



YCMEAS Scan Installation and Use Manual

YCMEAS(Beijing) Technology Co., Ltd

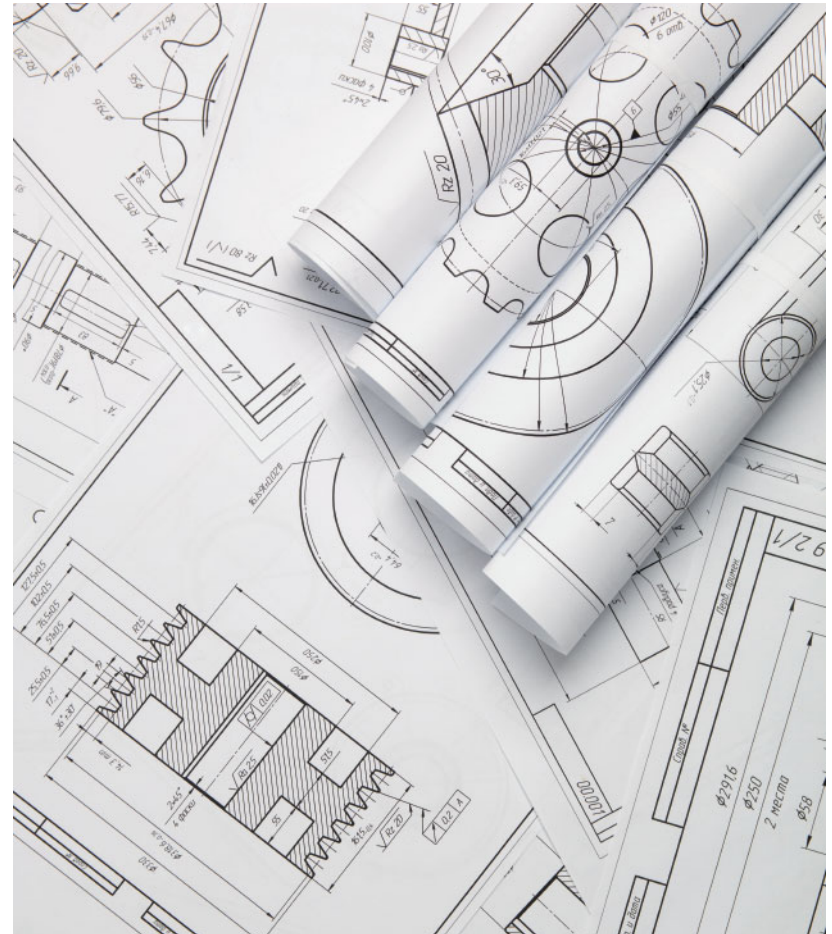


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Overview

- This system assists in the auxiliary design for planar measurement and processing. It operates on the Android system platform, utilizing a self-developed 360° scanning pan-tilt, an Android tablet or smartphone, and a supporting tripod. The system employs a laser rotary scanning method to construct closed planes; annotates dimensions for each side in millimeters (mm), allows manual modification to inches; features for backslash and apron (underside overhang) can be highlighted with color, with automatic length calculation. Drawing values can be modified as needed. Basic parameters are entered manually. Cutout shapes include Circle, Rectangle, and Ellipse, with data input manually. The system exports DXF format files for compatibility with customer CAD software.
- The software interface defaults to landscape orientation, optimized for 7-inch tablets or Android smartphones. Each machine is activated with a unique registration code.
- Compatible Platforms: Android 7.0 and above, including HarmonyOS. (System RAM 6GB or above required)
- Preparation: Assemble the equipment by mounting the pan-tilt onto the tripod and extending the legs. Enable Bluetooth on your tablet or phone, launch the software, and connect to the device. Once the green indicator light illuminates, level the machine.
- Optical measuring instruments have specific requirements for reflective surfaces and angles. Surfaces should ideally be white and diffuse. For dark walls, dark patterned walls, semi-translucent natural marble, or glossy tiles, apply masking tape before scanning. Position the equipment to best accommodate the tilt angles of all walls to be measured.



Device connection

1. Take out the device and turn it on.

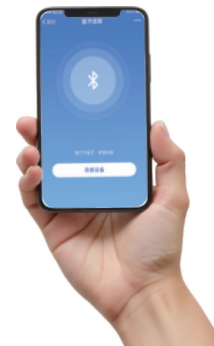


Switch

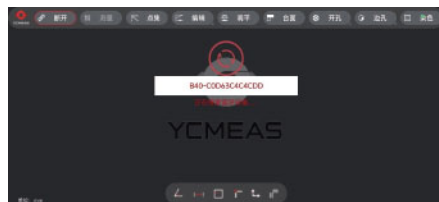
2. Mount it onto the tripod and extend the legs.



3. Enable Bluetooth on your tablet or smartphone.



4. Launch the software and connect to the device.

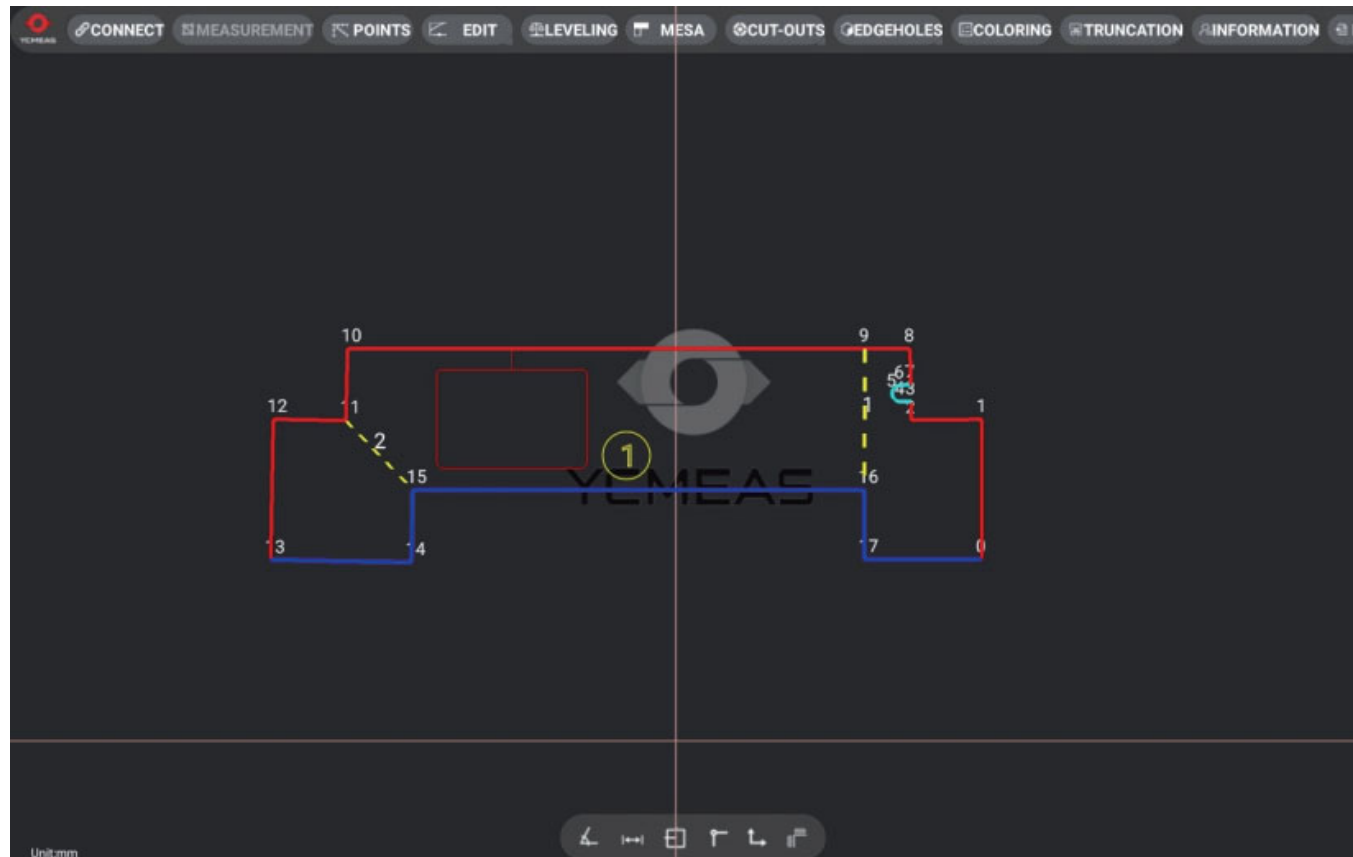


5. After the green indicator illuminates, level the device.



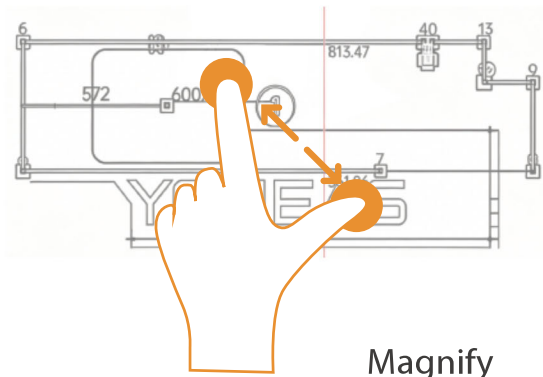
Software initial interface

The initial interface is as follows: Connect, Measure, Points, Edit (Add Angle, Add Point, Width, Scale, Patch, Smooth, Arc, Delete, Splice, Mirror, Pixelspace), Level, Mesa, Cutout (Round Hole, Elliptical Hole, Rectangular Hole), Edge Hole (Rectangle, U-Shape), Options, Truncation, Info, Export DXF, File (Open, Save, Delete), Undo, About/Copyright Info. The current unit (mm or inch) is displayed in the bottom left corner.

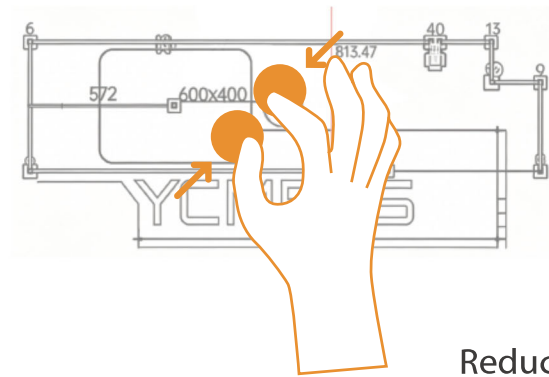


Interface Function

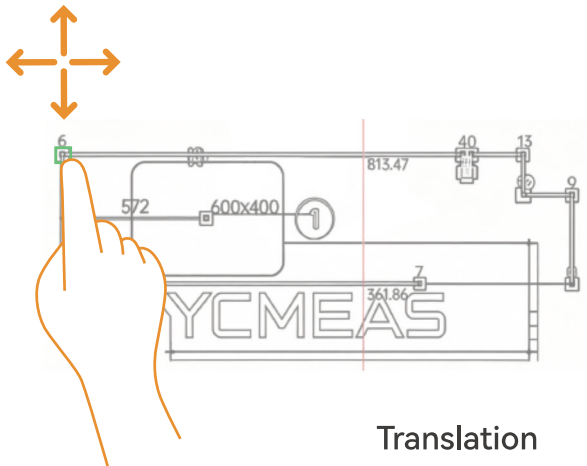
Use a two-finger pinch to zoom the drawing in or out. Drag the central label with a single finger to move it. Swipe horizontally to navigate the top menu.



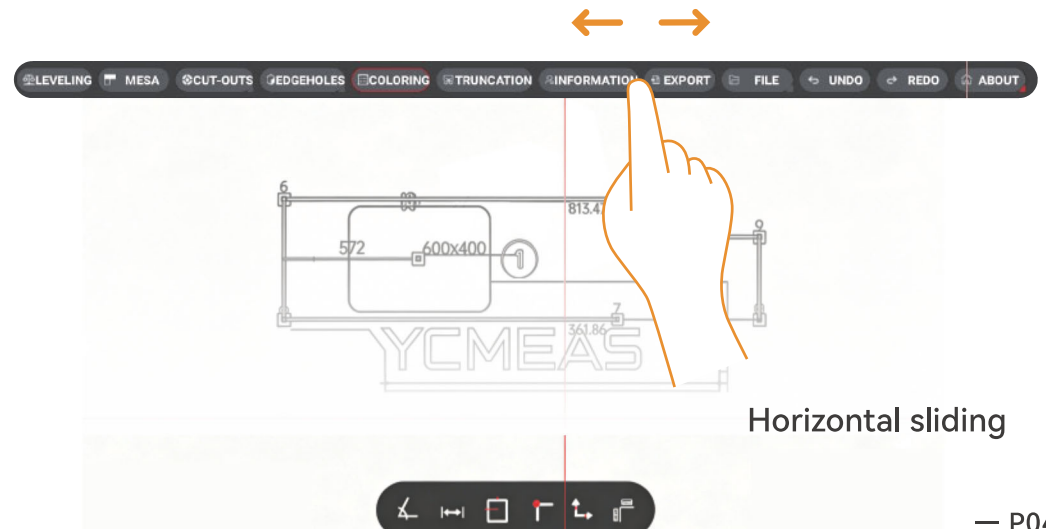
Magnify



Reduce



Translation



Horizontal sliding

Bottom menu

Bottom Menu: Toggle the display of: Angles, Lengths, Cutout Annotations, Corner Points, Drawing Intersection Data with Axis, Backslash/Apron Disassembly.

Display



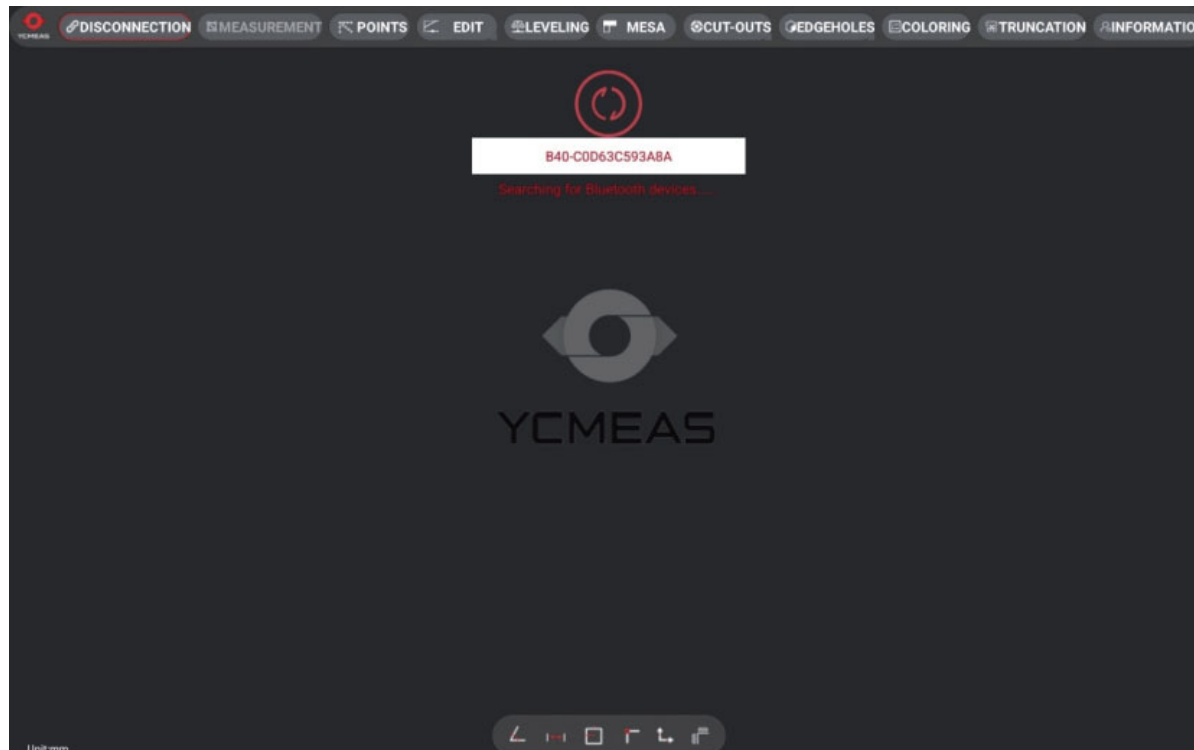
do not display



Connect

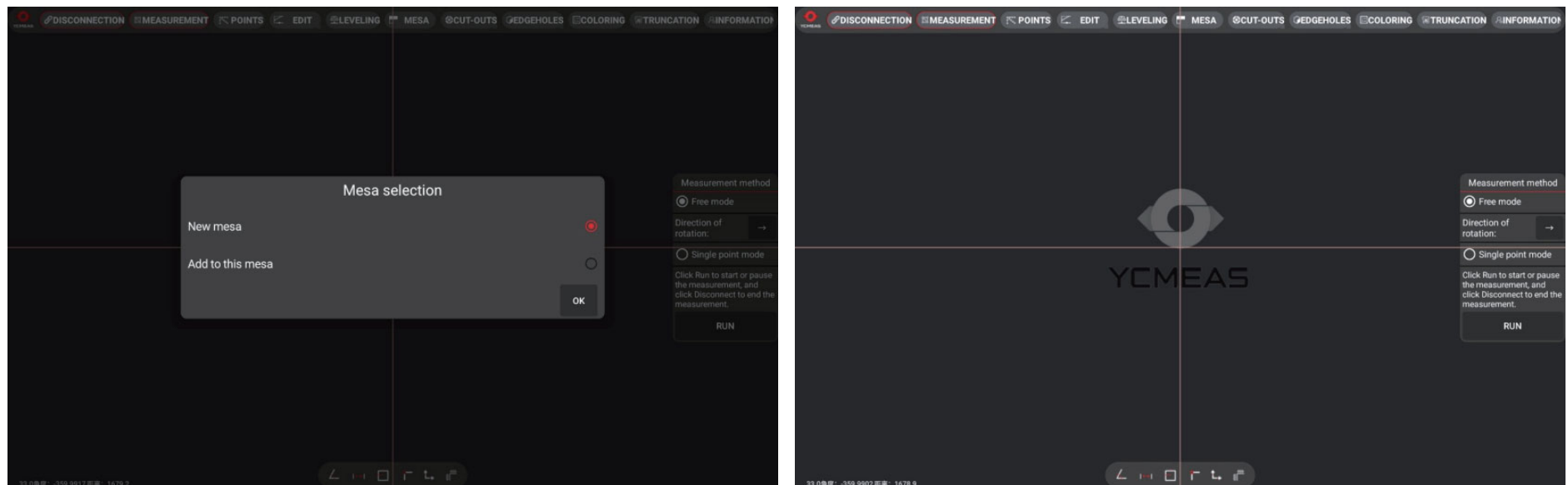
Power on the machine, click  MEASUREMENT , (order does not matter).

The software will search for devices. The interface lists the Bluetooth code of the machine; click the code to connect to the device. (When many Bluetooth devices are in the environment, the connection progress indicator may persist; in this case, click "Disconnect", then "Connect" again). Upon successful connection, the pan-tilt's green ring light illuminates. Adjust the pan-tilt height and level. Manually rotate the pan-tilt to observe the laser red dot; check the scanning height and position relative to the installation surface, and adjust the tripod height and level accordingly.



Measuring Process

- 1 Manually rotate the pan-tilt to the starting point for measurement. The device scans clockwise.
Click,  MEASUREMENT choose New Mesa or Add to this Mesa.
- 2 Then click "Run".

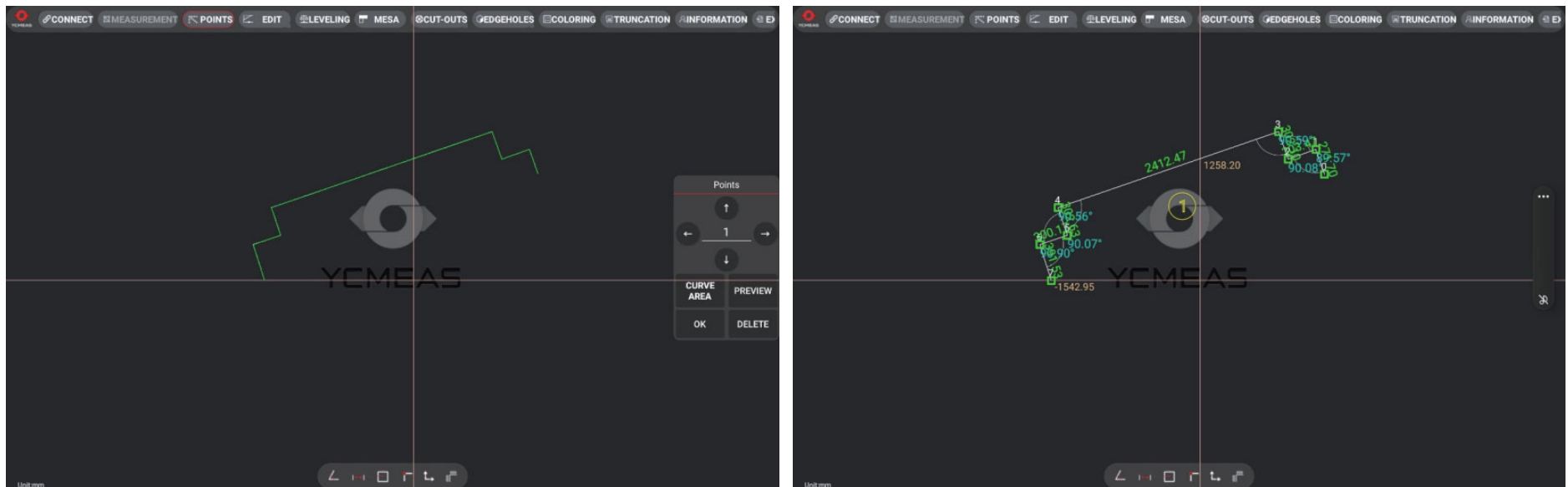


Observe the moving laser dot. When it reaches the endpoint, click "Pause", then click "Disconnect"; or directly click "Disconnect" to complete the scan.

The Plus version has a Single Point mode. You can scan first, then mark points; or mark points first, then scan. After "Disconnect", click "Points" to generate data. For point marking alone (e.g., for apron edges), "Point Set" is not required after disconnecting. Application scenario: e.g., scanning backsplash, dotting for apron, forming the countertop. Recommendation: Use a dedicated baffle for accurate point marking. Excessive laser incidence angles can cause oversized measurements. For Corners: Mark two points close to the corner, then use "Add Angle" later. Manual point selection may introduce error.

Points

Click "Points",  POINTS to reduce the number of points.



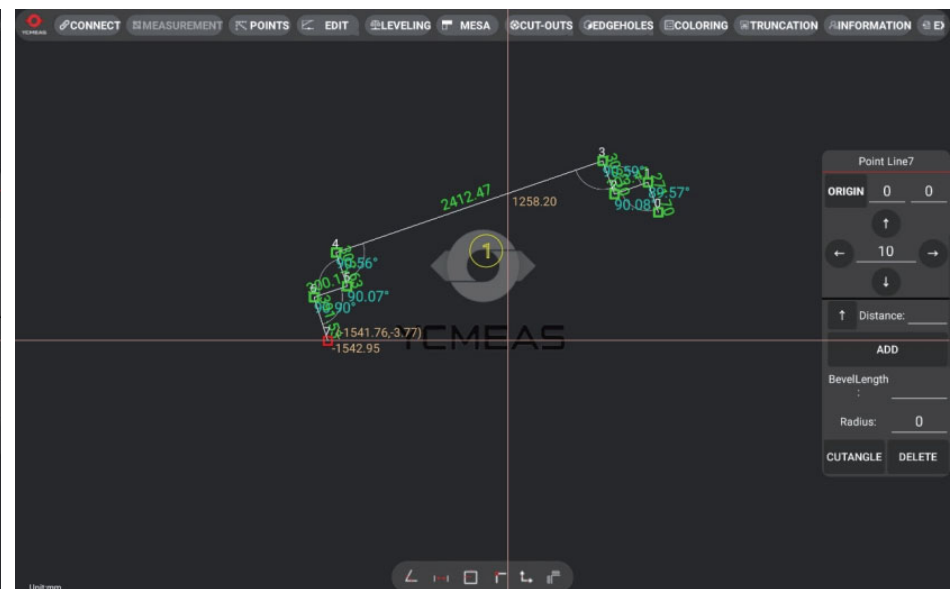
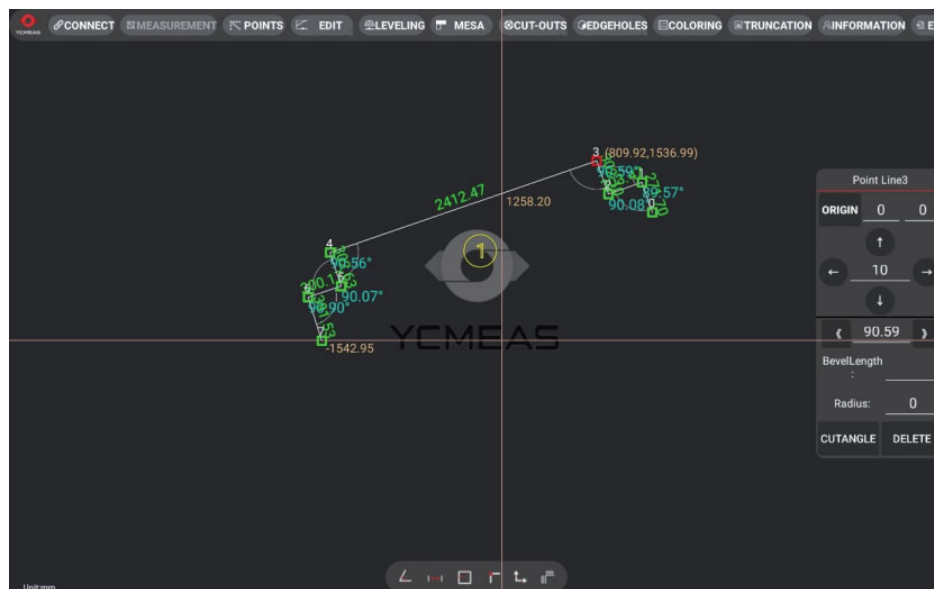
Displays the scanned point set as white dots for comparison. For occluded points, click Delete, then drag-select to delete, then preview. If the generated green lines ignore details you want to retain, click and drag to select the curve area, then preview.

If the scanned drawing contains arcs, first click Smooth in Edit to form a spline curve, then click Points. Points function extracts straight-line segments from the drawing. The Smooth function extracts curves from the drawing and converts them into spline curves. Click OK when done.

Edit

Click on a point on the drawing to edit it individually.

ORIGIN corresponds to the background coordinate system, horizontal coordinate X, vertical coordinate Y. Clicking "Origin" at (0,0) moves the selected point to the origin. For example, clicking "Origin" at (10,20) moves the selected point to X=10, Y=20 in the plane coordinate system. This function is for use with line laser levels, generally applied to complex, irregular, or large scenes requiring segmented measurement.



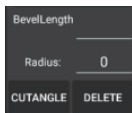
Edit



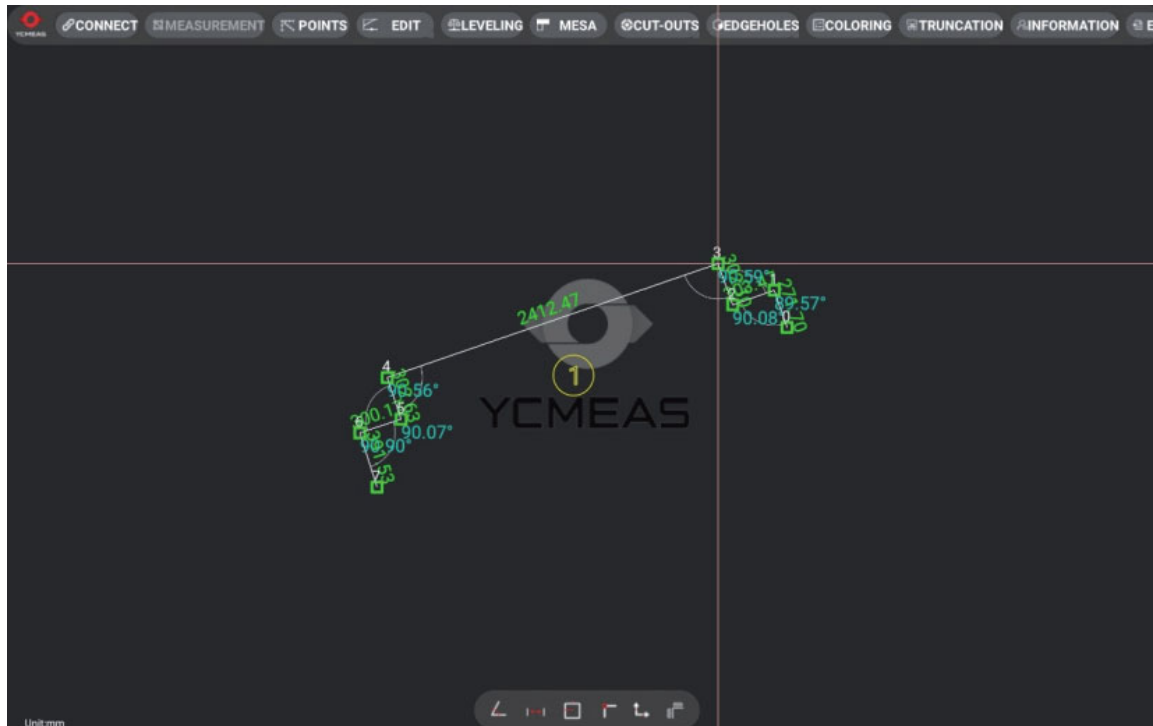
moves the point horizontally or vertically according to the step value entered. Before this operation, it's recommended to level the line segments connected to this point first.



changes the included angle. Only available when a non-endpoint is selected. The buttons on either side move the respective sides of the angle.



Creates a chamfer or fillet at the selected corner point. Enter length for miter, click "Chamfer" to form a miter. Enter radius length for fillet R, click "Chamfer", and this point will become a rounded corner.



Edit

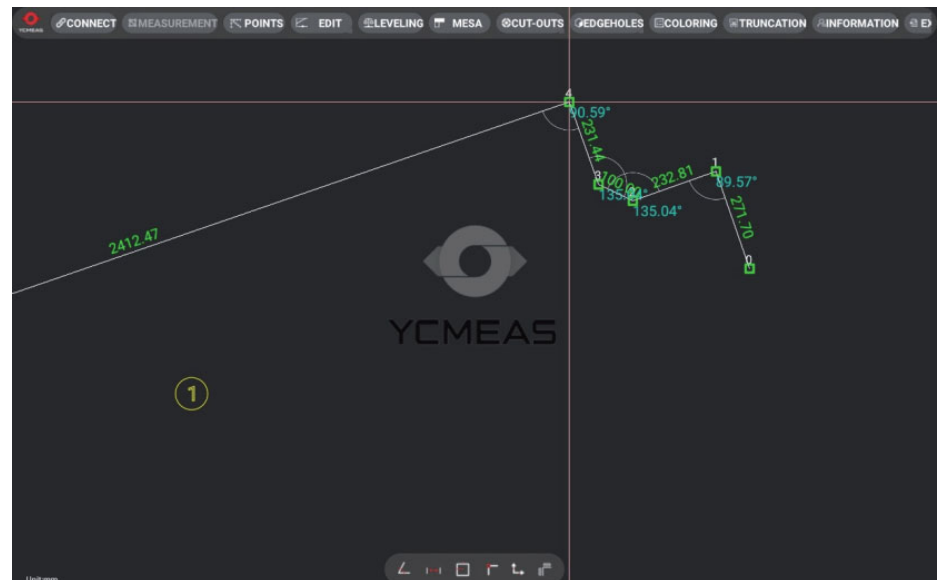
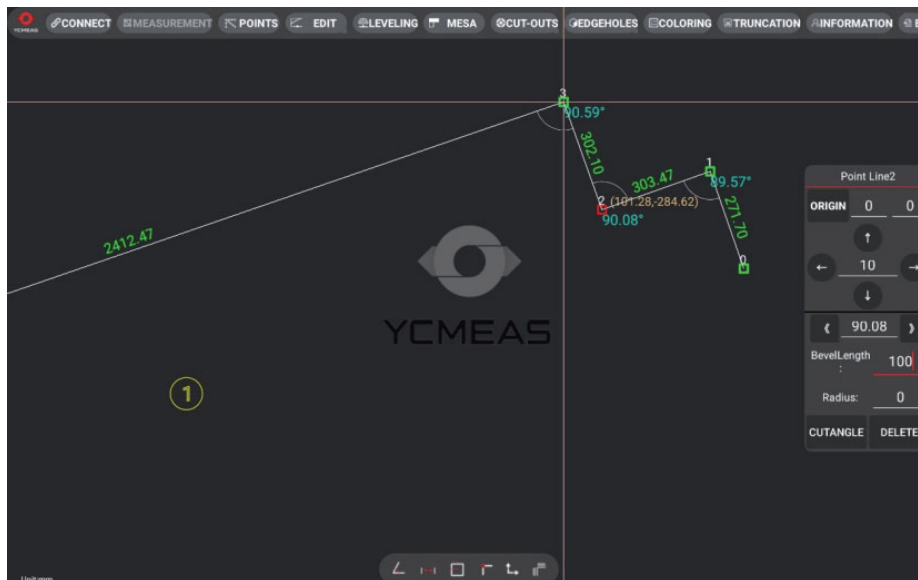
DELETE

"Delete": Deletes this point.

↑ Distance:

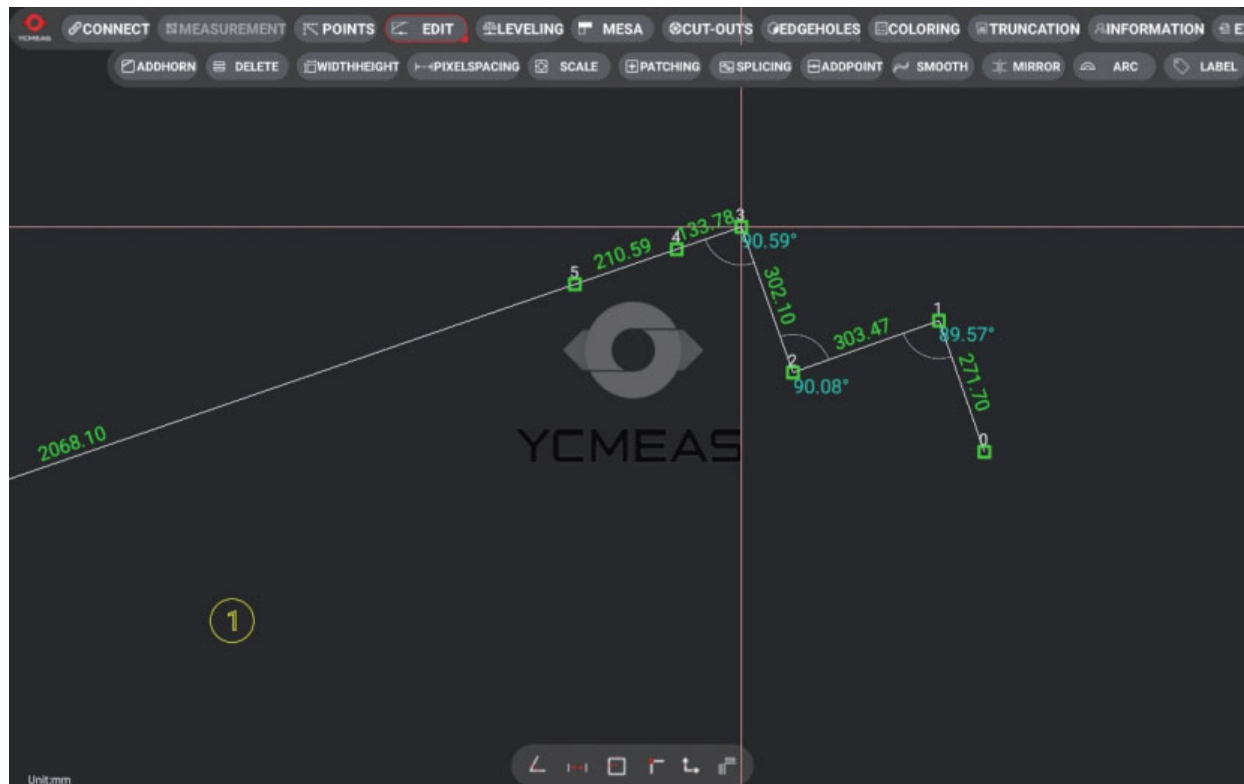
ADD

Adds a point. Only available when an endpoint is selected. The arrow button changes direction each click, representing the direction from the selected point to add the new point. Enter the distance, click "Add", and a point will be added in that direction.



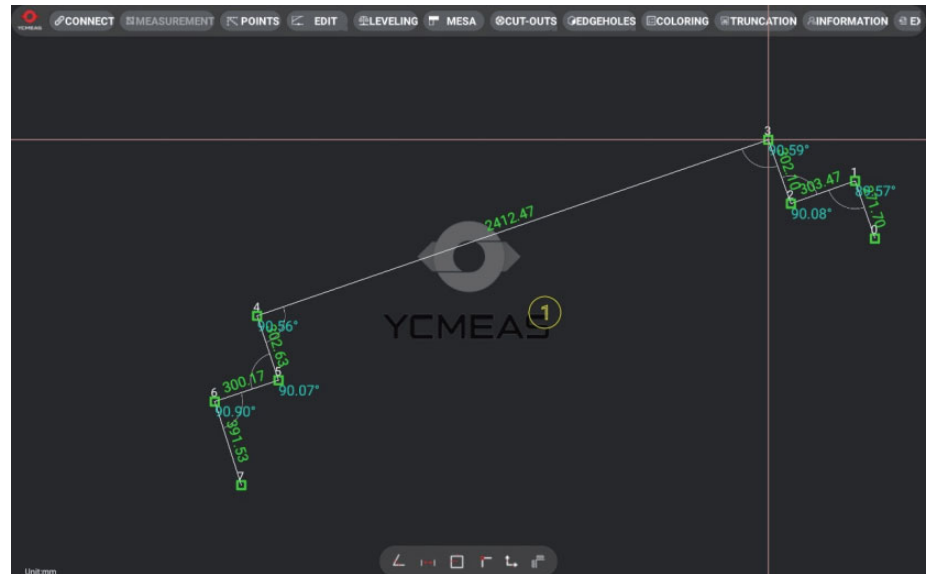
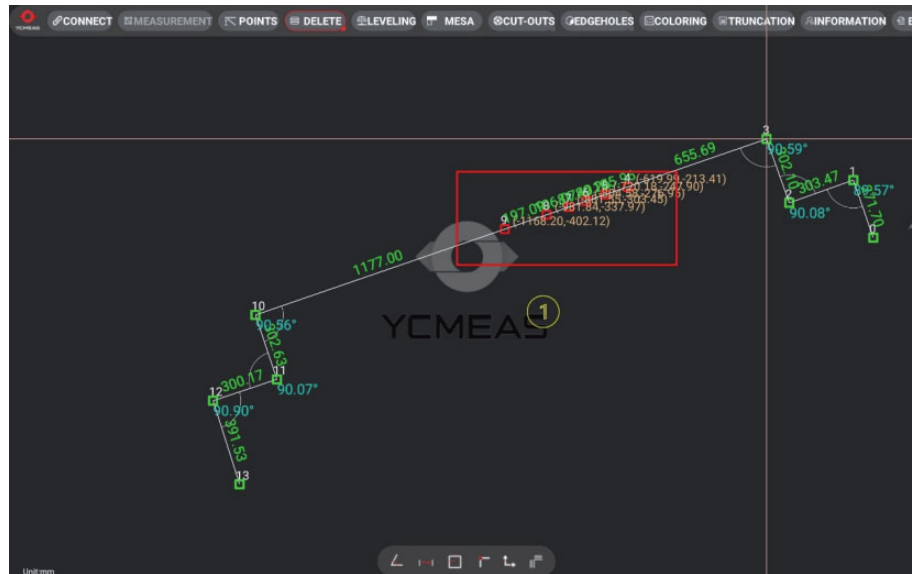
Edit (Add Angle)

If "Simplify Point Set" was chosen in the "Points" operation above, Add Angle is generally needed. Drag-select the point set at the corner location; the software automatically extends the two line segments to intersect. This angle is measured data, not necessarily a right angle.



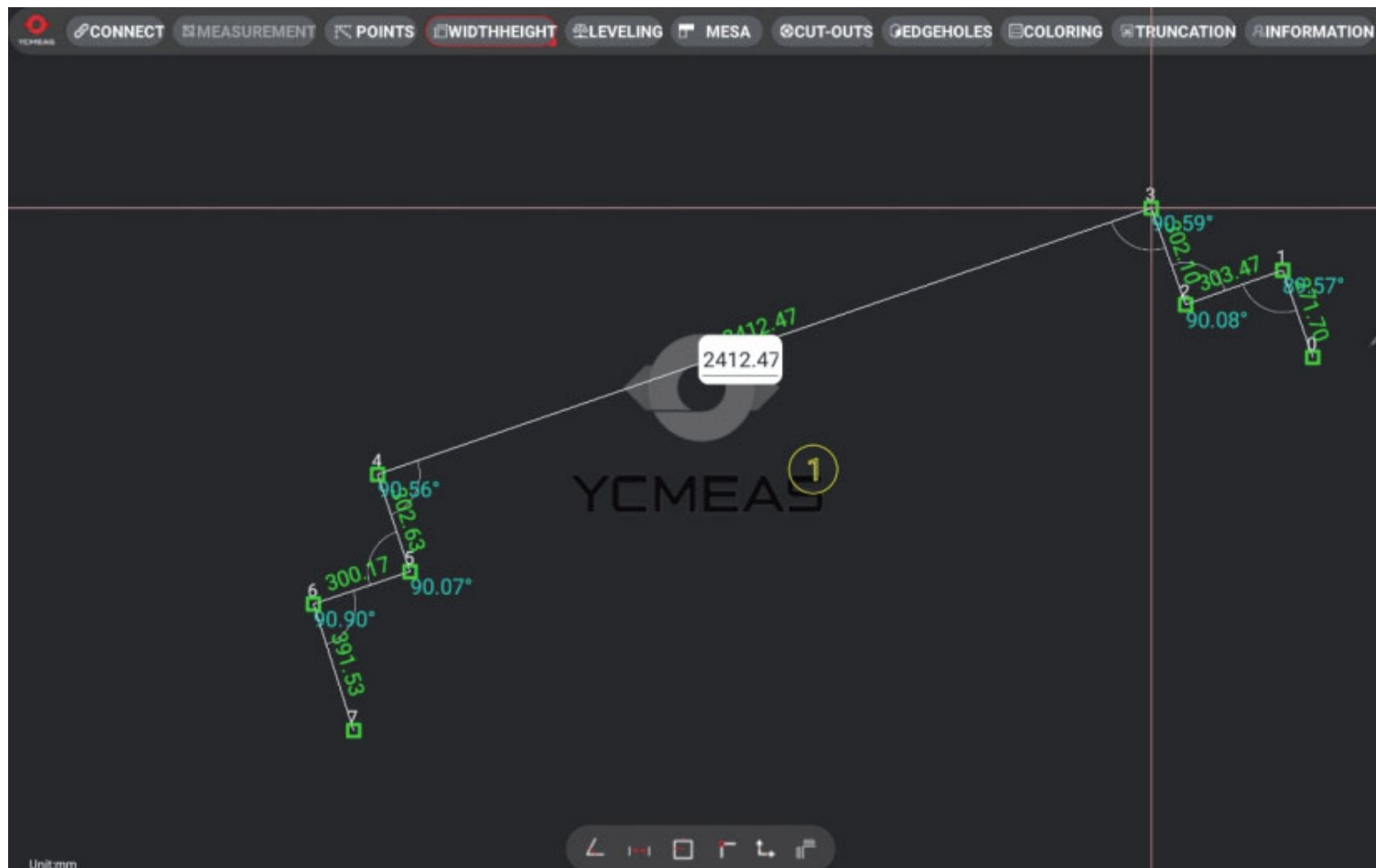
Edit (Delete)

Drag-select points to delete, release to delete. Used for deleting multiple points at once.



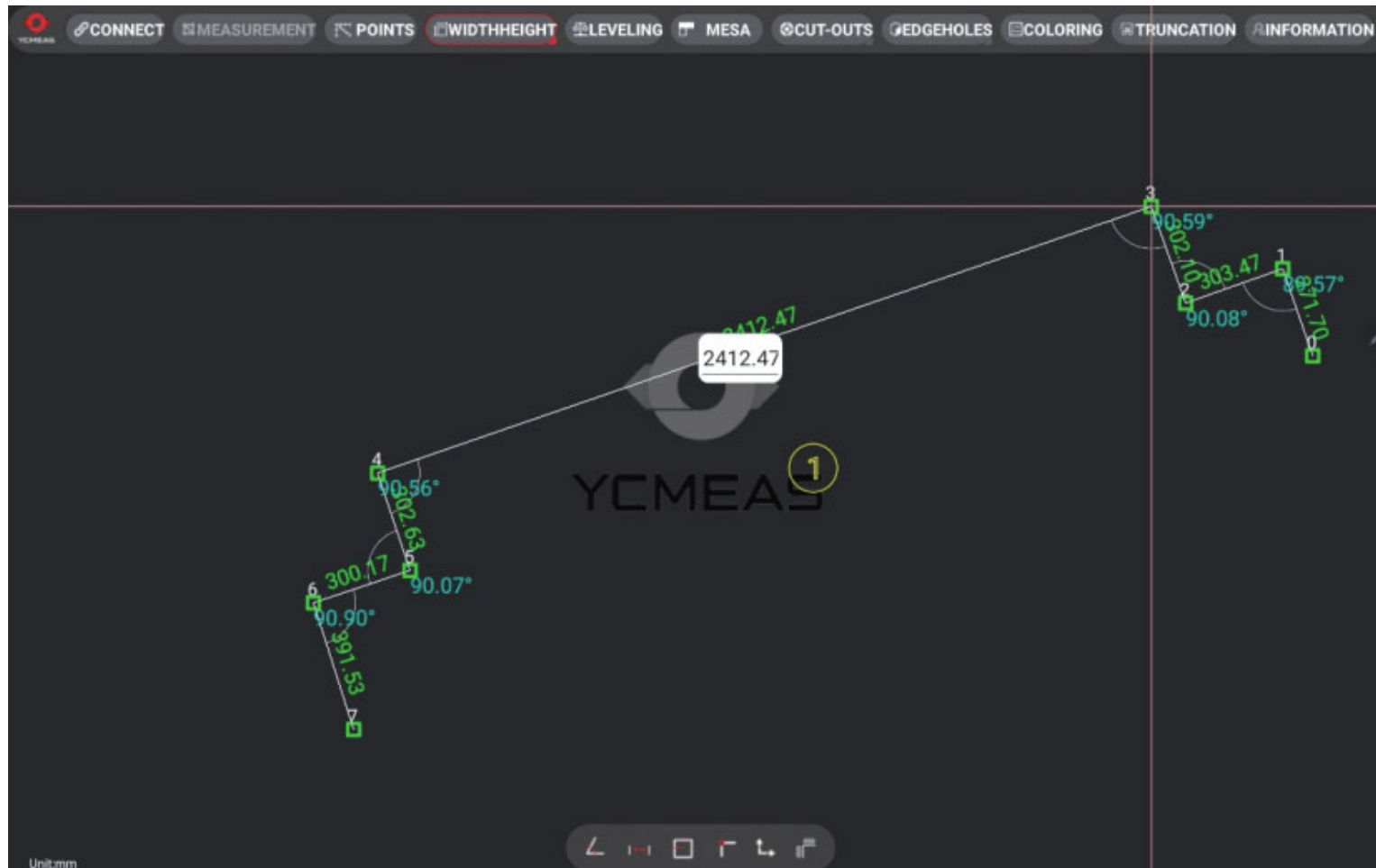
Edit (Width)

Adjusts the overall width or height of the drawing. Click the value to adjust, input the corresponding data, click elsewhere to apply. This operation translates points left/right or up/down.



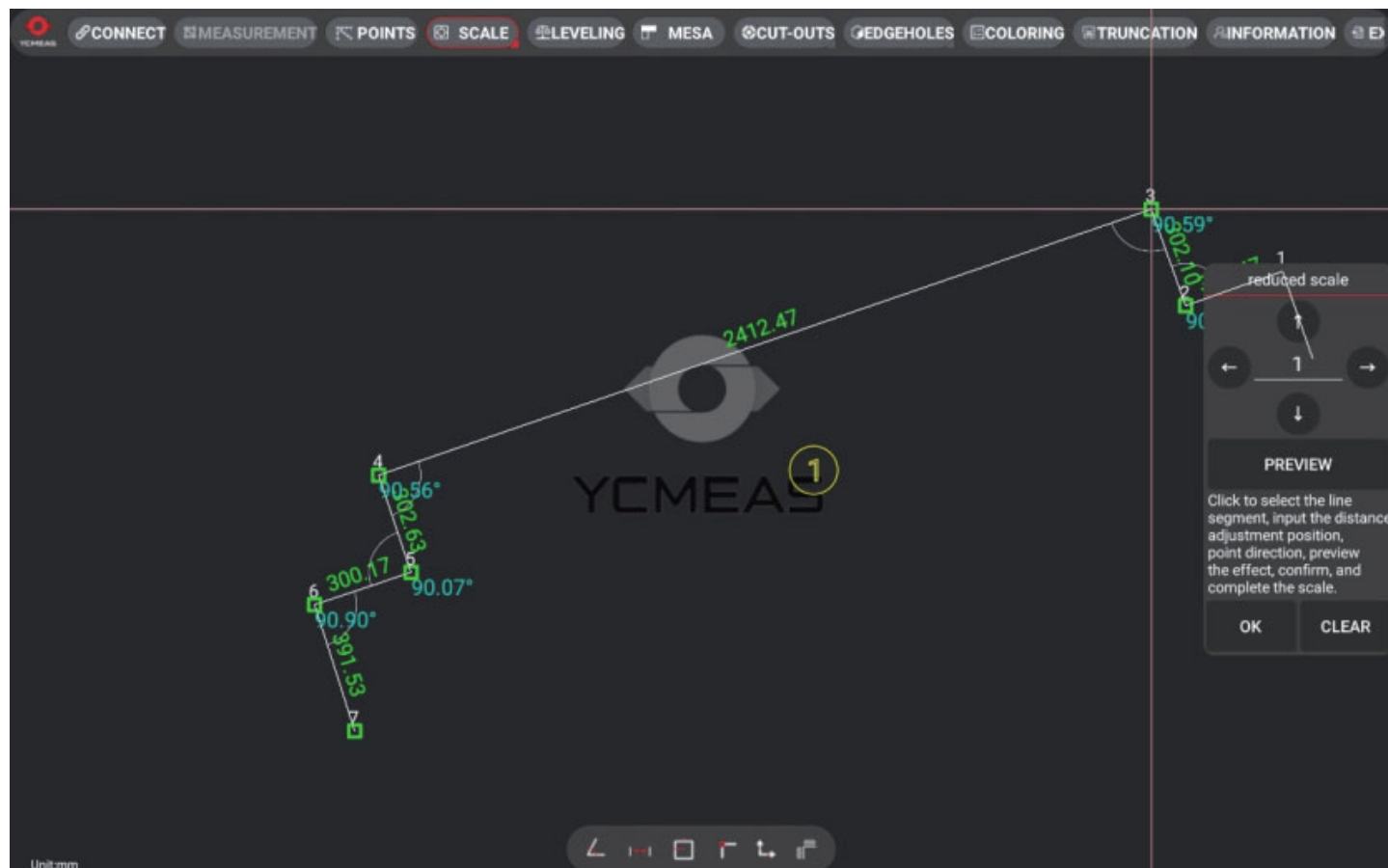
Edit (Pixelspace)

Measures distance between two points, or distance from point to edge.



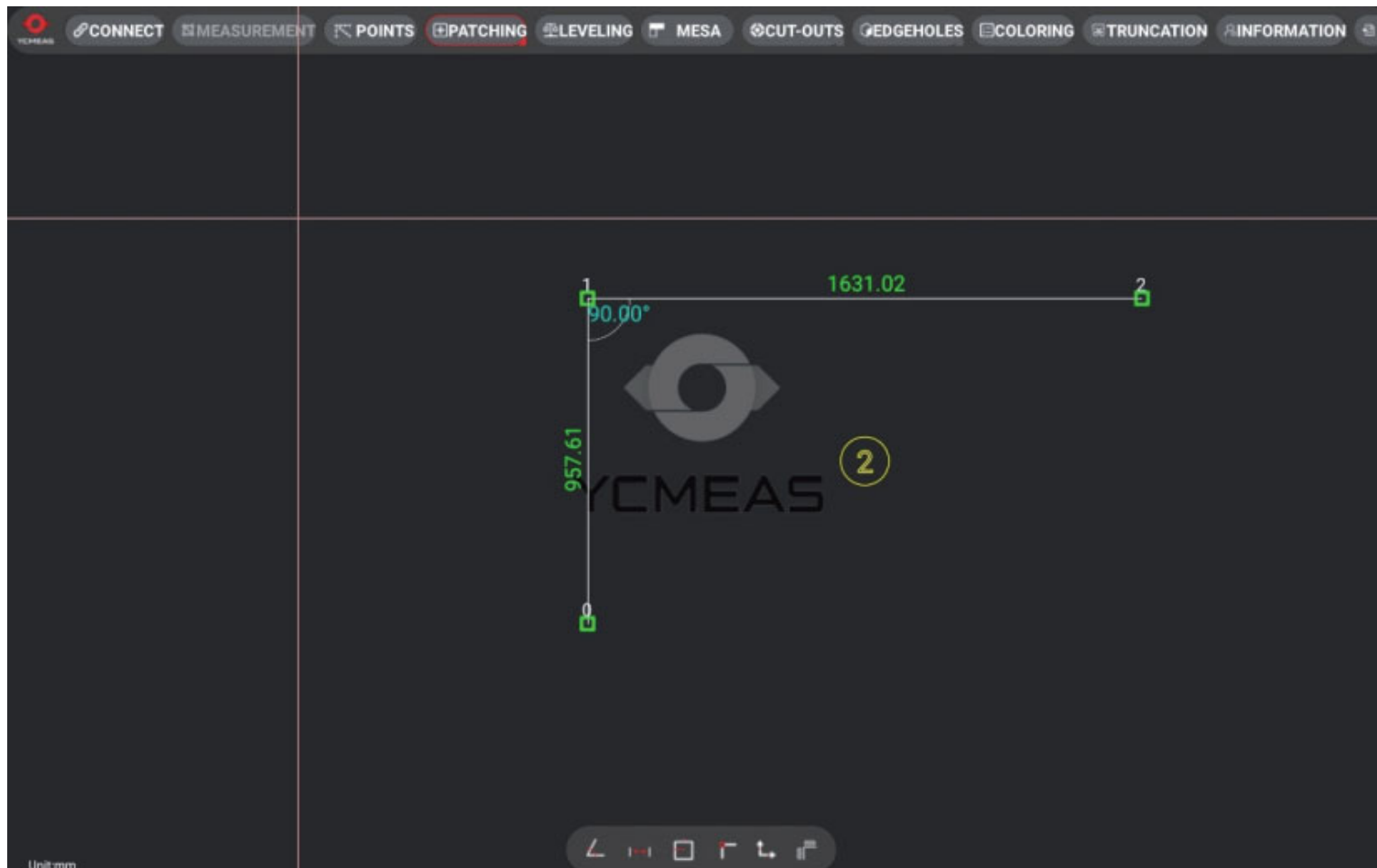
Edit (Scale)

Manual Scale Down: Select a line segment, input the distance, click directional arrows to move, click Preview to see effect. One-click Scale Down: Select no segment, input the scaling distance, click "Preview", all edges shrink towards the center. Clear cancels selection. This operation is generally used after leveling.



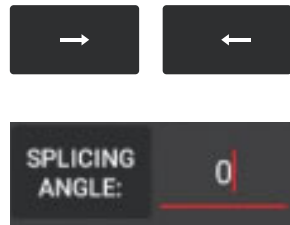
Edit (Patch)

This function can add countertop area to an existing base, or directly add/draw a countertop. Manual drawing with automatic horizontal/vertical alignment check.



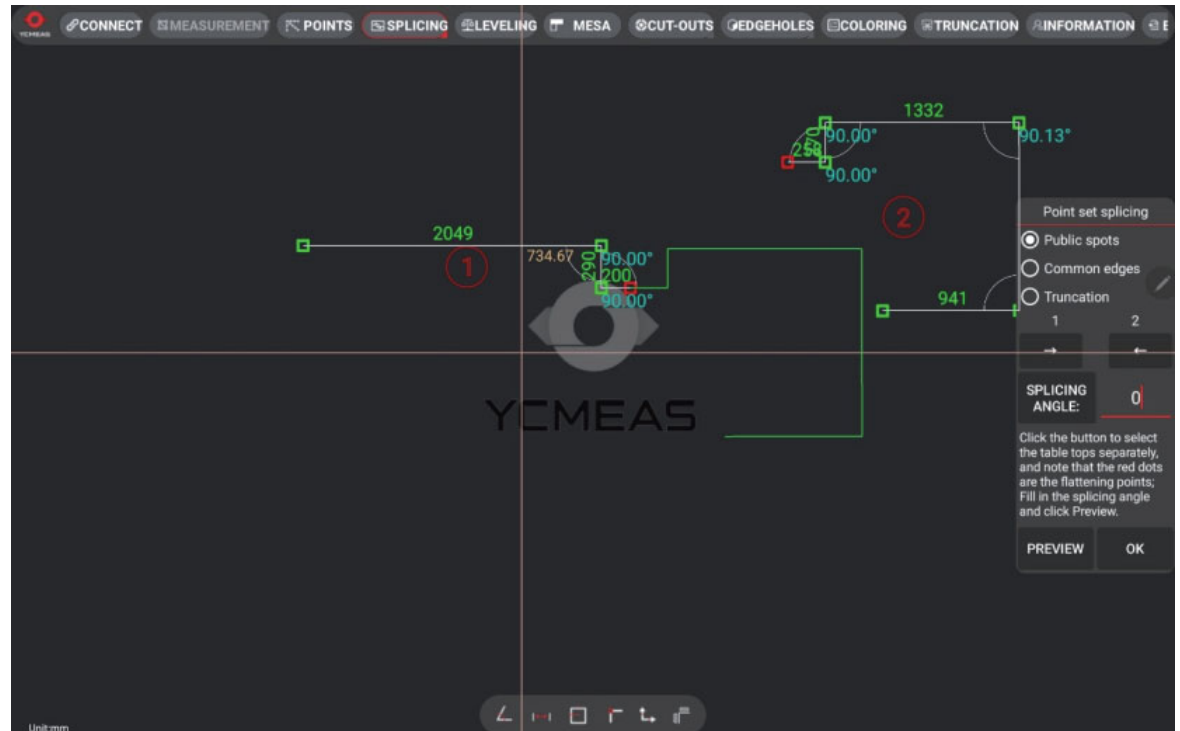
Edit (Splice)

Required for large scene segmented scanning.



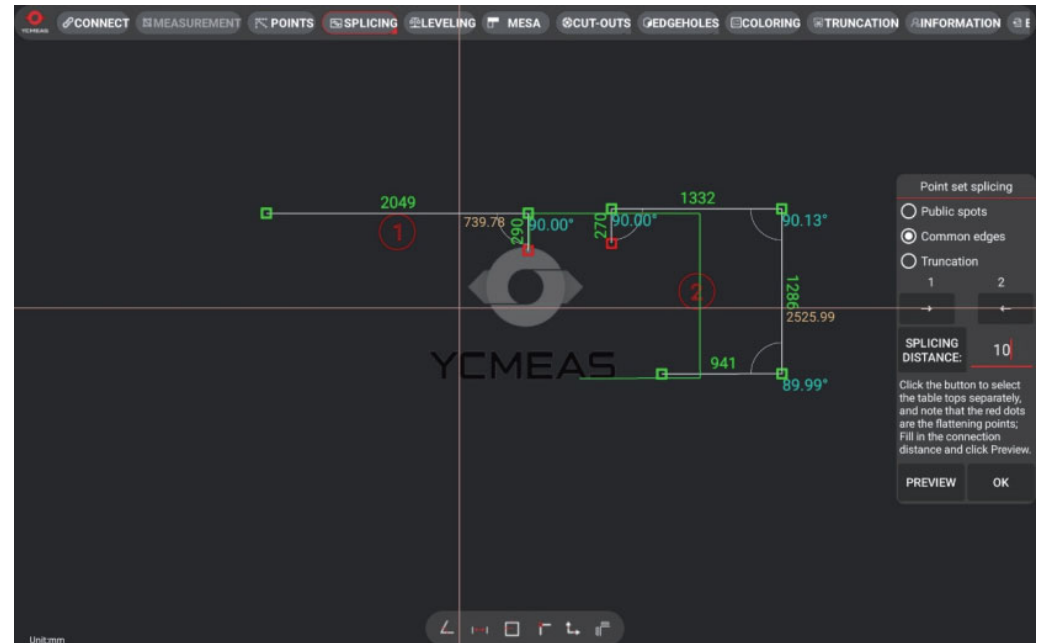
Press each to darken, then click the numbers of the drawing to splice; the endpoint of the selected drawing will have a red frame by default, appearing at the start or end point. Click the other end manually to switch. The red-framed point is used as the common point for splicing. Press the darkened button again to restore it; the button shows the selected drawing number. Splice Angle refers to the angle between the two line segments at the red-framed point. Leave blank to splice according to current placement (generally referencing the coordinate axis). Can also input an angle for rotation. Click "Preview", the right drawing moves to the designated splice position, shown in green. Click "OK", the two drawings merge as previewed.

"Common Point" splice:
Merges two drawings based on a common point. Note the splice angle issue; generally for straight-edge splicing: level first, then splice by common point.

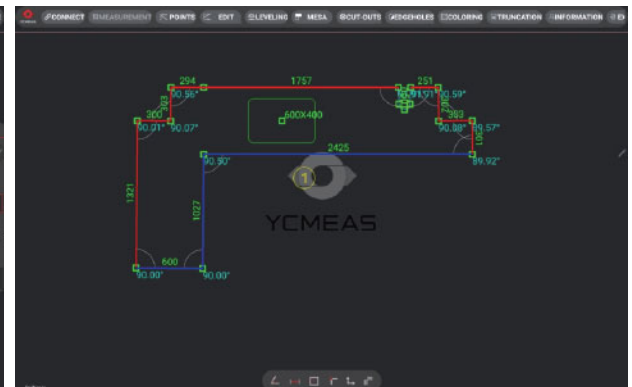
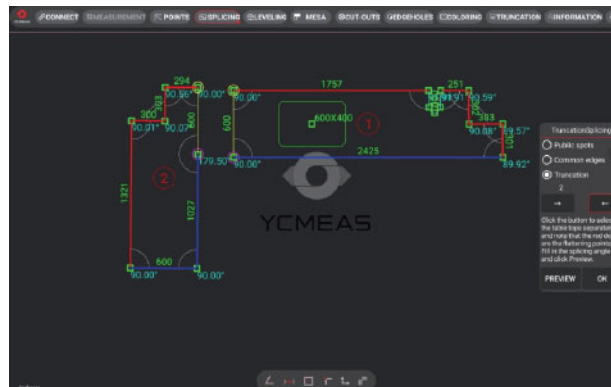
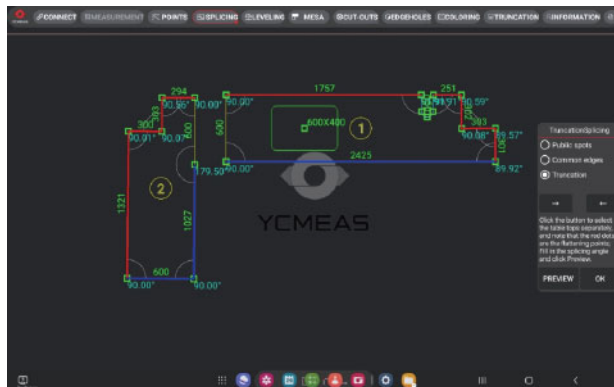


Edit (Splice)

"Common Edge" splice: For on-site arc areas requiring segmented measurement, use a straight object as a common edge for splicing. Select drawings as above; input the thickness of the straight object as Splice Distance. Click Preview, OK.

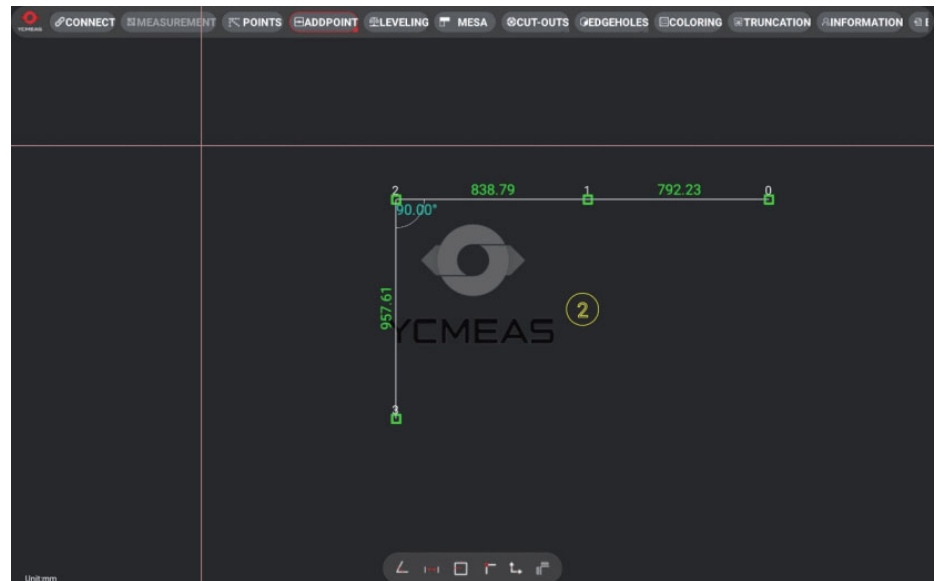
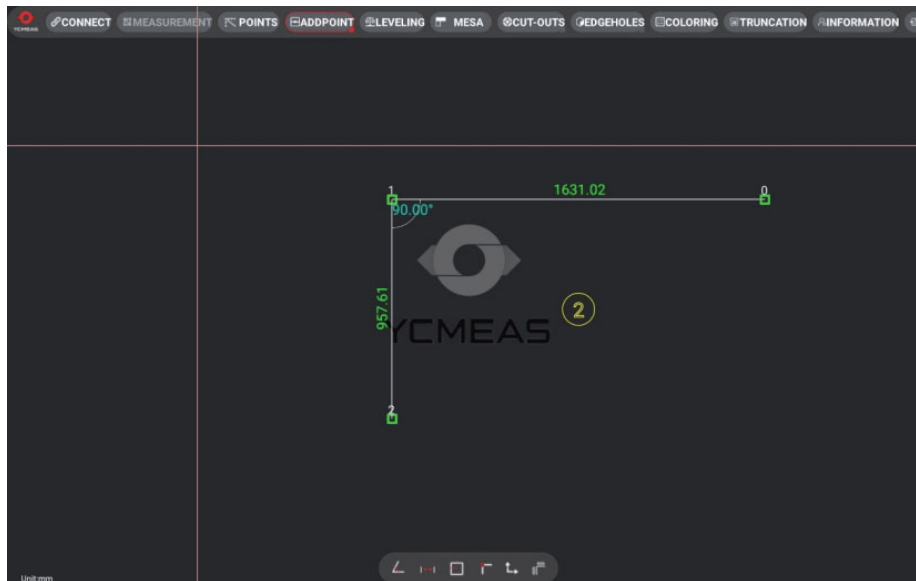


"Truncation" splice: Drawings separated by a truncation line can be spliced here. After selecting drawings, also click two splice points. Note splice points are differentiated by color; match colors when splicing. Clicking order changes point color.



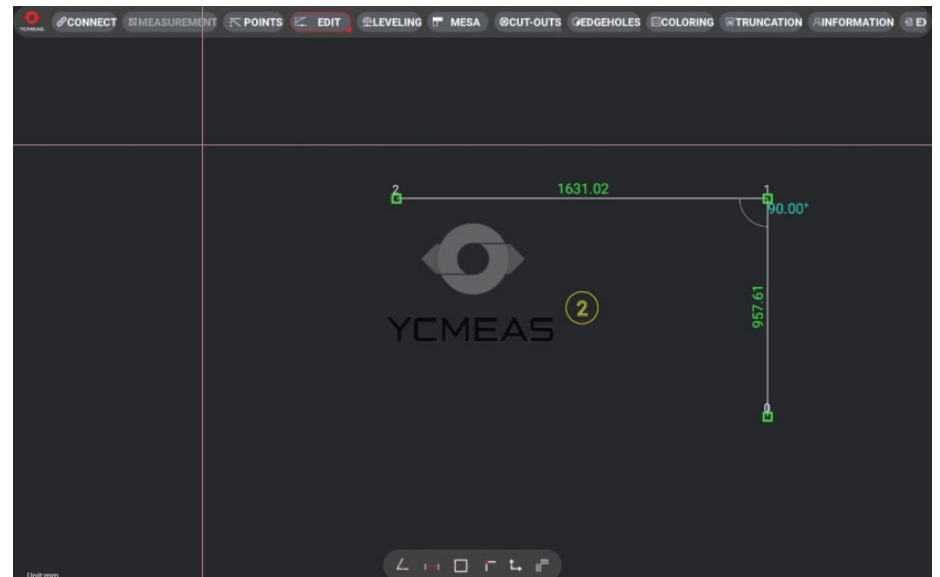
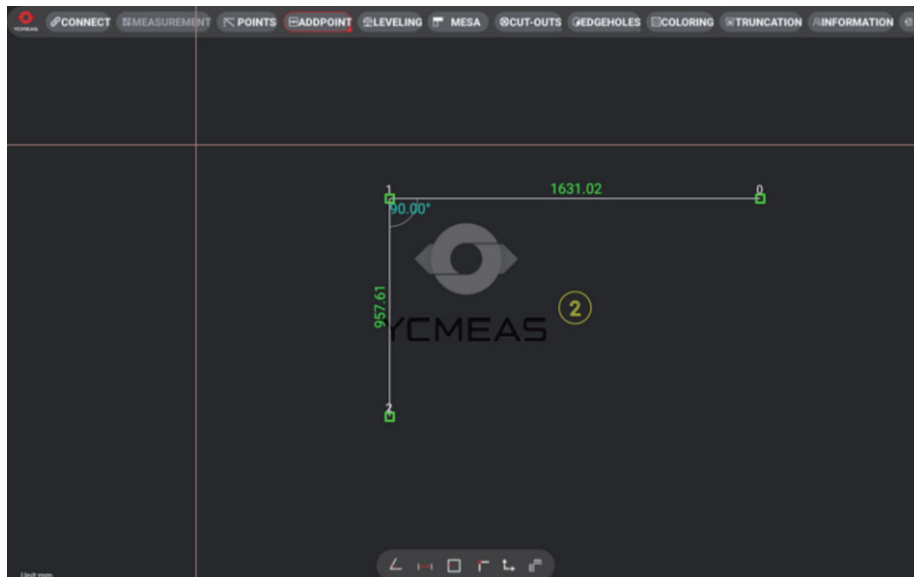
Add Point

Manually adds movable points. Click on a line segment location to add.



Mirror

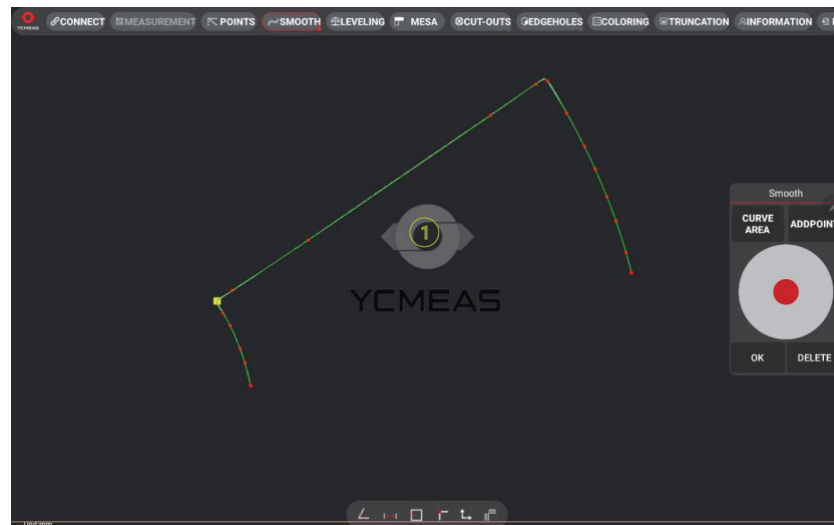
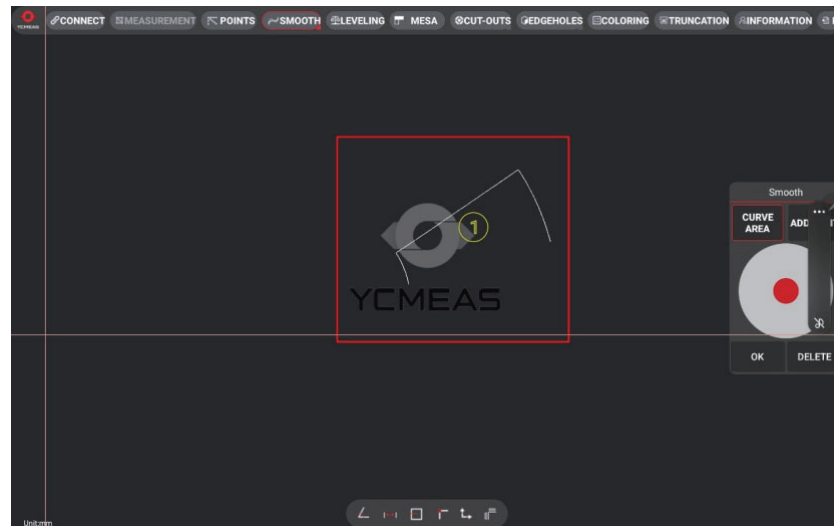
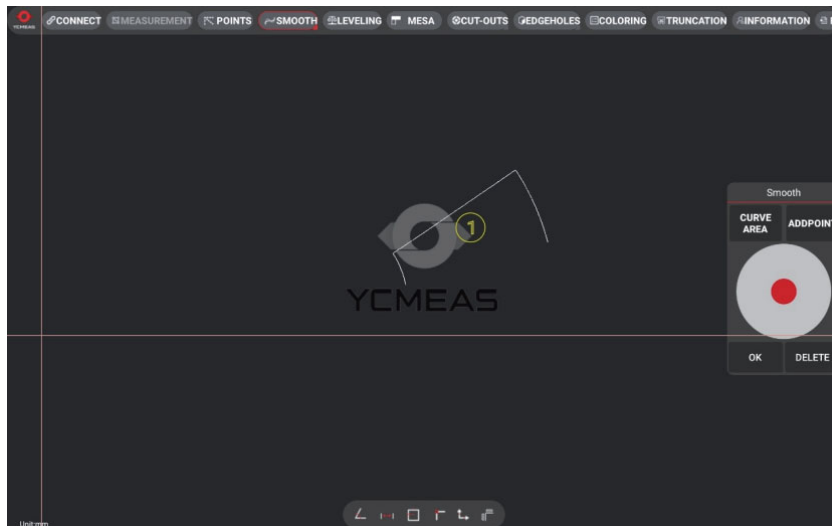
Mirrors the left/right drawing. Commonly used for staircase measurement or inverted scanning.



Smooth

For curved surface processing.

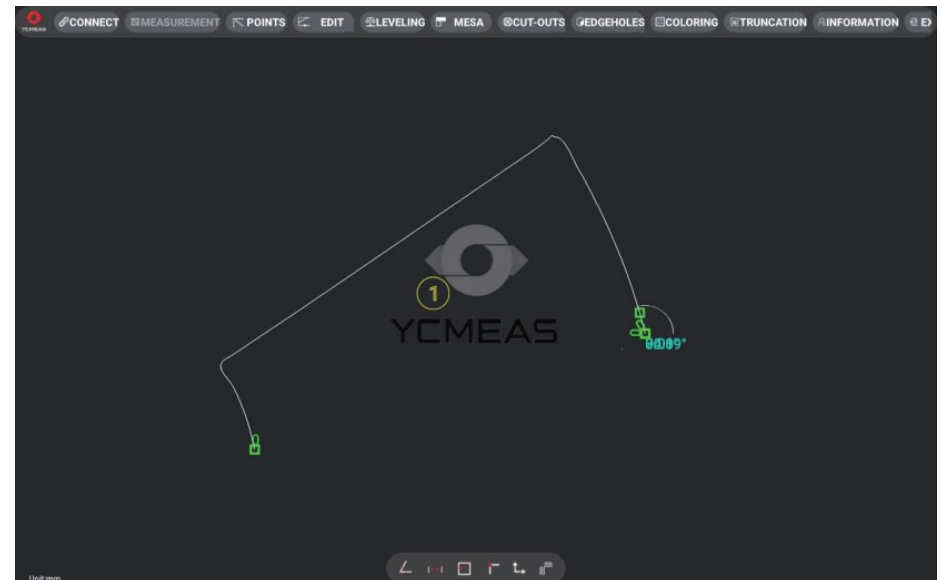
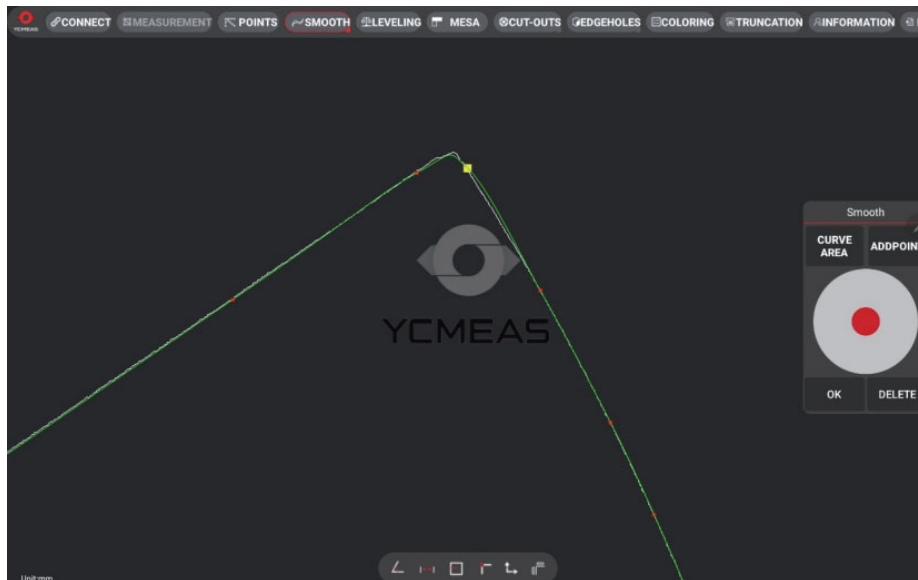
Click and drag to select curve points.



Smooth

Zoom in to see corner details. The software automatically adds control points, but not all drawings fit perfectly. For non-fitting parts, manually add control points, then move them to adjust the green line to the proper position. Control points can also be deleted. Control points here are similar to CAD operations, requiring manual adjustment.

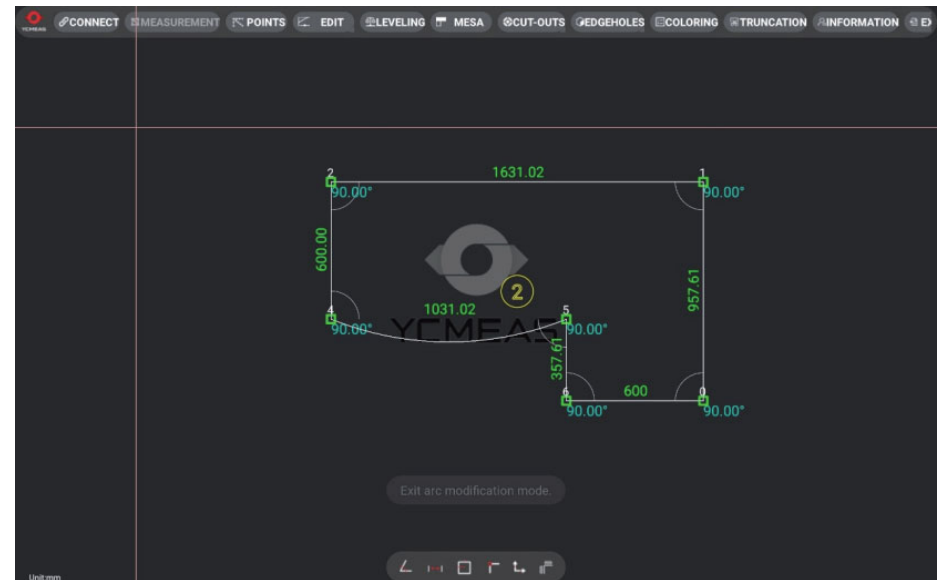
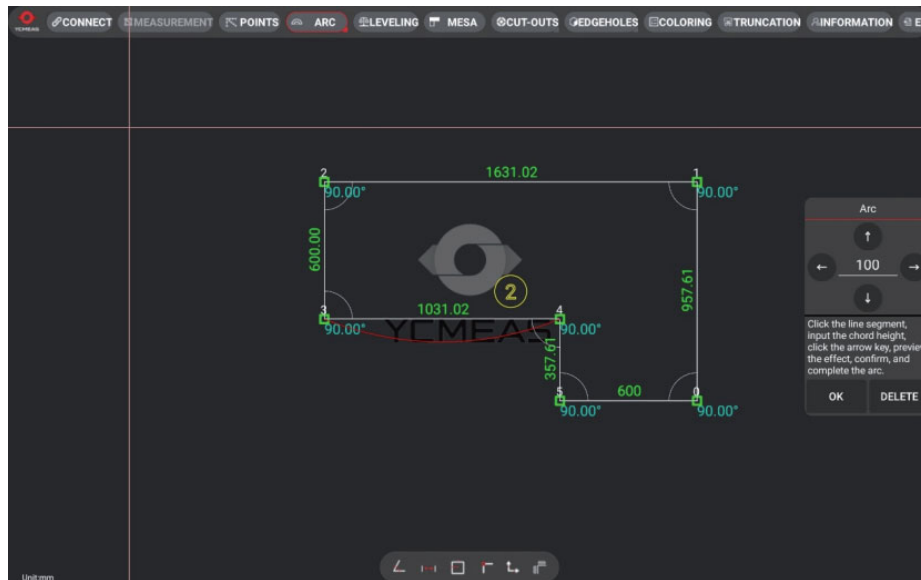
To move a control point: select it first (appears as a yellow square), then press and slide the joystick on the right, release; repeat until positioned. Then click OK.



Arc

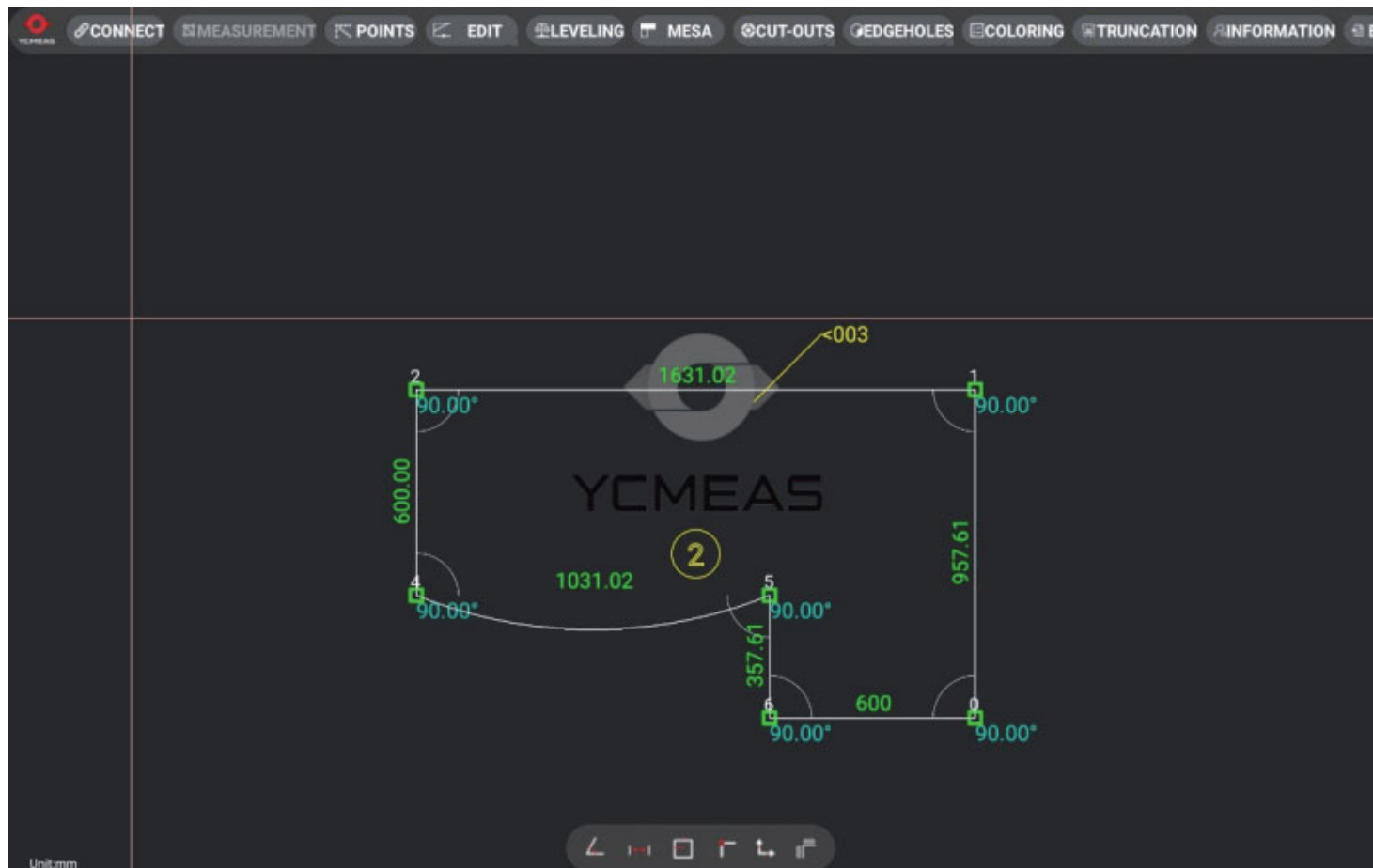
Should be done after completing the countertop. First, level the line segment to be converted to an arc.

Select the line segment to become an arc. Input the sagitta height, click directional arrows. The displayed subdivision count (default is fine) determines the smoothness of the arc—higher is smoother.



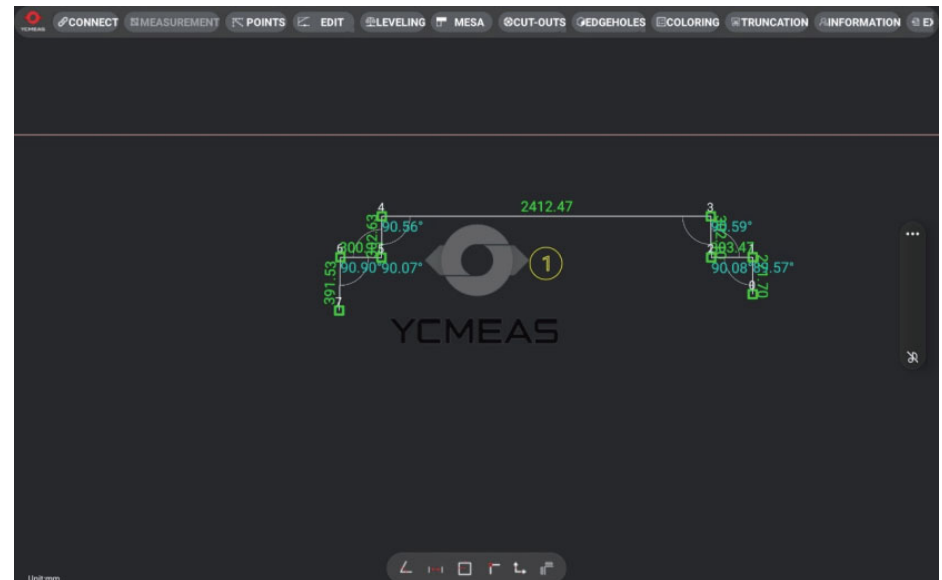
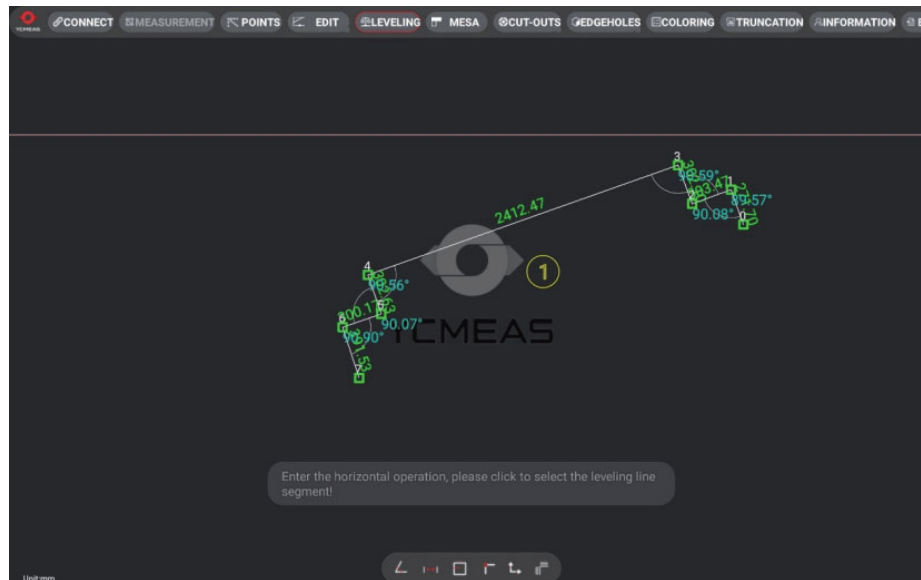
Label

Can add labels. The anchor point is the location clicked when adding. Text can be edited freely. If left empty, the empty label is deleted by default. The "<" to the left of the text can be dragged to reposition the text, but the anchor remains fixed. To delete a label, clear its content, or go to Edit, Delete, drag-select to delete.



Level

Click the Level icon, then follow prompts to click a horizontal line segment. Click any line segment to level based on that segment. Repeatedly leveling the same segment enables rotation. Alternatively, without selecting a segment, press and drag on a blank area of the screen to manually rotate the drawing, useful for adjusting original points or during splicing operations.

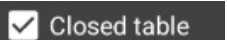


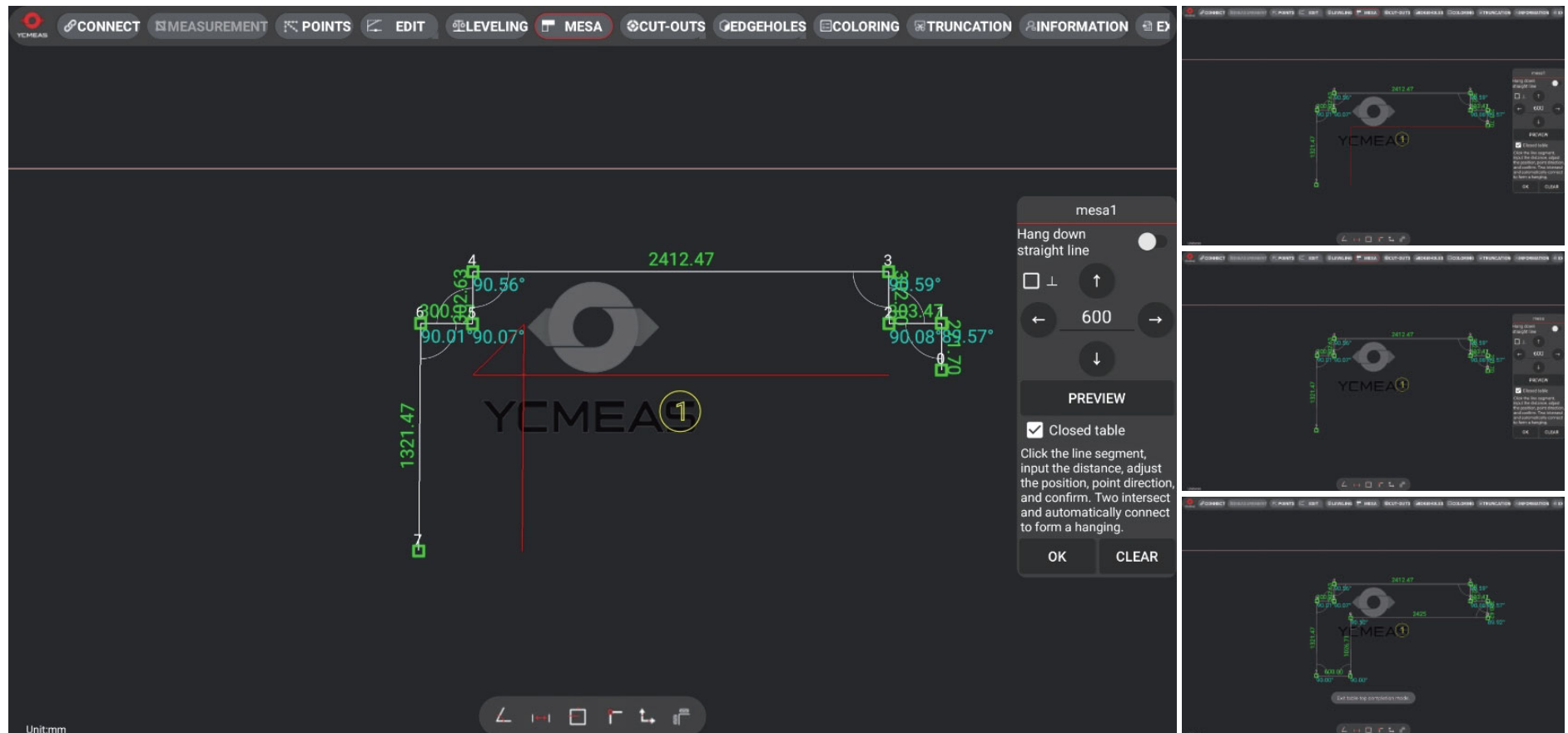
Mesa

Click the Mesa icon

Straight Apron: Manually select the backsplash edge line to generate a parallel apron (highlighted red). Input offset distance (default 600mm), then click directional arrows to move. The apron is generated by offsetting parallel to the selected backsplash edge.

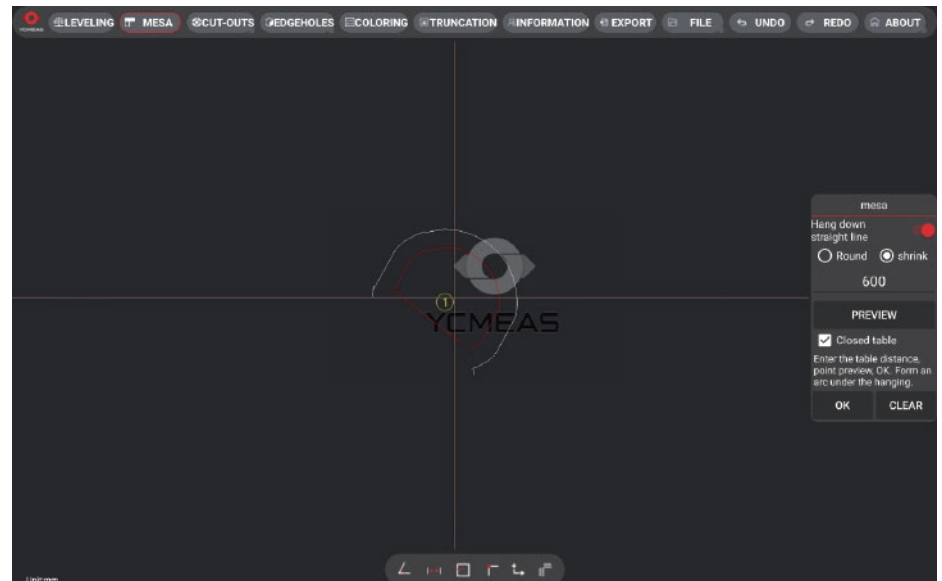
For a right-angle apron, first level the base backsplash edge (usually the longest), then enter Countertop, select ,  then proceed as above.

For a closed-loop countertop, select no segment,  click "OK".



Mesa

For arc-shaped countertops, process the outer contour through Smooth and Points first, then enter Mesa.

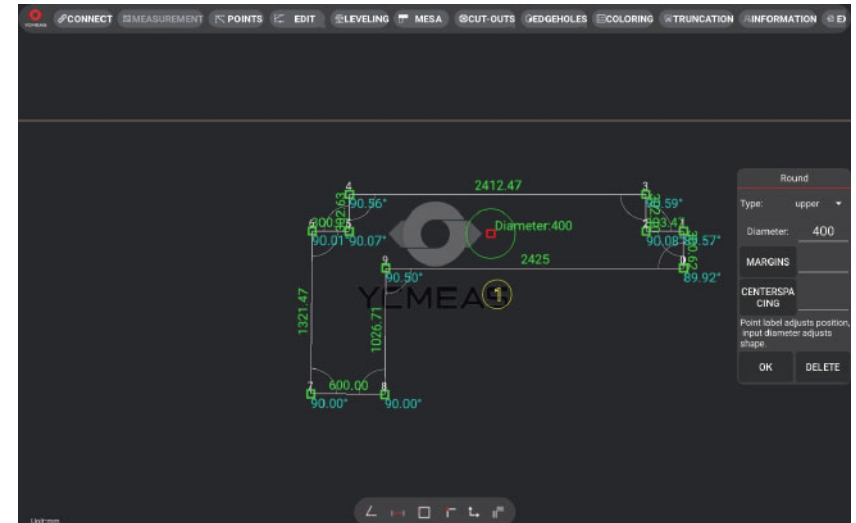


Cutout

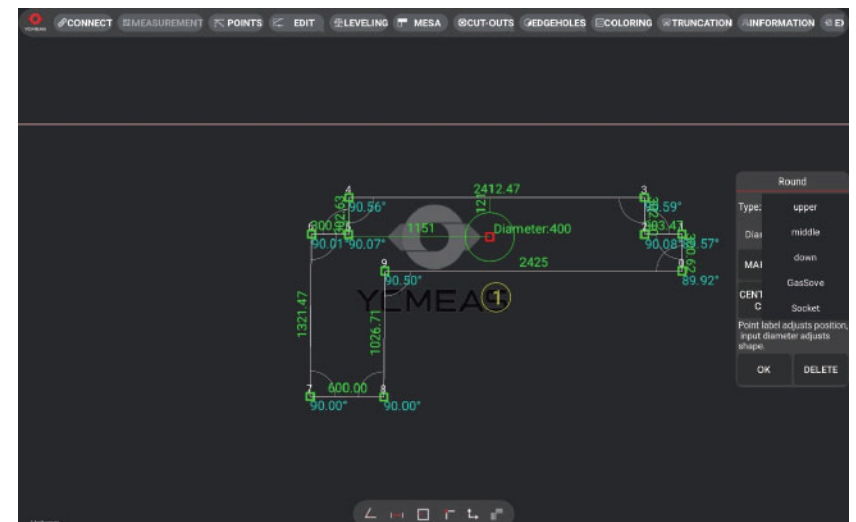
(Select Round Hole, Elliptical Hole, Rectangular Hole.)

Round Hole: Click the Round Hole icon, click approximate location on countertop.

Click the circle's center point; parameters display on the right. Adjust diameter to change hole size. Click "Margin" or "Center Space", then select a line segment to complete location. Modify the corresponding value, click OK to apply hole position change. Click Delete to remove hole. Holes can be added indefinitely.

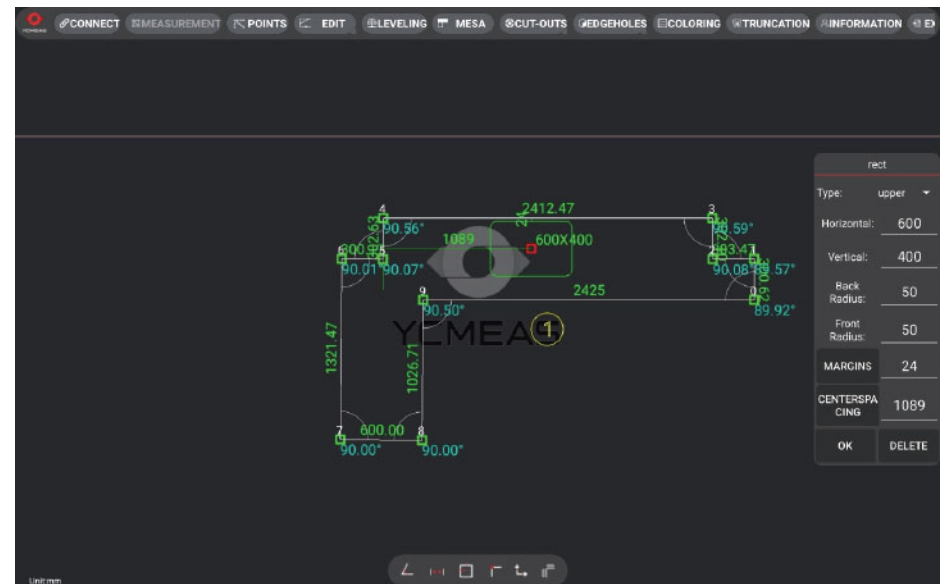
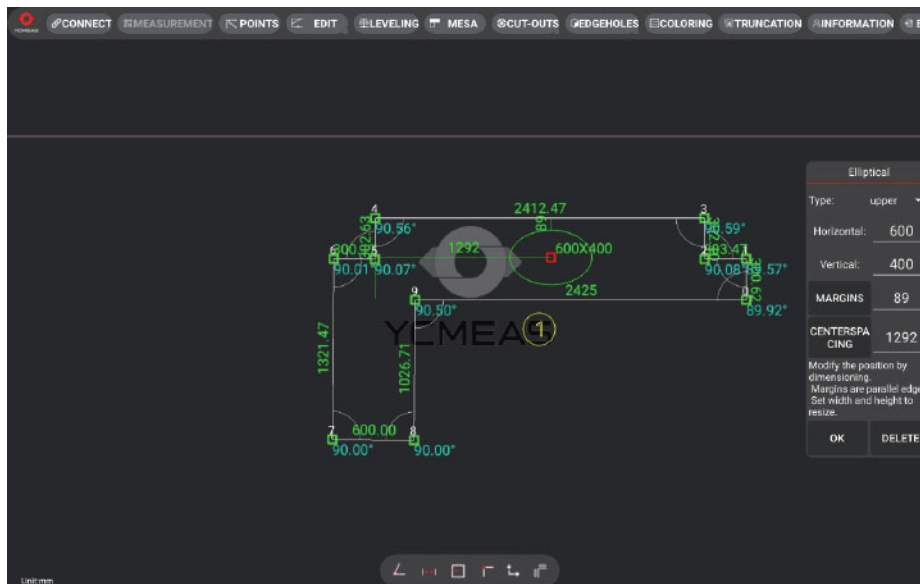


Type includes Over-counter, In-counter, Under-counter, Stove, Socket. This is for recording only, reflected in exported DXF.



Cutout (Select Round Hole, Elliptical Hole, Rectangular Hole.)

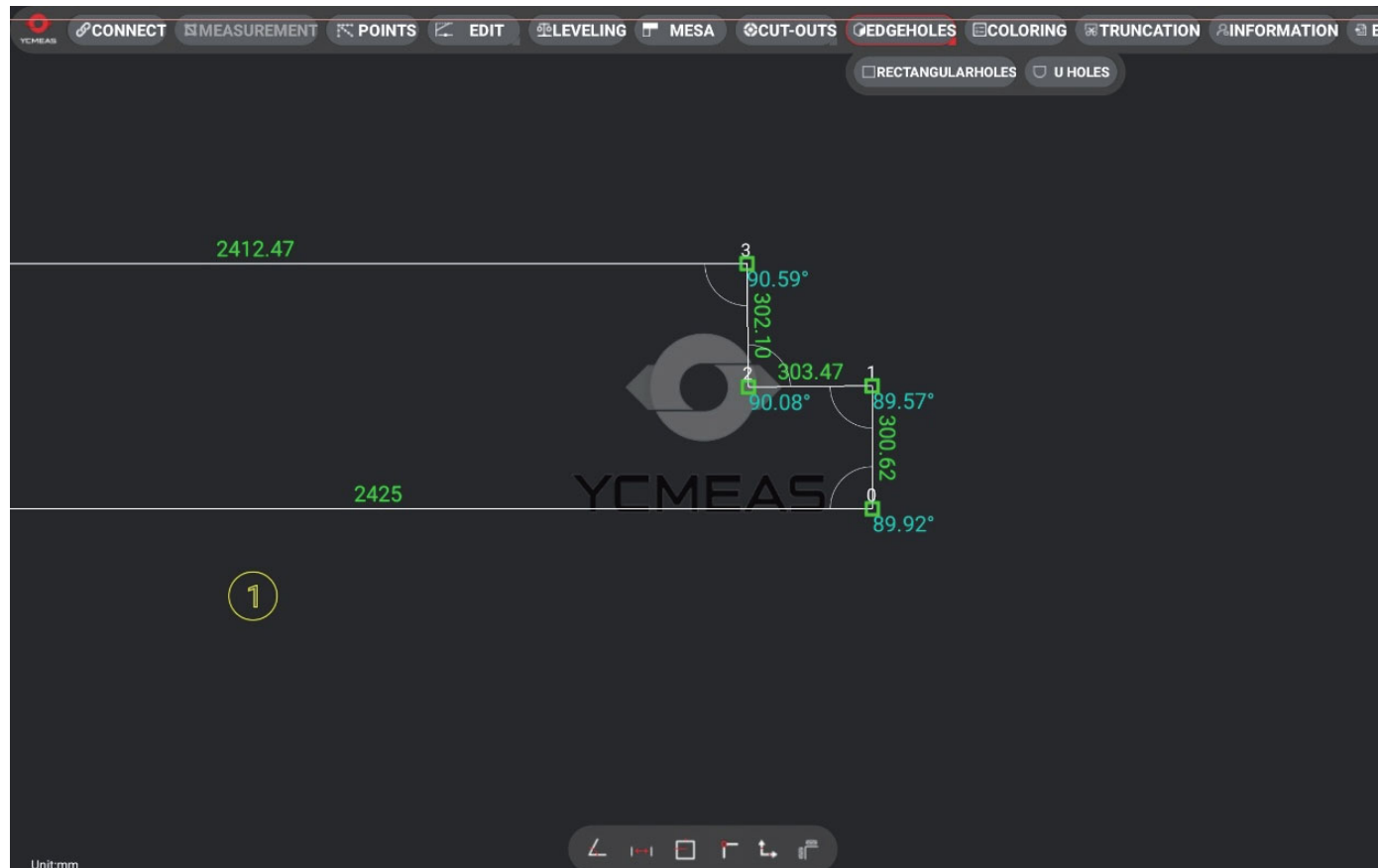
"Rectangle", "Ellipse": Long side / major axis is parallel to the edge selected by "Edge Distance".



Edge Hole

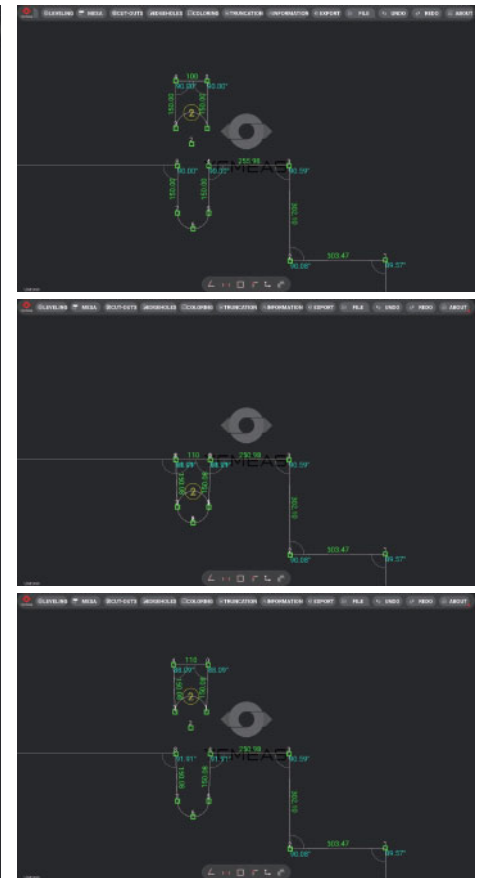
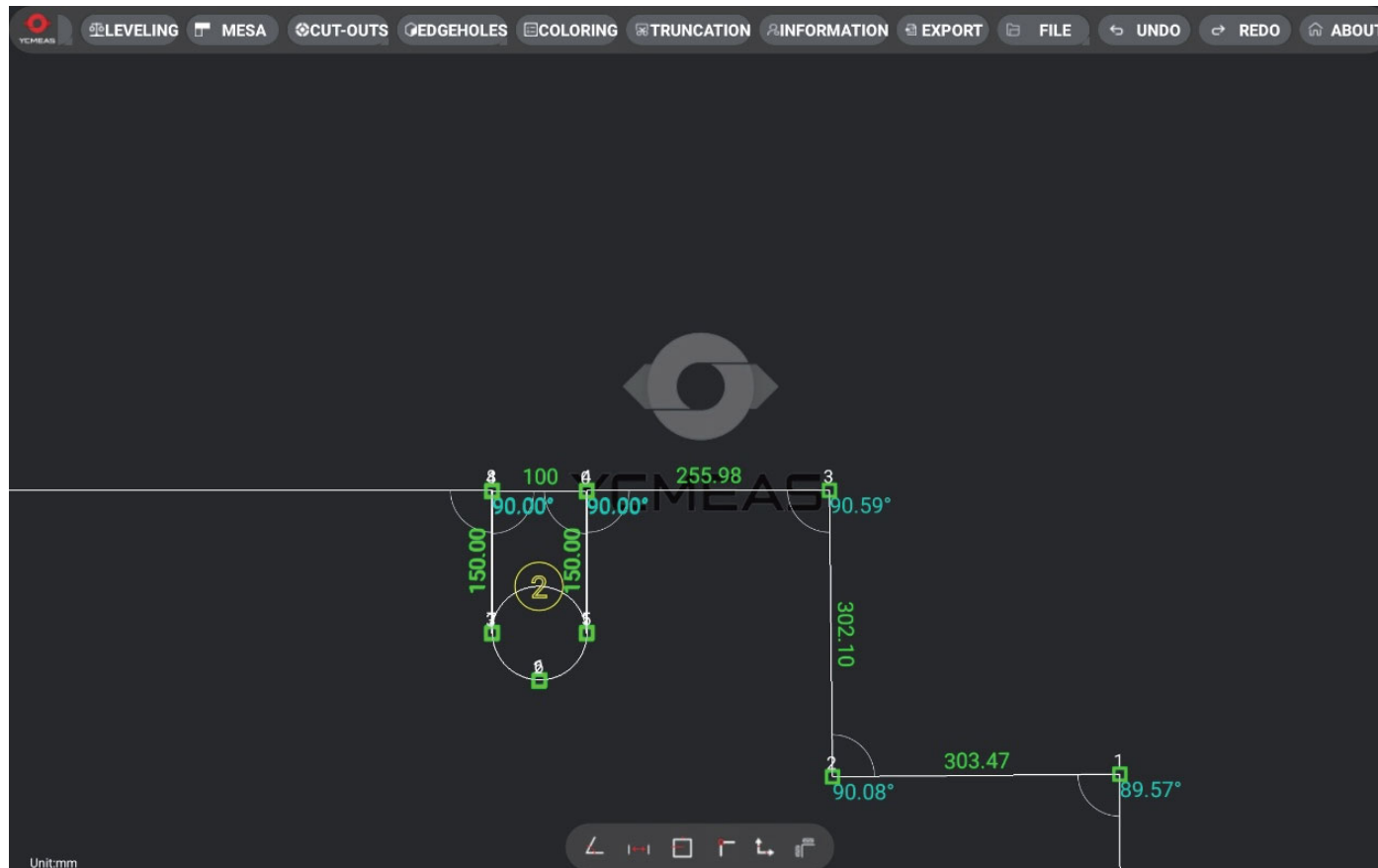
For convenient opening on one side or corner of countertop for chimneys, water/gas pipes, etc., using smart edge hole. Click desired hole shape, then click appropriate location on countertop. Adjust length/width dimensions to change size.

Click "Margin 1", "Margin 2", select line segments to complete location. Modify annotation data, click "Preview" to drive position change. Confirm and click OK; hole merges with border.



Edge Hole

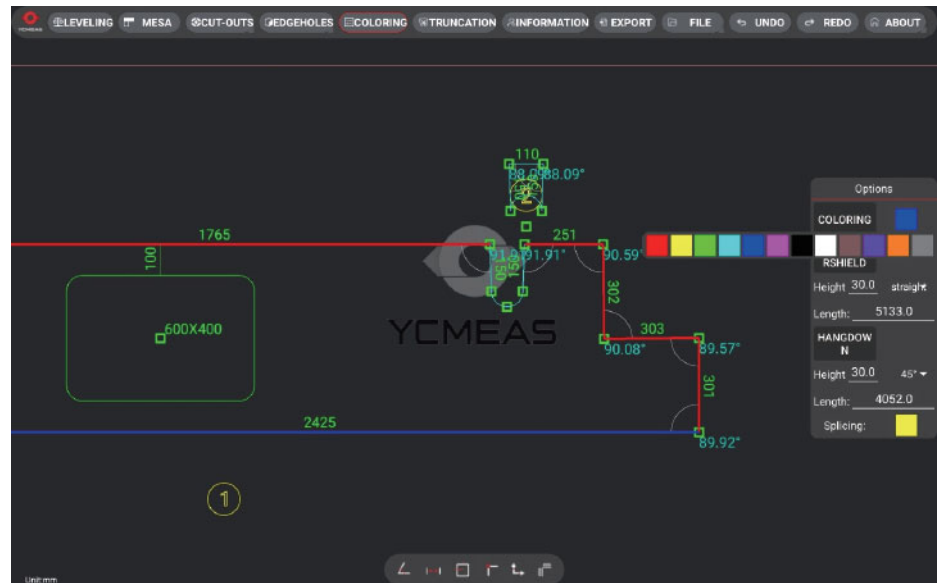
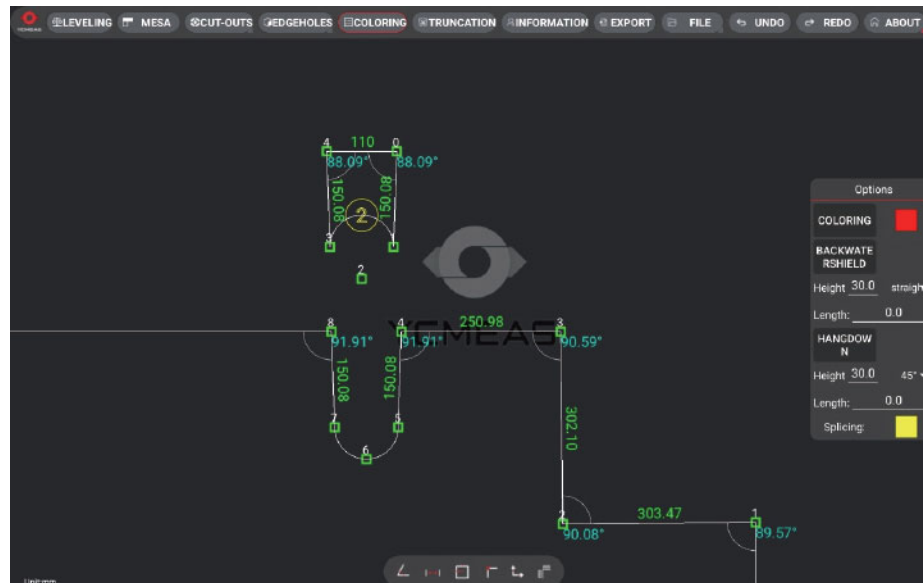
"U-Shape" Edge Hole: Upon completion, automatically generates a filler piece. If not needed by customer, click Edit, Delete. When "Horizontal" value is less than "Vertical" value, an option button  appears. Default is square (hole front/back width same). Clicking this  button toggles mode, generating a hole with back edge widened by 1mm; filler piece adjusts accordingly. Can be modified in DXF export preview.



Coloring

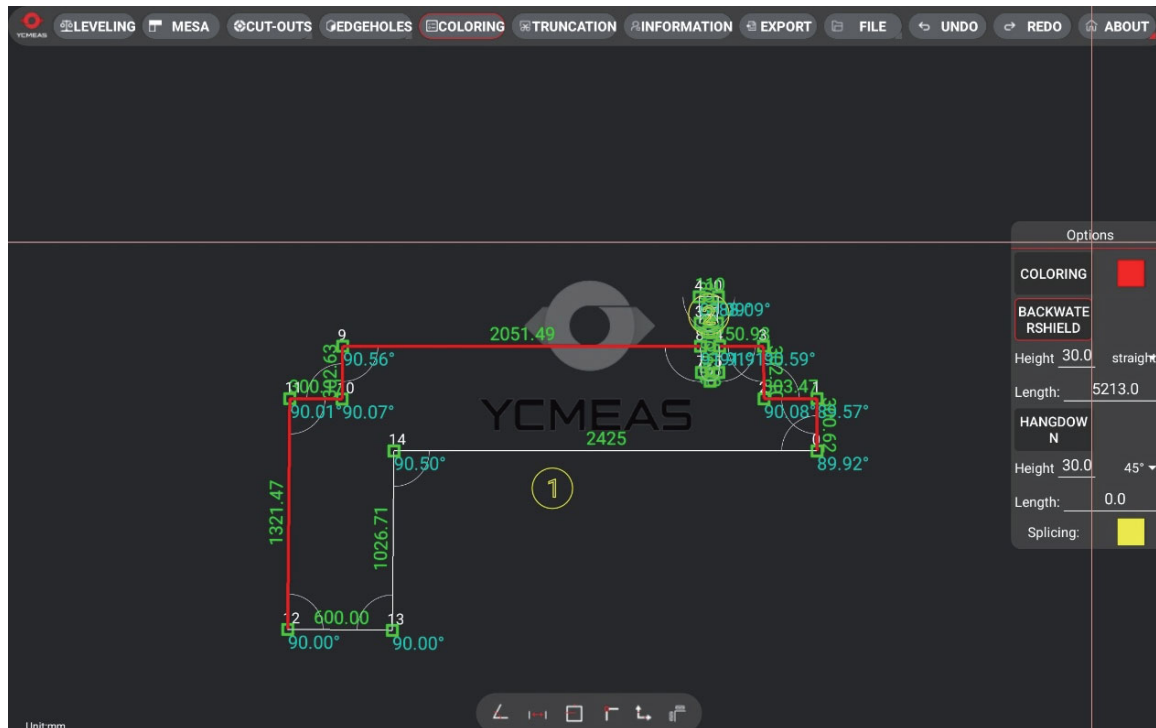
Click to set backslash position, front apron position, color settings, cutout color selection.

Click color button ■ to choose color. Backslash type (Straight, Arc), Apron type (45-degree, 23-degree, European style); for recording only, reflected in exported DXF. Enter respective heights; used in output DXF for disassembling backslash/apron strips. Backslash and apron lengths are automatically summed.



Coloring

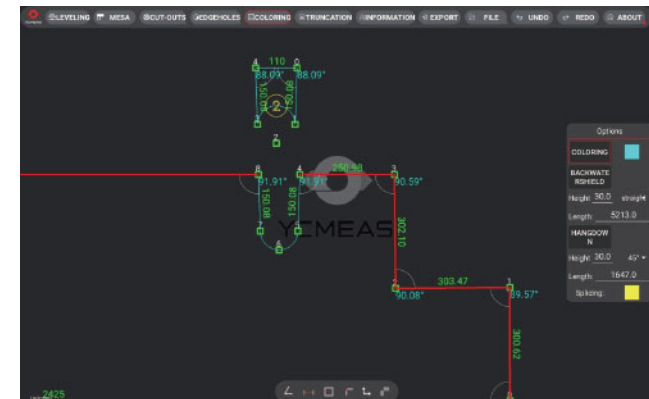
First select backslash color, then click "Backslash" button (darkens). Select line segments for backslash. Re-select to deselect. Selected lines become bold and colored. Length automatically accumulates for DXF export disassembly.



Apron operation is similar.



"Color" button darkens. Select cutout shapes. This coloring also supports coloring backlash and apron with different colors.



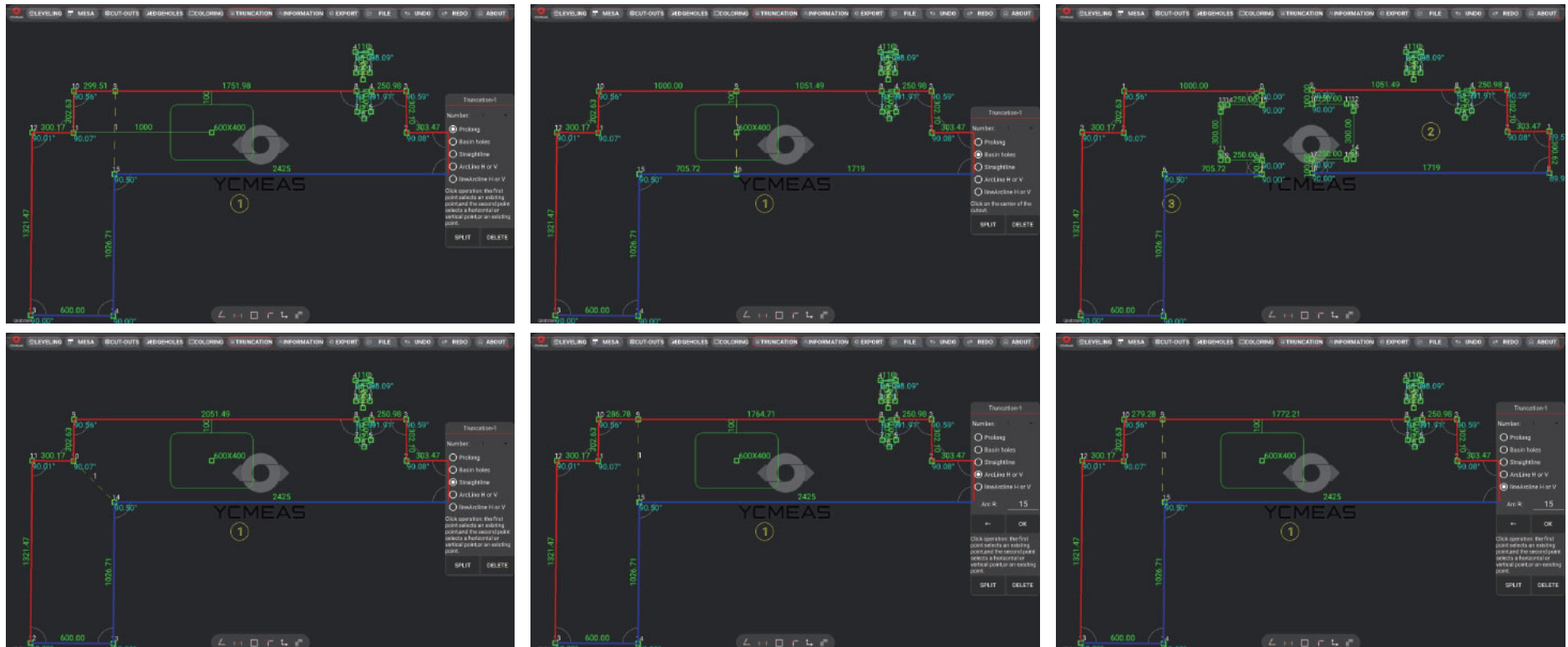
Some customers require arcs colored separately; uses the last color in the coloring palette.

Truncation

For irregular countertop processing, supports horizontal, vertical, and point-to-point truncation. Click, icon changes. First point must be a line segment endpoint. Second point can be another endpoint or approximate horizontal/vertical border position; software auto-calculates horizontal/vertical and corrects.

Truncation lines can be added indefinitely. To delete, first select line number, then corresponding operation.

Truncation line types include: Prolong, Straight line, ArcLine H/V, Line-ArcLine H/V. Only horizontal/vertical truncation lines can use ArcLine or Line-ArcLine. Click down arrow "↓" to toggle offset direction, then OK to change truncation type.



- Split divides one countertop into two based on cutoff line position.
- After operation, click again to close parameter window.

Info Settings

Click to set other countertop info, operator, client info, etc. Appears as notes in exported DXF master drawing.

Here, Stone Size and Saw Blade Thickness affect backsplash and apron disassembly. If these three fields (Stone Size, Saw Blade Thickness) and Backsplash/Apron Height are all non-zero, backsplash and apron will be automatically broken down.

Number:

Total:

Plate Size: × Height

☐ No 2 water retaining width:

Cutting seams:

Illustrate:

Gluing:

Customer:

Telephone:

Address:

Designer:

Other:

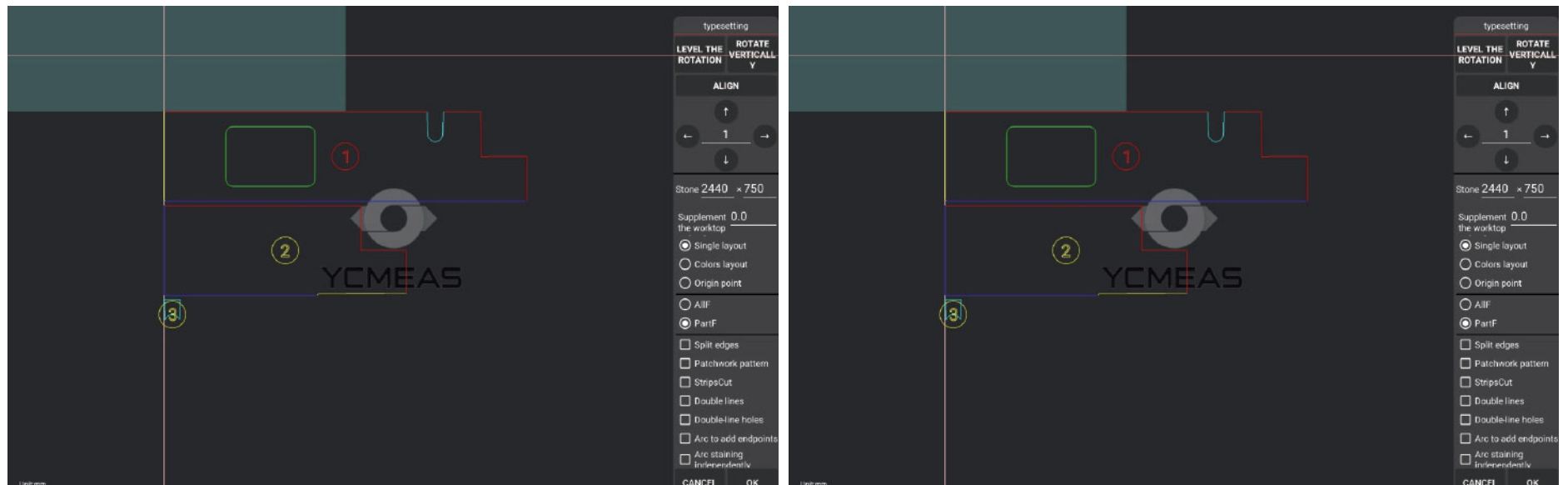
OK

CANCEL

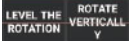
Export DXF File

Preview and export DXF file in standard format compatible with customer cutting software. File saved to phone storage /OGLCAD/*****.dxf. Use OTG adapter for USB drive, or phone file manager to copy; or connect to PC, access phone storage to copy. Filename customizable.

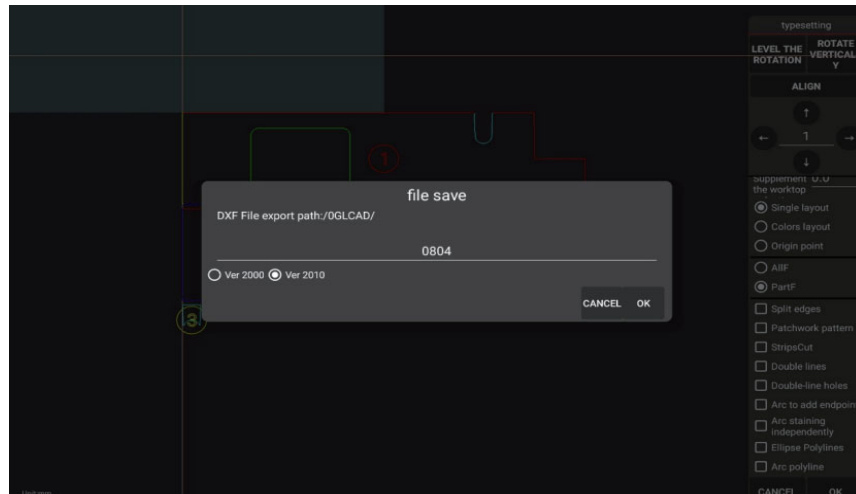
Layout Preview: Select the central circle label of a drawing to move freely for layout. If Stone Size is not entered, stone area is not shown. After entering Stone Size, stone at actual scale is displayed. User can drag countertops onto stone; software auto-snaps to edges. For non-snap movement, move quickly to separate.



Export DXF File

Leveling Rotation:   similar to software's Level function, flips countertop as needed for cutting.

Align: Activate button  then select multiple countertops (selected numbers turn red). Click directional buttons below to align selected items (Top, Bottom, Left, Right) based on the first selected target.



Fine Adjustment: With Align button inactive, click directional buttons to move countertop precisely according to the step value shown. Can refer to coordinate axis data.

Other options available via scrolling.

Generated files include: Master file, e.g., "abc.dxf"; Split files: Based on user-drawn truncation lines, multiple files e.g., "abc1.dxf", "abc2.dxf", "abc3.dxf".

Single Layer vs. Color-separated Layers: Single Layer exports all elements to one DXF layer. Color-separated Layers assigns elements to layers based on color.

AIIF vs. PartF: AIIF places split drawings in one DXF file. PartF creates independent DXF files for each split drawing.

Edge Cutoff: When Stone Size and Saw Blade Thickness are filled in Info, backplash/apron are disassembled into strips; this option controls whether strip endpoints are cut off.

Add Arc Endpoints: Some cutting machines cannot automatically lift the tool after cutting an arc; this option adds an extra point at each arc endpoint.

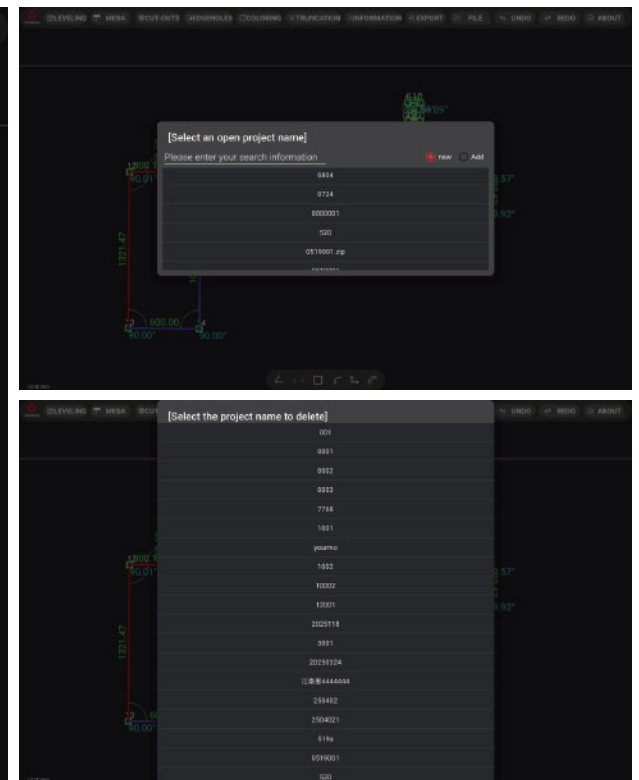
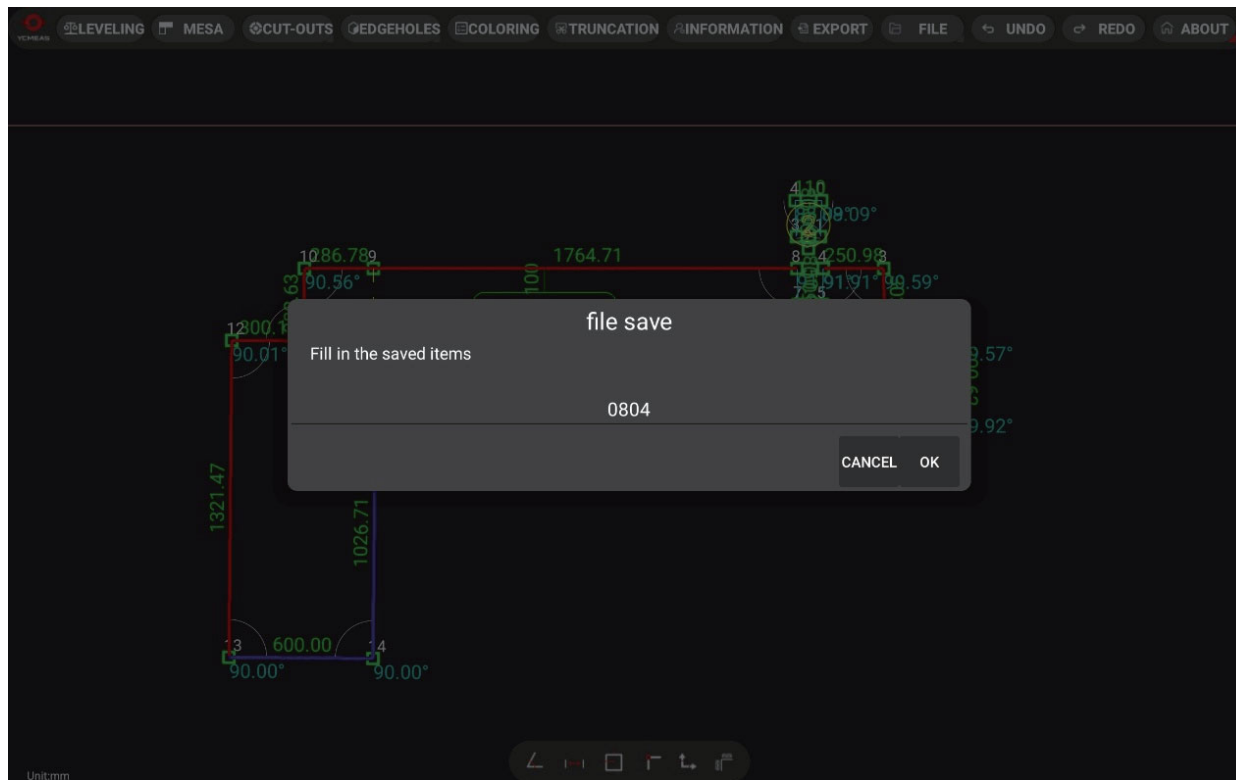
Arc Independent Coloring: When selected, all arcs are colored with the last color set in Options coloring; required by some cutting machines.

Double Lines: In exported master drawing, backslash as double solid lines, apron as dashed lines.

Countertop, Backslash, Apron, Up/Down Arrow Buttons: Simple adjustment for layout after disassembly (when Stone Size and Saw Blade Thickness are filled). Select an item, press Up arrow to move it up, Down arrow to move it down. For use with cutting machines lacking layout capabilities.

File

Open for re-editing, Save, Delete functions.



Undo, Redo

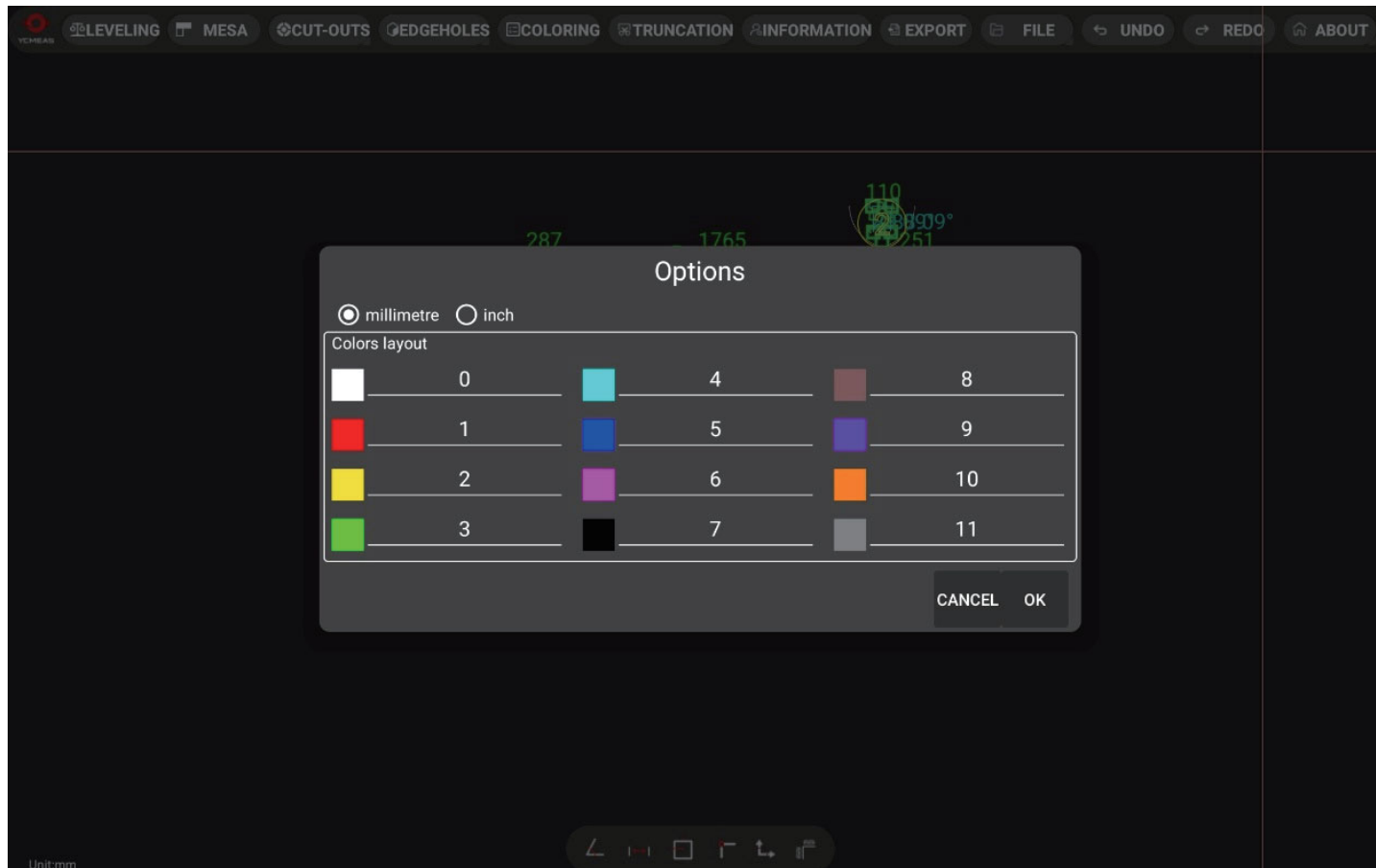
Click Undo anytime to revert last operation; Redo to repeat next operation.

↶ UNDO

↷ REDO

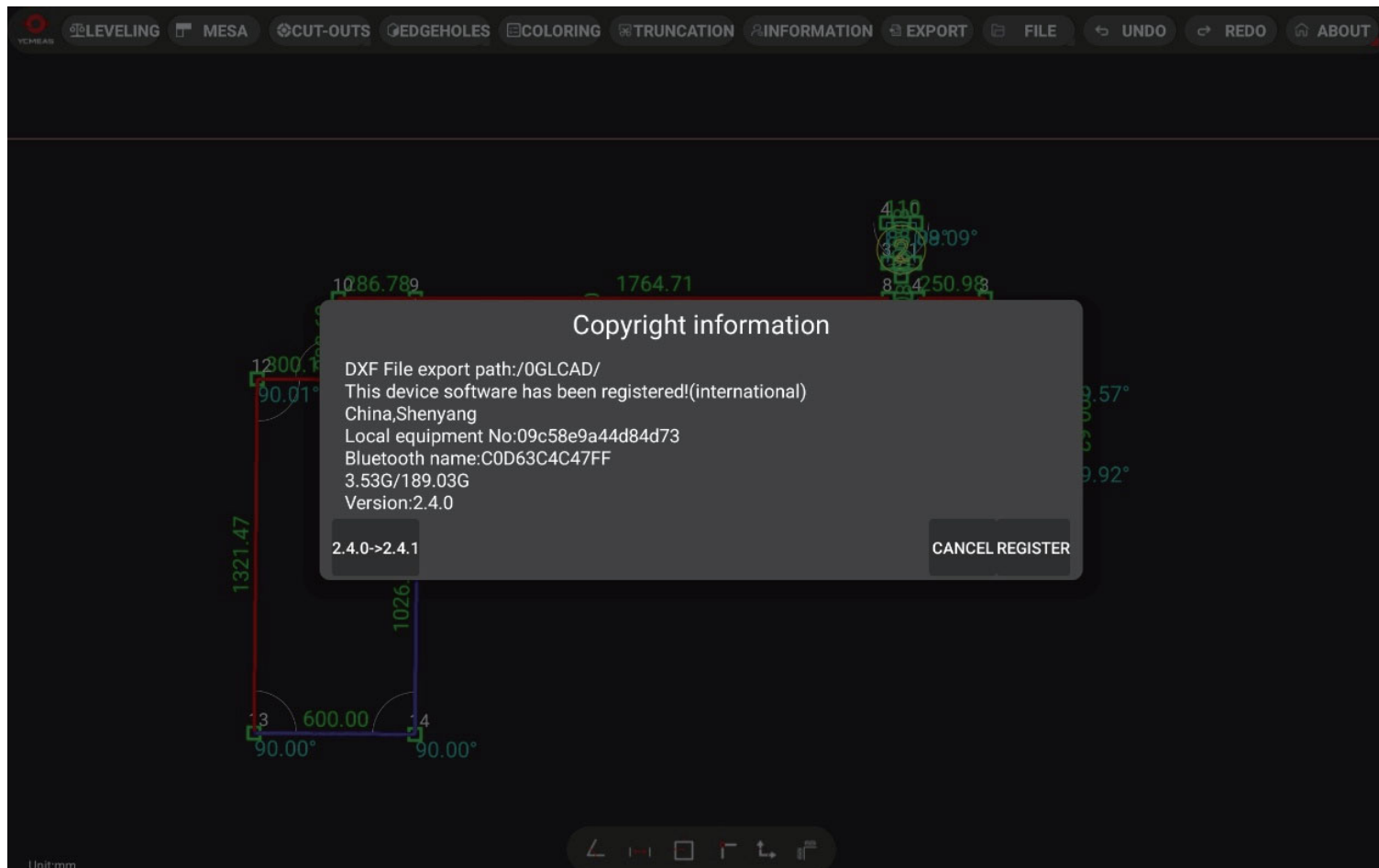
Options

Two sections: Unit Toggle (inch/mm), and Color Layer mapping to modify corresponding layer names. Some cutting machine manufacturers identify by layer name, not color, and have custom layer name/numbering. Can modify to desired layer number; mapping done via color in Coloring.



About/Copyright Info

Click to open copyright info, display export file path for easy copying. Send device ID to supplier to purchase activation serial number. Permanent use after registration.



Technical parameters

	YC360 plus	YC360 pro
Range under normal conditions:	0.05-8m.	0.05-5m.
Angle error:	$\leq \pm 0.02^\circ$	
Distance error:	$\leq \pm 1$ mm, tilt angle greater than 40 degrees, reflectivity greater than 80%	
Dotting accuracy:	Dotting accuracy: when the table is horizontal, the dotting accuracy is 2mm.	×
Protection class:	IP54	
Laser Class:	2 级	
Measuring range:	360°	
Battery parameters:	lithium ion rechargeable battery, 3.7 V * 4, 1000mAh (if it is not used for a long time, please take it out and charge it regularly to avoid excessive discharge leading to battery scrap; do not mix batteries with different power levels; the charger supplies DC 5V 2A)	
Laser type:	635nm,<1mW	
Tripod retraction length:	450mm	
Extended height of tripod:	1200mm	
Tripod weight:	1kg	
Host size:	95*180mm	
Weight of main machine:	1.05kg	
Software adaptation system:	Android 7.0 or above (including Hongmeng system)	
Registration method:	unique registration code binding for each instrument	
Butt-jointing processing equipment:	four-axis and five-axis bridge cutting/machining center/strip breaking machine/water knife, etc.	
Software interface design:	landscape, suitable for tablet or mobile phone	



YCMEAS(Beijing) Technology Co., Ltd

27B Block A, Oriental Ginza DongCheng District,
Beijing, China

FCC Warning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.