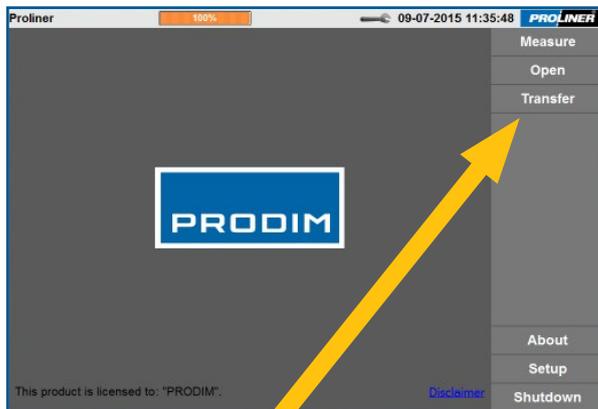


External Rectangle

Draws a minimum rectangle around the selected contour specific dimensions.

To Use: Select elements and it automatically draws a minimal external box around it.

5.1 Transfer Screen



Transferring

You can browse the Proliner memory and choose files to be transferred via USB or via Bluetooth.



5.2 Transfer Output

The most common outputs are :

MEASUREMENT

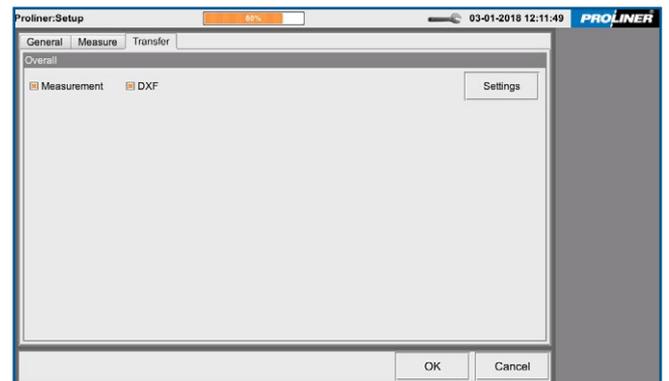
Format: PRL8

The PRL8 file is the original measurement file created by the Proliner.

DXF

Format: DXF

The DXF file is an output of the measurement. DXF is compatible with third party software and machinery (CNC).



5.3 Transfer settings

DXF

OUTPUT

Contours: Interpolated black lines

Raw Lines: original 3D entities

Machine Origin: Proliner position

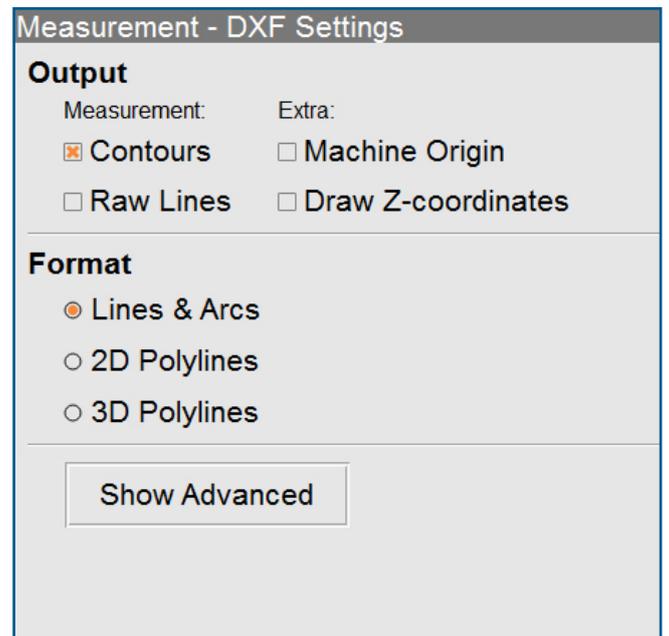
Z-lines : projections lines (from 3D to 2D)

Level-symbol : water-leveled plane

(only available for Proliners with an inclinometer)

FORMAT

You can opt between different DXF formats.



5.4.1 Transfer via USB

1. Insert USB pen drive in one of the two USB portals on the Proliner.
2. Go to the transfer screen.
3. Select the files you want to transfer.
4. Choose **USB** as transfer medium.
5. Press Transfer and wait until the progress bar shows 100% progress and the beep of the Proliner.

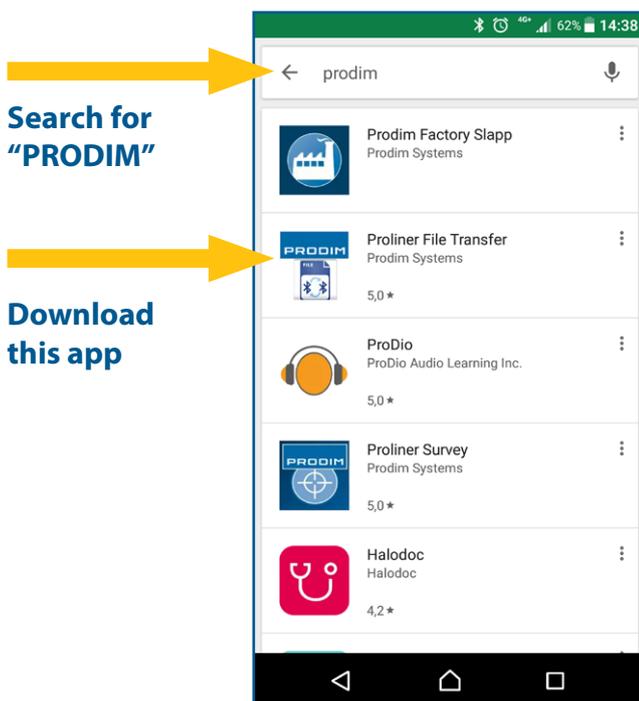
5.4.2 Transfer via Bluetooth

Follow these steps to transfer files from the Proliner to an Android device with Bluetooth:

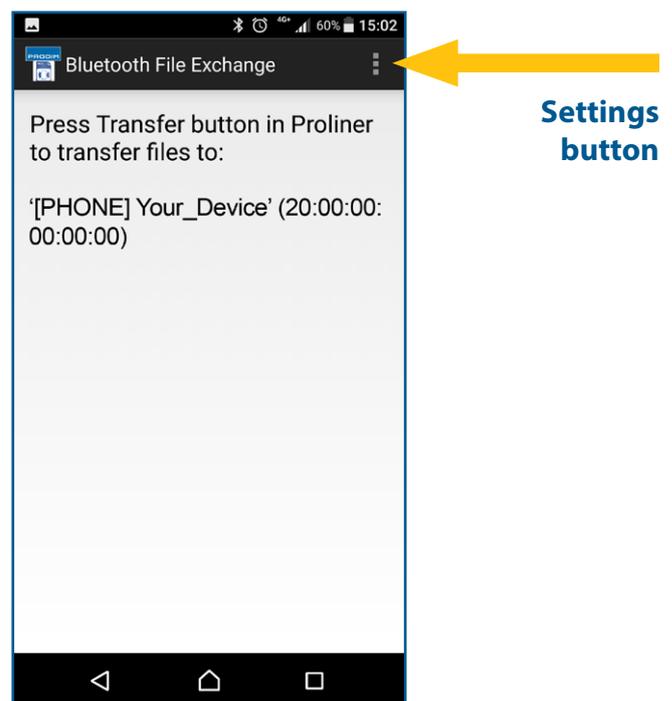
1. Go to the Google Play Store (*Android*) and type "Prodim" in the search functionality. Download and install the **Proliner file transfer** app.
2. Make sure the Bluetooth dongle is inserted in one of the USB portals of the Proliner.
3. Go to the transfer screen.
4. Select the files you want to transfer.
5. Choose **Bluetooth** as transfer medium.
6. Open the **Proliner file transfer** app on your device.
7. Connect your device to the Proliner.
8. Press Transfer button on the Proliner to download the files to your device.

Tip! You can change the download folder on your device using the **Settings** button in the app.

Watch the video



Proliner file transfer app



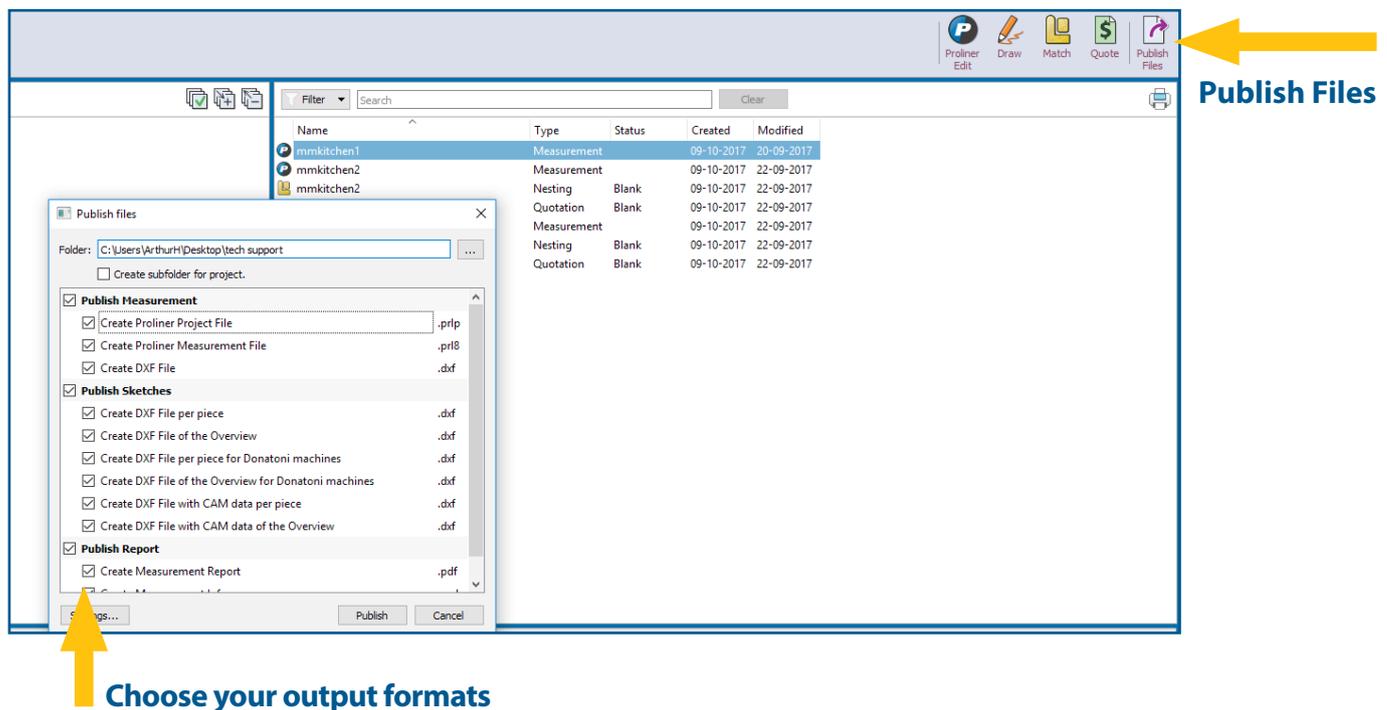
Connect your device

5.5 Machine specific output settings

Output files for machinery

To ensure the best compatibility, Prodim has created dedicated DXF-output formats for some CNC machinery brands. (i.e. INTERMAC, BIESSE, DONATONI, GMM)

It's recommended to create these dedicated DXF output files by importing Proliner measurement files into Prodim Factory desktop software and select the preferred output format within the "Publish" function. Although it's recommended to use Factory, it's possible to use the Proliner export function as well.



5.6 Measurement support

In case any technical support regarding a measured project or a file Prodim will ask you to send the 'Measurement' and 'DXF' file to helpdesk@prodim-systems.com or helpdesk@prodimusa.com.

6. Register

A.	<u>Alarms</u>	5	O.	<u>Origin</u>	18
B.	<u>Bluetooth</u>	24	P.	<u>Projection</u>	30
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	<u>Contour</u>	7		<u>Remote control</u>	7
				<u>Rotate screen</u>	9
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E.	<u>Editing</u>	18	T.	<u>Tolerance</u>	18
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	<u>Leap</u>	16		<u>USB</u>	24
	<u>License</u>	8	V.	<u>VNC</u>	10
M.	<u>Maintenance</u>	5			
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	<u>Measurement settings</u>	13			

**For questions, feedback or support,
please contact Prodim.**

Check our website for more information:

www.prodim-systems.com

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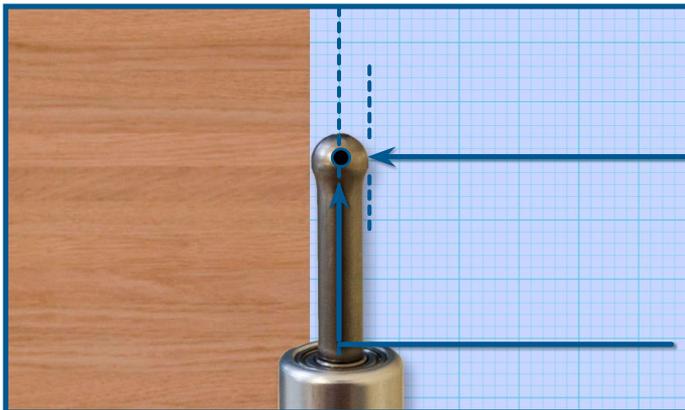
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TRAINING ADVISED

This appendix is in no way a substitute for the Proliner Training.
It can help you though understanding some measuring concepts used by the Proliner.

A.1 Compensation

The measuring pen captures points from the absolute centre of the pen tip (raw points). During a measurement, the object is touched with the outside of the pen tip. Due to the thickness of the pen tip (5 mm diameter), there is a difference of 2.5mm (radius) between the object that you are measuring and what the Proliner pen captures. This can be corrected automatically using the compensation setting, or during editing afterwards.



Difference of 2.5mm between the centre of the pen tip (radius) and the object

The centre of the pen tip

A.2 Compensation settings

Compensation can be selected before and during a measurement in the measurement settings.

Choosing left or right compensation, will make the measurement off set automatically 2.5 mm in that direction.

Depending on the choice for either left or right compensation, you have to measure in a specific direction.

Choosing none will keep the data as recorded. The measurement will differ 2.5 mm from reality.

When using some add-ons compensation has to be set to none. Toucher, Papertracer, IPT or LASER are add-ons that don't capture the points in the centre of a sphere and therefore measurement don't need compensation.



ATTENTION!

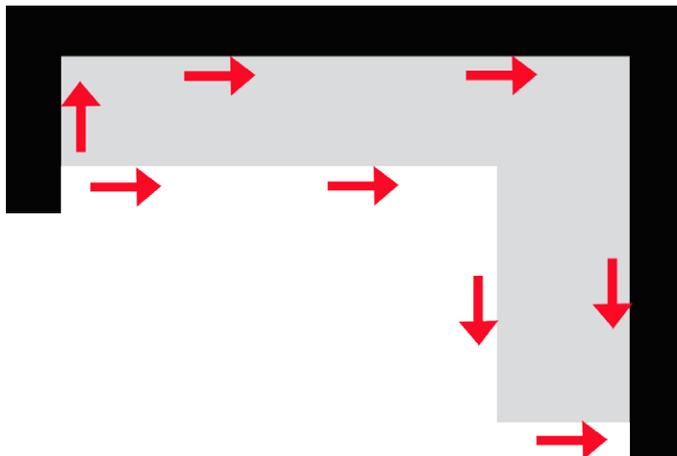
If you change pen type (settings), you might have to adjust the compensation as well! In case of using paper tracer, toucher, IPT or Prodim laser you have to set compensation to none. When using one of these add-ons you are already measuring the exact point, therefore compensation is redundant.

[Watch the video](#)

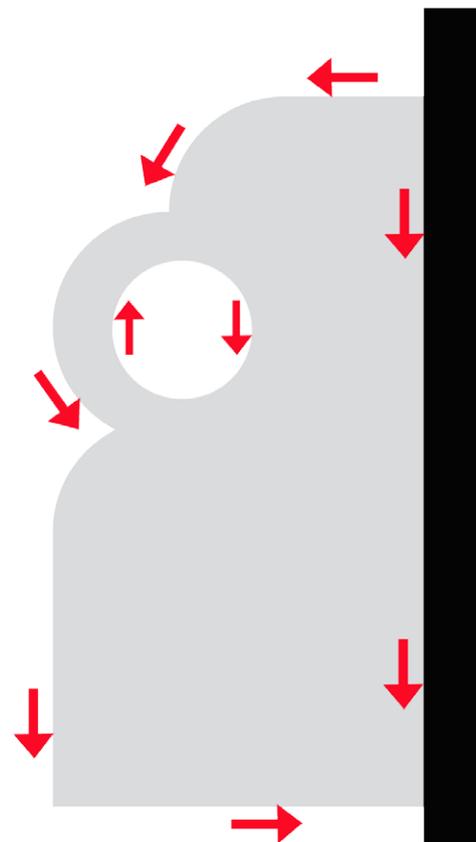
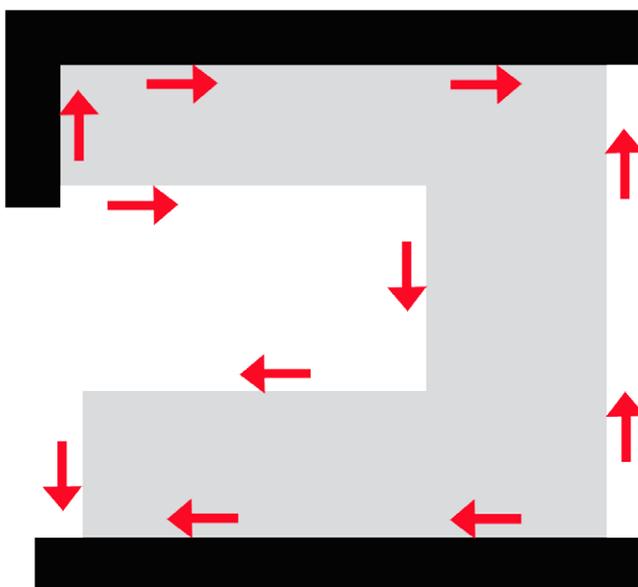


A.3 Example: Measuring a counter top

When measuring a counter top and using **left** compensation you have to measure in the direction shown by the red arrows below.

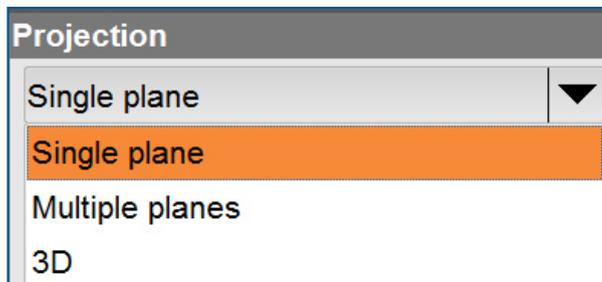


Compensation: left!



B.1 Projection settings

The Proliner measures in 3D. In order to create an output that is easier to process, the 3D points have to be projected on a, or multiple, 2D planes.



SHOWN CONTENT

Depending on your specific Proliner configuration some shown or discussed functions and options might not be available in your Proliner Solution.

1- SINGLE PLANE

A single plane for the whole file. All points measured will be projected on that plane.

Examples: Counter top, Wall, Shutter, Window.

2- MULTIPLE PLANES :

Multiple planes are possible. Each layer is a different plane.

Examples: Counter top and Splash back, Shower, Upholstery.

3- 3D

In 3D there is no projection. (Only available for full 3D Proliner devices.)

A plane in the Proliner can be created based on:

1- AVERAGE

Projection on a automatically generated plane, so without specifying it.

Can be used if all measured points can be recorded at the same height.

Example: Templates.

2- FIRST CONTOUR

Projection plane is defined based on all points (at least three) measured in the first contour. If using Multiple planes you have to define your projection plane for each plane in the first contour of each layer.

Examples: Counter top, Stairs.

EXTRAS

Only available for Proliners with an inclinometer. The inclinometer makes it possible to create a horizontal or vertical projection plane.

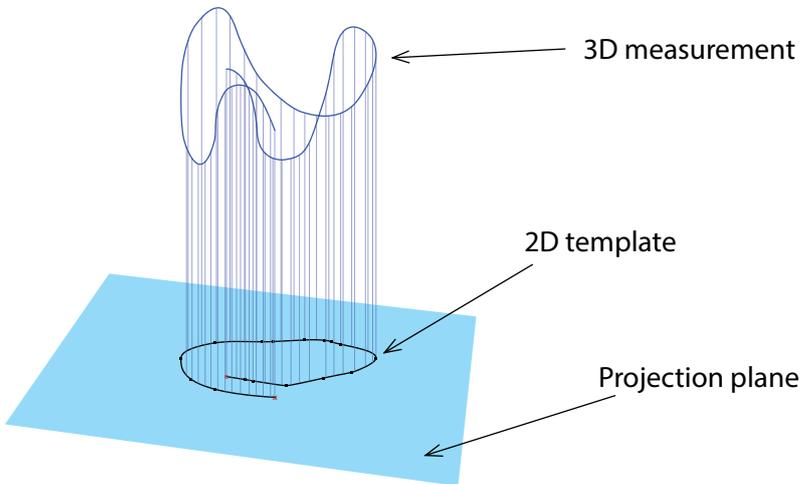
HORIZONTAL

All points measured are projected on a horizontal 2D plane defined with the first point measured.

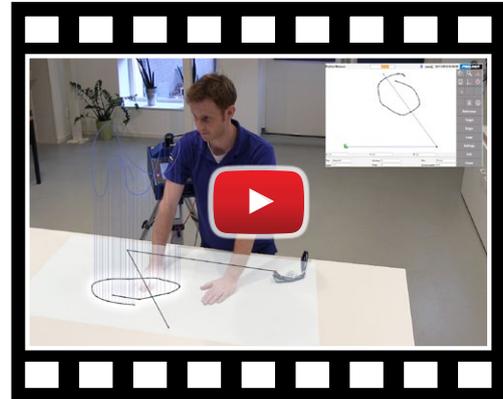
VERTICAL

All points measured are projected on a vertical 2D plane defined with the first point measured.

B.2 Example

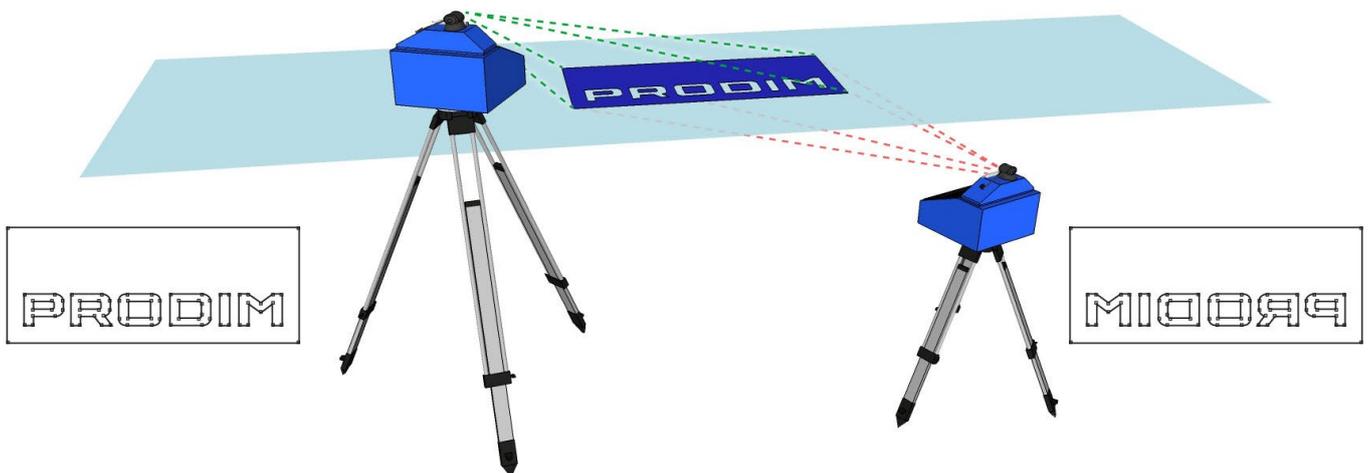


Watch the video



The drawing above is an excessive example to help explain what the Proliner software actually does.

On the right side there is a picture of a kitchen counter top. This top looks fairly flat, but isn't in practice, thus 3D. Therefore, you will always need to determine the 2D projection plane in your first contour. The determined 2D projection plane used for measuring the counter top is shown in light blue.



Watch the video



TIP: Position the Proliner significantly higher as the measurement object!

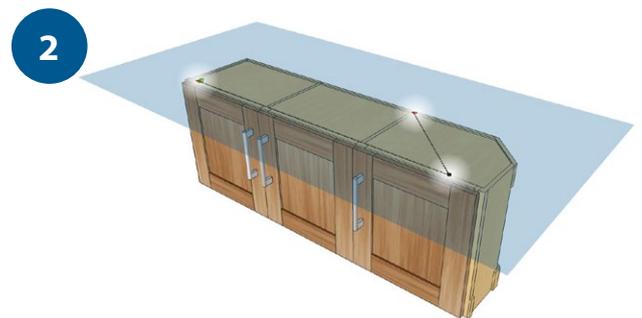
If possible, try to place the Proliner clearly above the projection plane. This way you get a drawing projected on the top of your projection plane. If the projection plane is positioned higher than the Proliner, you are likely to mirror your measurement.

B.3 First Contour projection

1 A plane is any flat, two dimensional surface. A minimum of three points must be taken to define a plane. All points measured will be projected to that plane. Press the (•••) button on the Proliner remote to create a new contour.



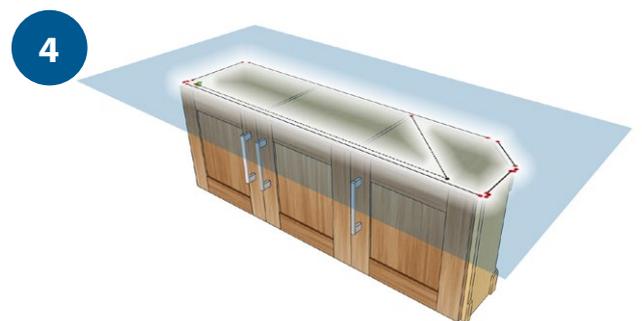
2 Once established the projection plane and created a new contour, the edges of this plane are infinitely projected outwards. This is the 2D surface that future points will be projected to.



3 You are now ready to actually measure. It does not matter if you record points above, below or on the plane, all the points will be 'projected' perpendicular onto the plane.

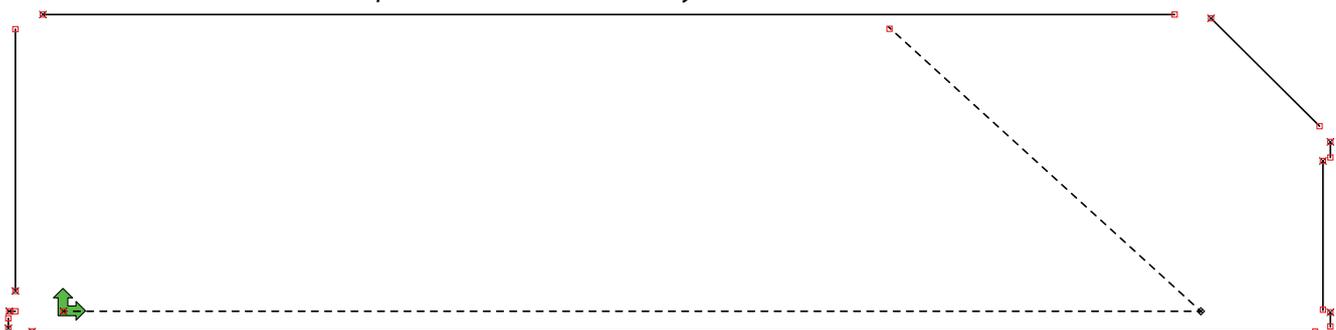


4 The points are on a single plane allowing the data to be transferred for 2D production. Examples: Procutter, Plotter, CNC.



Planes can be set at any angle.
Keep in mind if measuring a flat (2D) object,
the projection plane should be flat as well.

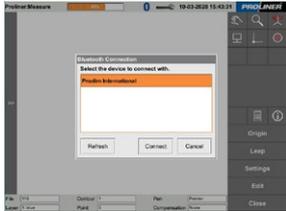
The measurement in this example would look like this on your Proliner screen:



New functionalities in Proliner 4.1 onwards

Automatic update via Bluetooth

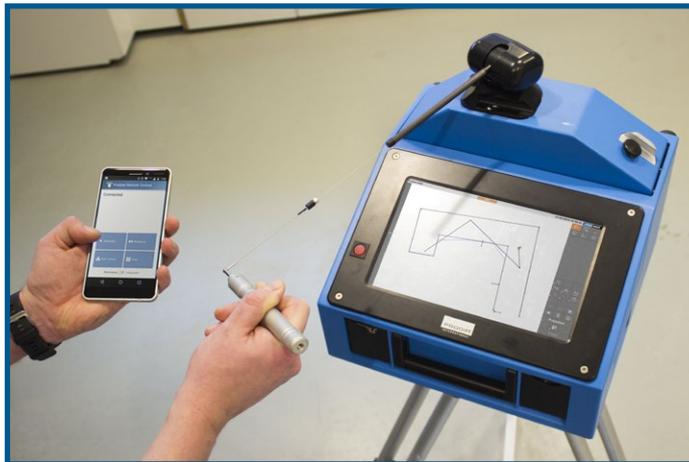
This function enables you to automatically update the Proliner software and license via internet using an Android device and Bluetooth.



Remote App

Your Android device can now also be used as Remote Control for your Proliner.

To use: Download and install the Proliner Remote Control App from the Google Play Store



[Click to download](#)

Start the application

Start a new measurement on the Proliner.

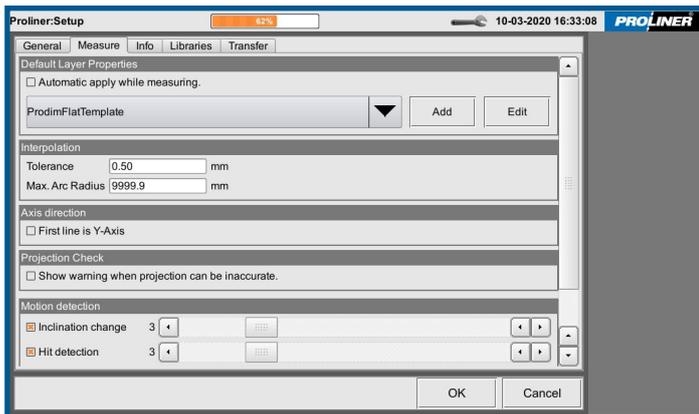
After performing the index-search click on the Bluetooth logo icon  in the top of the screen.

In the connection menu search for your device and press connect to pair to your device.

New functionalities in Proliner 4.2 onwards

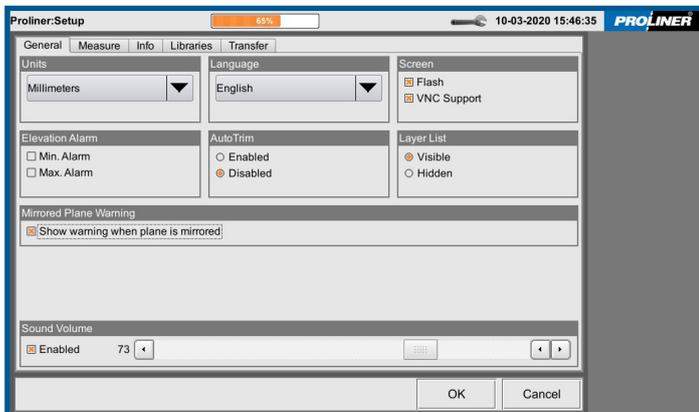
Motion Detection

The Motion Detection function can warn you whenever your Proliner moves during a measurement. The Inclination change will warn you when the angle of the Proliner changes during measuring. The Hit detection will warn you when the Proliner detects a shock during measuring. Sensitivity can be adjusted where 1 is less sensitive and 10 is maximum sensitive.



Mirrored Plane Warning

Mirrored Plane Warning will show a warning when your plane might be mirrored. The check will be showed once entering the EDIT mode.



Content

The manual might discuss or show content that is not available for your acquired Proliner configuration. The content of this manual may change without notice. Any submission regarding this content can be send to helpdesk@prodim-systems.com.

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