UCCNC 2022

Screenset

Reference Guide
Version 1.005

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By installing this software, the user agrees to the license agreement found in 2022_License.txt.
Please read before installing.
A copy of this manual will be installed in the \UCCNC\Documentation folder for your convenience, and a shortcut will also be added to your Windows Start menu.

Introduction

The 2022 Screenset is a custom interface for the UCCNC machine control software, providing additional features and a simplified user interface.

Additional features include Z axis auto zero, automatic auto zero after toolchange, and several basic probing macros.

Limitations

1) The 2022 Screenset does not include the UCCAM functionality found in the default UCCNC screenset. There are no plans to add this to the 2022 Screenset.
2) The 2022 Screenset does not utilize the Probing routines from the default UCCNC screenset It has alternative basic probing routines for simple non-critical probing operations.

Requirements

The 2022 Screenset requires a licensed copy of UCCNC, from CNC Drive in Hungary.
http://www.cncdrive.com/UCCNC.html

The 2022 Screenset works with the UC100, UC300USB, UC300ETH, and UC400ETH, and AXBB-E motion controllers.
The UC300USB controller is supported only when used with the 5LPT motherboard from CNC Drive, or the M44 motherboard from CNC4PC. Any other configurations are not supported.
The UC300ETH controller is supported when used with the 5LPT motherboard from CNC Drive, the UB1 motherboard from CNC Room, or the M44 and M45 motherboards from CNC4PC. Any other configurations are not supported.

The 2022 Screenset is designed to be run on a 1920x1080 monitor, with the Windows Taskbar hidden. While it can be resized to fit other resolutions, the quality of the graphics may suffer somewhat.

Some macros included in the 2022 Screenset will not function until the machine has been homed, and a repeatable home position is also required.

Installation

Installation of the 2022 Screenset is a simple process.
Run 2022_Screenset_V1.x_Install.exe, and follow the prompts in the Setup Wizard.
Be sure to install the Screenset into the same folder that UCCNC is installed in. The installer should find the install path for you. If it doesn't, set it to install to the ...\UCCNC\ installation folder..
When the installation wizard is complete, there is one more step to installing the screenset.
Navigate to your UCCNC\Profiles folder, and open the 2022_Screenset_Macros\ folder. Copy the contents of this folder into the macro_*profilename* folder of your profile. If you have a functioning UCCNC profile, It's highly recommended to create a new profile before setting up the 2022 Screenset.

Create new Profile

Follow these steps to create a copy of your current profile.
1) Start UCCNC with the default screenset, and go to Configuration > Profiles.
2) Check the "Create shortcut on desktop" Checkbox.
3) Type in a new profile name and hit the "Enter" key.
4) Click the "Create new profile" button.

Assign Screenset to Profile

To use the 2022 Screenset with your newly created profile, start UCCNC using the new Desktop shortcut. Navigate to the Appearance Settings, and click the "Select Screenset" button. When the Screen Select window opens, select "2022" from the list, and click the "Select" button. UCCNC will then restart with the 2022 screenset.

Configure Plugin

The 2022 Screenset uses a plugin to control many screenset functions, as well as motion and probing routines.
Navigate to the Settings > Page 2 screen, and at the bottom center, click Configure Plugins. When the Plugins Configuration window opens, find the "2022 Screenset" plugin in the list, and check the "Enabled" checkbox. Then close, and restart UCCNC. The plugin should now be running, and all screenset functions working.

Uninstall Note: The 2022 screenset can be uninstalled from the "Programs and Features" option in the Windows Control Panel.

<u>Setup</u>

Verify / Configure Axis (motor) Settings

Start UCCNC with the newly created desktop shortcut, and you should now see the 2022 Screenset. (Note: If running in demo mode, select the appropriate motion controller from the list when starting.)

Click the "Axes Setup" tab at the top center of the screen, which will take you to the Axes setup pages. The 2022 Screenset has consolidated the axis setup into five sub-tabs:

1) X, Y, and Z axes.
2) A, B, and C axes.
3) Spindle
4) Tangential (A axis Tangential Settings)
5) Aux. Encoders

All of the UCCNC axis settings can be found on these pages. As per standard UCCNC convention, you must click the "Apply Settings" and "Save Settings" button when making any changes.

Verify / Configure I/O Settings

Click the "I/O Setup" tab at the top of the screen to go the the I/O setup pages. There you will find three sub tabs:

1) General I/O. This page contains Debounce, General Inputs, MPG, THC, M10.x Outputs, and Analog I/O Settings. (Analog is only available with UC300 and AXBB-E motion controllers)
2) Input Triggers. This page contains 96 Input Triggers. See the UCCNC User Manual for information on their use.
3) Output Triggers. This page contains 96 Output Triggers. See the UCCNC User Manual for information on their use.
4) Hotkeys. This page contains the settings for the 96 available hotkey assignments. See the UCCNC User Manual for information on their use.

All of the UCCNC I/O settings can be found on these pages. As per standard UCCNC convention, you must click the "Apply Settings" and "Save Settings" button when making any changes.

Verify / Configure Settings

Click the Settings tab at the top of the screen to verify standard UCCNC settings, and configure settings required by the 2022 Screenset. There are two "Settings" sub tabs:
1) Page 1.
2) Page 2.

Note: Standard UCCNC Settings require the use of the "Apply Settings" button to take effect, and the "Save Settings" button to be saved for the next time that UCCNC is run.
Settings unique to the 2022 Screenset can be used immediately, and are saved when UCCNC is shut down. Save requirements are specified below for each section.

Page 1

Page 1 Settings are broken down into several groups, most of which are standard UCCNC settings.

Kernel Frequency

UCCNC Kernel Frequency options and Communication Buffer Size setting. See the UCCNC User Manual for more information. (Apply and Save required)

Trajectory

UCCNC CV Settings, arc tolerance, and G41/G42 Cutter Compensation settings. See the UCCNC User Manual for more information.
(Apply and Save required)

Homing Sequence

UCCNC standard Homing Sequence settings.
(Apply and Save required)

General Settings.

A group of standard UCCNC settings with two exceptions.

Safe Z Height 1 (Run From Here Only)

This is the default Safe Z settings for UCCNC. It's value is in Work Coordinates. In the 2022 Screenset, this value is only used when using the Run From Here option. (Apply and Save required)

Safe Z Height 2 (Machine Coordinates)

This is an alternate Safe Z setting for the 2022 Screenset. It's value is in Machine Coordinates. Safe Z in Machine Coordinates provides a consistent height which is much safer than the default SafeZ.
This value is used (optional) for the following functions in the 2022 Screenset:
1) Goto Zero.
2) Park 1 – Park 3
3) Tool Setter Calibration
4) Goto Tool Change Position

This setting is automatically saved when UCCNC is closed.

Unknown G-Code Handling

Select the option that determines how unknown g-codes are dealt with by UCCNC. See the UCCNC User Manual for more information. (Apply and Save required)

Tool Change Operation

UCCNC standard tool change settings. See the UCCNC Manual for more information. To use the 2022 Screenset's Auto Zero during tool changes, "ATC Mode" should be selected.
(Apply and Save required)

Tool Change Position

X, Y, and Z axis Tool Change Position, in Machine Coordinates.
If Use Safe Z 2 option is enabled, the Z axis will first move to the position defined as "Safe Z Height 2" on the General Settings page. It will then move the the XY Coordinates, before finally moving to the Z tool change position. (These settings are automatically saved when UCCNC is closed.)

Park Positions

The 2022 Screenset provides three user definable Park Positions.
Park positions can be called from their respective buttons on the Run screen, or from M codes inserted into g-code or run from MDI.
Each positions coordinates can be in either Work Coordinates or machine Coordinates.
A "Use Safe Z2" option effects all three Park Positions. Use Safe Z2 uses the "Safe Z Height 2" on the General Settings page, and this Safe Z is always in machine coordinates, regardless of the coordinates used by the Park Position.
Park positions can be called from g-code or MDI with the following M codes:
Park Position #1 – M20673
Park Position #2 – M20674
Park Position #3 – M20675
(These settings are automatically saved when UCCNC is closed.)

Page 2 Settings

Page 2 Settings is broken down into several groups. Some are standard UCCNC settings, and others are settings specific to the 2022 Screenset.

Appearance Settings

Toolpath display options and program color options. To change a color, click on the color square to bring up a color picker. See the UCCNC User Manual for more information. (Apply and Save required)

Profiles

UCCNC standard profile controls.

Configure

Options to Configure Plugins, Macroloops, and to Lock the UCCNC settings.

Jog % Increments

The 2022 Screenset uses pre-defined jogging speed increments, which are set here. Values should be entered incrementally, with the smallest value used for #1, and the highest for #6.
The plus ("+") and minus("-") buttons on the jog panel will cycle through these values.
(These settings are automatically saved when UCCNC is closed.)

Jog Step Increments

The 2022 Screenset uses pre-defined jogging step increments, which are set here. Values should be entered incrementally, with the smallest value used for #1, and the highest for #6.
The plus ("+") and minus("-") buttons on the jog panel will cycle through these values.
(These settings are automatically saved when UCCNC is closed.)

System Information

UCCNC hardware/software/license information

Z Axis Auto Zero Settings

Settings for the 2022 Screenset Auto Zero routines can found under the Probing> Settings page. See below for information on each of the available settings/ options. (These settings are automatically saved when UCCNC is closed.)

Plate Thickness

Thickness of the movable plate used for zeroing the Z axis Plate Thickness.

Fixed Plate X Position

Machine Coordinate X position of the Auto Zero fixed plate. When zeroing the tool to the fixed plate, the center of the tool will be located at this position.

Fixed Plate Y Position

Machine Coordinate Y position of the Auto Zero fixed plate. When zeroing the tool to the fixed plate, the center of the tool will be located at this position.

Clearance Plane Z Value

After running an Auto Zero macro, the tool retracts to the specified Clearance Plane value. It MUST be higher than the work piece, to prevent the tool from plunging down into the work after zeroing. This is especially important if you set Z zero to the bottom of the work piece.
There are 3 options for the Clearance Plane value.
1) Work Offset – This is the actual position in Work Coordinates, above Z zero. It must be greater than the Plate Thickness.
2) Incremental Move – This specifies the Clearance Plane as an incremental move above the plate/tool setter.
3) Machine – This specifies the Clearance Plane value to be in Machine Coordinates. It must be below the Z axis Home position.

Probe Distance

Maximum Z axis travel distance for the auto zero macro. If this distance is reached before making contact with the plate, the zero operation will be aborted.

Retract Distance

The 2022 Screenset uses a double touch auto zero routine. The Retract Distance is the amount the tool lifts from the plate before making the second probe move.

First Probe Feedrate

Feedrate of the first auto zero probing move. By using a faster First Probe Feedrate, the total elapsed time of the auto zero routine can be reduced.
Note: If using a rigid auto zero plate, an excessive First Probe Feedrate may cause tool damage, as the Z axis needs room to decelerate at the end of the probing move.

Second Probe Feedrate

Feedrate of the second probe operation where the actual zeroing of the tool is done. While feedrate should technically have no affect on the zeroing process, a slower feedrate can minimize or eliminate machine deficiencies from the process.

Z axis Home Switch Clearance

The 2022 Screenset checks the home switch location prior to making retract moves to prevent machine damage or limit switch triggers. If it finds that such moves will travel past the home switch, the user is given an option to move to a safe distance below the home switch.
This value specifies an absolute distance below Z zero that the machine can safely retract to.

Rapid Down to Z Machine

This option is used during tool changes, and Tool Setter Calibration. When selected, prior to probing for the fixed tool setter, the machine will rapid down to the specified value (in Machine Coordinates) before starting the probing operation. This can greatly speed up the probing process, by shortening the probe distance.
Warning! Incorrect settings may result in damage to your tools and/or machine. If this option is selected, make sure it's location provides sufficient clearance with the longest possible tool used.

Use Material Offset

The Material Offset option allows setting Z zero at a position other than the location of the auto zero plate. This can be useful in a variety of situations.

Example: Say that you have g-code that cuts profiles .74" deep into a .75" thick panel, and you'd like to use the same code on thinner material, say .50". There are two ways to use the offset.
1) Set the offset to the difference between the material originally coded for (.75") and the material your using (.5"). You'd set the offset to .25", and zero with the plate on the material. Z zero will be set .25" above the material.
2) Set the offset to the thickness of the original material, .75", and zero to the bed of the machine. Z zero will be set .75" above the bed. This will allow you to cut the profiles from any material thickness not greater than the original.

Note: Negative values are valid for Material Offset, but will result in a warning message during the Auto Zero macros.

Prompt When Material Offset Enabled.

Selecting this option will result in a Message Box being displayed during probing operations when the Material Offset option is enabled, as a reminder to the user.

Prompt User to Start Spindle

When checked, this option will result in a Message Box being displayed at the end of the Tool Change macro. The macro will not proceed until the Message Box is closed by the user.
This gives the user time to either remove a clipped on ground wire, or,when zeroing a new tool after a

tool change, start the spindle before continuing.

Set Z Zero for All Offsets

The Auto Zero routine will normally set Z zero for the currently active Work Coordinate System (G54 through G59).
Enabling this option sets Z zero for all six Work Offsets, so that multiple Work Offsets can be used without the need to re-zero tools.

Re-Zero Current Tool on M6

If a tool change is called using the same tool as the current tool, the default operation is to ignore the tool change. If this option is selected, the current tool in the spindle will be re-zeroed to the tool setter. No tool change will occur.

Use Safe Z2 for Fixed Plate Clearance Plane

If this option is selected, Safe Z 2 will be used for the Clearance Plane during Tool Setter Calibration and Tool Setter (fixed plate) probing moves. This does not apply to simple Auto Zero probing.

Using the 2022 Screenset

Note: It is assumed that the user has working knowledge of the UCCNC control software. Standard UCCNC functions and operation are not covered in this guide.

Run Screen

UCCNC is operated mainly from the "Run" tab, which has the controls broken down into groups.

Main Coordinate Tab Group

The main coordinate group is a Tab group with 5 tabs. The first 3 tabs contain the main coordinate DRO's, as well as the Homing and axes Zero buttons. Below the main coordinate DRO's are the actual Velocity and actual RPM DRO's, as well as the elapsed time timer.

Homing buttons

On the left, is a "Home All" button, which homes all axis in the order specified on the General Settings tab page.
To the right of the Home All button, are individual "Home" buttons for each axis, which also indicate whether the axes are homed or not.
Axis that have not been homed will have a red "X" on the button. Axis that have been homed will no longer display the "X".

Axis prior to Homing   *Axis after Homing*

Main Coordinate DRO's

To the right of the Homing buttons are the main DRO's for the X, Y, Z, and A axis. These are always displayed in the current work coordinate system.

Axis Zero Buttons

Adjacent to the Main Coordinate DRO's are Axis Zero Buttons.

Zero Axis Button

Machine Coordinate DRO's

On the first tab, "Machine", are the Machine Coordinate DRO's for the X, Y, Z, and A axis.

To Go DRO's

On the second tab, "To Go", are the To Go DRO's for the X, Y, Z, and A axis.

Scale DRO's

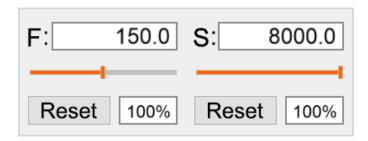On the third tab, "Scale", are the Scale DRO's for the X, Y, Z, and A axis.

Offsets

On the fourth tab, "Offsets", are the controls for the G54-G59 offsets. The G54-G59 buttons along the bottom select the DRO's for the desired offset. These buttons do not change the actual offset currently in effect.

Extents

On the fifth tab, "Extents", are the extent DRO's for the currently loaded g-code file.

Feedrate/ Spindle Speed Group

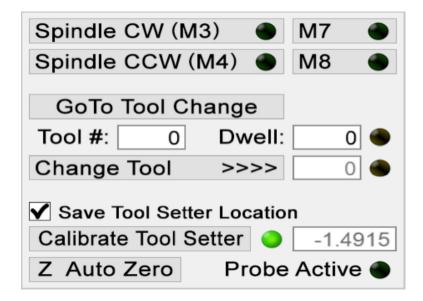This group contains the current Feedrate and Spindle Speed DRO's. These are read only, and can not be edited by the user.
It also contains the Override DRO's for each, and slider controls to adjust the feedrate and spindle speed overrides. The "Reset" buttons will reset the override values to 100%. These DRO's can be edited by the user, ie, specific override values can be entered into the DRO's.

Spindle Control Group

This group contains a variety of controls related to the spindle.

Spindle CW (M3) & Spindle CCW (M4)

These buttons toggles the spindle on and off, and contain LED's to indicate the state of the spindle. These buttons are also controlled by the M3 & M4 g-code commands.

M7

This button toggles the M7 output pin when configured, and contains an LED to indicate it's current state.

M8

This button toggles the M8 output pin when configured, and contains an LED to indicate it's current state.

GoTo Tool Change Position

This button sends the machine to the tool change position specified on the Settings > Page 1 page. The move is handled by the 2022 Screenset plugin.

Tool # DRO

Displays the currently selected tool number. (Read Only)

Dwell DRO

Displays the dwell duration when a dwell is in effect. (Read Only)

Change Tool >>>

To change the current tool manually, enter the tool # in the adjacent DRO, and press the button. This button calls an M6 g-code, which runs the M6 tool change macro. See the Auto Zero section for more information. The adjacent LED indicates when a tool change is in progress.
Note: Tool changes are not allowed without first running the Calibrate Tool Setter routine.

Save Tool Setter Location

When checked, the Tool Setter (fixed plate) location is saved and restored when UCCNC is closed and restarted. This is typically used when the machine table or spoilboard is set to Z zero, and eliminates the need to set Z zero.

Calibrate Tool Setter

This button performs a Z axis auto zero at the current location, and then moves to the tool setter (fixed plate) location, where it touches the fixed plate and stores the fixed plate Z coordinate.. See the Auto Zero section for more information. (This is handled by the screenset plugin)

Z Auto Zero

This button performs a simple Z axis auto zero at the current position. See the Auto Zero section for more information. (This is handled by the screenset plugin)

Probe LED

To the right of the Auto Zero button, is a Probe Input LED to display the state of the Probe Input. This is useful for testing the touch plate prior to running an Auto Zero macro.

Softlimits

The Softlimits button toggles Softlimits on and off. Softlimits are on when the LED on the button is on. By default, changes to the Softlimit button are not saved when UCCNC is closed. To save them and have UCCNC start with them on or off, set them as desired, and go to the Settings screens and click the Save Settings button.

Other Groups

All of the remaining controls on the Run screen are standard UCCNC controls, and should be self explanatory.

Z Axis Auto Zero Operation

The 2022 Screenset includes both a "simple" Auto Zero, and a method of automatically measuring tools after a manual toolchange.

Both methods require a movable touch plate or "tool setter", wired to trigger the Probe input in UCCNC when activated.

To Auto Zero during a tool change, a second, fixed plate (or tool setter) is required. This should be permanently mounted in an area accessible by the tool, with it's X and Y location specified in the "Z Axis Auto Zero Settings". This plate is also wired to the Probe Input.

Z Auto Zero

For times when no tool changes are required, the "simple" auto zero is a quick option for zeroing the tool to the work.

To use the simple auto zero, jog the tool over the touch plate, and press the "Z Auto Zero" button. The tool will begin moving downward at the "First Probe Feedrate" until it reaches the plate. It will then retract the "Retract Distance" and probe again at the "Second Probe Feedrate" to get a more accurate reading.

Z zero is then set to the top of the work piece.

The tool will then retract to the "Clearance Plane Z Value", which is in Work Coordinates.

Note: Prior to running any Auto Zero macro, it's highly recommended that the user verify that the Probe Input is functioning properly by touching the plate to the tool, and confirm that the Probe LED is activating.

Simple auto zero also supports the Material Offset option. See explanation above.

Calibrate Tool Setter

Auto Zeroing during a tool change first requires running the "Calibrate Tool Setter" routine.

The calibration routine starts similarly to the Simple Auto Zero.

Jog the tool over the touch plate, and click the "Calibrate Tool Setter" button (NOT the "Auto Zero" button). This will set Z zero the same way as the Simple Auto Zero described above. After the tool retracts to the Clearance Plane, it will then travel to the tool setter/ fixed plate, and begin probing for the fixed plate Z position. After the double probe to find the plate position, the tool will again retract to the Clearance Plane.

The macro will then activate an LED adjacent to the Calibrate Tool Setter button, LED, #700. This LED tells the M6 macro that it's OK to change tools. If you don't run the Calibrate Tool Setter, the M6 macro will exit with an error.

To the right of the LED is a read-only DRO, where the fixed plate position is stored.

Above the "Calibrate Tool Setter" button, is a "Save Tool Setter Location" checkbox. When checked, the tool setter/fixed plate position will be saved and restored across multiple session of UCCNC. This option is useful if the machine uses a consistent Z zero position, usually the spoilboard or table surface. Zeroing the Z axis, or running the Z Auto Zero routine will remove the tool setter calibration.

Tool Changes

Automatic tool measurement is done with the M6 macro. In order for UCCNC to run the macro, the user must configure UCCNC for "Automatic Tool Changer" on the "Function Settings" Screen.

When UCCNC encounters an M6 in a g-code program, it will then run the M6 macro.

The M6 macro does the following:

1) Moves the spindle to the Tool Change Position, as specified on the Settings > Page 1 page. If Use Safe Z2 is enabled, it will first go to the Safe Z 2 position before moving to the tool change position.

2) The macro will then pause to allow the user to change tools. A Message Box will be displayed, prompting the user to change tools. When finished changing tools, press the OK button to continue.

3) The spindle will then move to the fixed plate location, and probe to find the plate position. The tool Z position will then be set to the value stored in Field #20327, effectively "zeroing" the tool to match the zero position of the tool used during the "Calibrate Tool Setter" routine.

4) The tool will then retract to the Clearance Plane

5) If "Prompt User to Start Spindle" is enabled, a Message Box will prompt the user to click OK to continue.

6) The macro will exit, and the g-code will resume.

Manual Tool Changes

It's also possible to change tools without calling an M6 from g-code, and still have them measured automatically. To do this, enter the new tool number, and click the "Change Tool >>>" button. This will run the M6 macro, as described above.

This allows the user to run multiple g-code programs, with each using unique tools, and still have all of the tools zeroed to match the first.

Auto Zero Notes:

There are multiple safety checks in the Auto Zero routines and M6 macros, to try to minimize errors from occurring.

1) Auto Zero Initialize and M6 macros require the machine to be Homed (Ref'd) before they will run. This is to ensure that UCCNC knows where the fixed plate and tool change locations are. The user will be notified is Homing has not been done.

2) If any of the setting contain invalid values, the macros will not run, and will notify the user of the error.

3) After zeroing, the Clearance Plane position is compared to the Z axis home switch position, and Home Switch Clearance value. If the Clearance Plane is higher than the Home Switch Clearance value, the user will be notified of the potential error, and given the option of moving to the Home Switch Clearance position, or aborting the macro.

Probing

The XY Probing in the 2022 Screenset is simplified replacement for the Probing in the default UCCNC screenset.

To use the Probing, select one of the probing operation buttons, and then select "Start Probing".
A description of each operation is provided upon selection.

It is highly recommended to use the Jog Safe and Safe Probe modes to prevent damage from unexpected moves.

Zero axis options
Depending on which operation is selected, different operations will be available to zero the axis at the probe contact points.

Probe Edge
When selected along with any of the four "Edge Probe" options, a second probe will be performed to find the angle of the edge relative to the machine axis.

Set Angle (Apply G68)
When selected along with "Probe Edge", G68 coordinate system rotation will be applied after probing.

One Time Edge
When selected, "Probe Edge" checkbox will be unselected after probing is complete.

Triple Edge
For use with a "Triple Edge Finder". When selected along with a corner probe operation, the Z axis will be zeroed after the X and Y axes. The Z axis will move into the corner in both the X and Y directions by the amount specified under "Triple Edge XY Offset".

XY Moves at Feedrate
When selected, all X and Y position moves will be done at the specified "XY Feedrate". If not checked, positioning moves are performed at rapid rate.

Z Moves at Feedrate
When selected, all Z axis position moves will be done at the specified "XY Feedrate". If not checked, positioning moves are performed at rapid rate.

Air Blower
When selected, An Air blast will occur during the probing move, using the selected output.

M7
When selected, Air Blast will be controlled by the pin assigned to the M7 command.

M8
When selected, Air Blast will be controlled by the pin assigned to the M8 command.

Output
When selected, Air Blast will be controlled by the specified port and pin.

Active Low
When selected, the specified output will be active low. If this option is selected, the output will go high after a restart of UCCNC.

Probe Diameter
Diameter of the probe or tool used for probing. If set to 0, the diameter of the current tool will be used. If both values are zero, an error message will be displayed.

Probe Feedrate
Feedrate for Probing moves.

Slow Feedrate
Feedrate for a second, slower probing move for greater accuracy. If this value is left at zero, no second probe will occur.

Probe Distance
Distance of Probing move.

XY Clearance
Used for the Boss probing operations, this is the distance traveled over the boss before probing the opposite side. Be sure to add at least 2x the backoff distance to this value.

Z Clearance
Distance the Z axis will lift up to travel over a boss, or for the Z axis probe with the Triple Edge option.

Corner Distance
When corner probing, this is the distance the probe will move towards the corner, and then down the adjacent side before the second probe operation. Be sure to allow for the backoff distance.

Retract Distance
Distance probe will backoff after making contact.

Edge Length
When Probe Edge option is selected, this is the distance between the two probe moves.

X Axis Offset
Distance Probe is offset in X axis from center of spindle, if probe is mounted away from spindle.
Can also be used to zero the axis offset away from probed position.

Y Axis Offset
Distance Probe is offset in Y axis from center of spindle, if probe is mounted away from spindle.
Can also be used to zero the axis offset away from probed position.

XY Plate Offset
If probing to a conductive plate, or other device, this is the offset value to the actual corner. Can also be used as an offset from the spindle to a probe.

Z Plate Offset
Z plate thickness for Triple Edge probing.

Start Delay
Time in seconds before probing move begins, after clicking "Start Probing" button.

Customization

This section details the UCCNC numbers for buttons, checkboxes, fields and LED's used in the 2022 Screenset.

Checkboxes

In order to change the appearance of the checkboxes in UCCNC, the checkboxes in the 2022 screenset are actually toggle buttons. The buttons toggle actual UCCNC checkboxes via the 2022 Screenset plugin.

For checkboxes unique to the 2022 Screenset, the actual checkbox number = Checkbox Button # +10000. So for checkbox button # 10331, the actual checkbox is #20331.
The actual checkboxes states are saved in the profile. When UCCNC starts, the 2022 Screenset plugin reads the profile, and sets the checkbox state, and state of the corresponding button to match.
The following table lists the button codes for the "Checkbox Buttons" in the 2022 Screenset

Button Number	Description	UCCNC Checkbox Number	Screenset Location
10301	25kHz Frequency	86	Settings > General – Kernel Frequency
10302	50kHz Frequency	87	Settings > General – Kernel Frequency
10303	100kHz Frequency	88	Settings > General – Kernel Frequency
10304	200kHz Frequency	214	Settings > General – Kernel Frequency
10305	400kHz Frequency	215	Settings > General – Kernel Frequency
10306	Exact Stop Mode	73	Settings > Page 1 - Trajectory
10307	CV Mode	74	Settings > Page 1 - Trajectory
10308	G41/G42 Round Corners	353	Settings > Page 1 - Trajectory
10309	Show G41/G42 Erros on File Load	345	Settings > Page 1 - Trajectory
10310	Dwell in Seconds	212	Settings > Page 1 - General Settings
10311	Pre-Compile all Macros on Startup	241	Settings > Page 1 - General Settings
10312	Maximize UCCNC on Startup	147	Settings > Page 1 - General Settings
10313	Validate DRO's with "ENTER" key	227	Settings > Page 1 - General Settings
10314	Disable Jog Panel Popup on Mouseover	242	Settings > Page 1 - General Settings
10315	Disable Virtual Mouse Mode	346	Settings > Page 1 - General Settings
10316	Display Softlimit Messages	222	Settings > Page 1 - General Settings
10317	Solftlimit File Pre-Check	342	Settings > Page 1 - General Settings
10318	Disable Cycle Start if not Homed	367	Settings > Page 1 - General Settings
10698	Mandatory Homing	380	Settings > Page 1 - General Settings

10319	Reset De-Ref'd Homes	368	Settings > Page 1 - General Settings
10320	Reset G51 on File Load	344	Settings > Page 1 - General Settings
10321	Reset G68 on File Load	343	Settings > Page 1 - General Settings
10322	Reset G94 on File Load	372	Settings > Page 1 - General Settings
10323	Save Tool Table on Exit	354	Settings > Page 1 - General Settings
10324	Unknown G-Code - Ignore	216	Settings > Page 1 - Unknown G-Code
10325	Unknown G-Code – Display Warning	217	Settings > Page 1 - Unknown G-Code
10326	Unknown G-Code – Do Not Run	218	Settings > Page 1 - Unknown G-Code
10327	Ignore Tool Change	76	Settings > Page 1 - Tool Change Op.
10328	Stop Spindle, Wait for Cycle Start	77	Settings > Page 1 - Tool Change Op.
10329	Automatic Tool Changer	78	Settings > Page 1 - Tool Change Op.
10330	Use Safe Z 2	20330	Settings > Page 1 - Tool Change Pos.
10331	Park Position 1 Machine Coordinates	20331	Settings > Page 1 - Park Positions
10332	Park Position 2 Machine Coordinates	20332	Settings > Page 1 - Park Positions
10333	Park Position 3 Machine Coordinates	20333	Settings > Page 1 - Park Positions
10334	Park Use Safe Z	20334	Settings > Page 1 - Park Positions
10335	Show Crosshair on TCP	90	Settings > Page 2 – Appearance Settings
10336	3D TCP Marker	80	Settings > Page 2 – Appearance Settings
10337	Show Cone Icon on TCP	89	Settings > Page 2 – Appearance Settings
10338	Rotate TCP Marker with Plane Selection	219	Settings > Page 2 – Appearance Settings
10339	Show Zero Marker	220	Settings > Page 2 – Appearance Settings
10340	Show G68 Rotation Point Marker	340	Settings > Page 2 – Appearance Settings
10341	Show Toolpath Boundaries	341	Settings > Page 2 – Appearance Settings
10342	Do Not Reset View on File Reload	355	Settings > Page 2 – Appearance Settings
10662	Do Not Compress Images	377	Settings > Page 2 – Appearance Settings
10663	Dimensions use Axis Color	378	Settings > Page 2 – Appearance Settings
10664	Show Toolpath Dimensions	379	Settings > Page 2 – Appearance Settings
10343	Create Desktop Shortcut	79	Settings > Page 2 - Profiles
10345	Goto Zero XY Only	20345	Run Screen
10346	Goto Zero Use Safe Z	20346	Run Screen
10347	Save Tool Setter Location	20347	Run Screen
10679	Clearance Plane Work Offset	20679	Probing > Settings – Z Axis Auto Zero
10680	Clearance Plane Incremental	20680	Probing > Settings – Z Axis Auto Zero
10681	Clearance Plane Machine	20681	Probing > Settings – Z Axis Auto Zero
10682	Full Retract at Feedrate	20682	Probing > Settings – Z Axis Auto Zero
10683	Clearance Plane at Feedrate	20683	Probing > Settings – Z Axis Auto Zero
10684	Rapid Down to Z Machine	20684	Probing > Settings – Z Axis Auto Zero
10685	Use Material Ofset	20685	Probing > Settings – Z Axis Auto Zero

10686	Prompt for Material Offset	20686	Probing > Settings – Z Axis Auto Zero
10677	Prompt to Start Spindle	20677	Probing > Settings – Z Axis Auto Zero
10678	Zero All Offsets	20678	Probing > Settings – Z Axis Auto Zero
10687	Re Zero Current Tool	20687	Probing > Settings – Z Axis Auto Zero
10702	Use Safe Z2 for Clearance Plane	20702	Probing > Settings – Z Axis Auto Zero
10348	Add Axis Names	228	Probing > Settings – Digitize Settings
10349	Write CSV	229	Probing > Settings – Digitize Settings
10350	Include X	230	Probing > Settings – Digitize Settings
10351	Include Y	231	Probing > Settings – Digitize Settings
10352	Include Z	232	Probing > Settings – Digitize Settings
10353	Include A	233	Probing > Settings – Digitize Settings
10354	Include B	234	Probing > Settings – Digitize Settings
10355	Include C	235	Probing > Settings – Digitize Settings
10356	Clear Filename on M41	236	Probing > Settings – Digitize Settings
10362	Enable X Axis	1	Axes Setup > XYZ Axes – X Axis
10363	Step Active Low	2	Axes Setup > XYZ Axes – X Axis
10364	Direction Active Low	3	Axes Setup > XYZ Axes – X Axis
10365	Enable Active Low	141	Axes Setup > XYZ Axes – X Axis
10366	Limit – Active Low	4	Axes Setup > XYZ Axes – X Axis
10367	Limit + Active Low	5	Axes Setup > XYZ Axes – X Axis
10368	Home Active Low	6	Axes Setup > XYZ Axes – X Axis
10369	Home Positive	7	Axes Setup > XYZ Axes – X Axis
10370	Home Auto Zero	8	Axes Setup > XYZ Axes – X Axis
10371	Enable Backlash Compensation	9	Axes Setup > XYZ Axes – X Axis
10436	Current Hi/Lo	347	Axes Setup > XYZ Axes – X Axis
10372	Enable Y Axis	10	Axes Setup > XYZ Axes – Y Axis
10373	Step Active Low	11	Axes Setup > XYZ Axes – Y Axis
10374	Direction Active Low	12	Axes Setup > XYZ Axes – Y Axis
10375	Enable Active Low	142	Axes Setup > XYZ Axes – Y Axis
10376	Limit – Active Low	13	Axes Setup > XYZ Axes – Y Axis
10377	Limit + Active Low	14	Axes Setup > XYZ Axes – Y Axis
10378	Home Active Low	15	Axes Setup > XYZ Axes – Y Axis
10379	Home Positive	16	Axes Setup > XYZ Axes – Y Axis
10380	Home Auto Zero	17	Axes Setup > XYZ Axes – Y Axis
10381	Enable Backlash Compensation	18	Axes Setup > XYZ Axes – Y Axis
10437	Current Hi/Lo	348	Axes Setup > XYZ Axes – Y Axis
10382	Enable Z Axis	19	Axes Setup > XYZ Axes – Z Axis
10383	Step Active Low	20	Axes Setup > XYZ Axes – Z Axis

10384	Direction Active Low	21	Axes Setup > XYZ Axes – Z Axis
10385	Enable Active Low	143	Axes Setup > XYZ Axes – Z Axis
10386	Limit – Active Low	22	Axes Setup > XYZ Axes – Z Axis
10387	Limit + Active Low	23	Axes Setup > XYZ Axes – Z Axis
10388	Home Active Low	24	Axes Setup > XYZ Axes – Z Axis
10389	Home Positive	25	Axes Setup > XYZ Axes – Z Axis
10390	Home Auto Zero	26	Axes Setup > XYZ Axes – Z Axis
10391	Enable Backlash Compensation	27	Axes Setup > XYZ Axes – Z Axis
10438	Current Hi/Lo	349	Axes Setup > XYZ Axes – Z Axis
10392	Enable A Axis	28	Axes Setup > ABC Axes – A Axis
10393	Step Active Low	29	Axes Setup > ABC Axes – A Axis
10394	Direction Active Low	30	Axes Setup > ABC Axes – A Axis
10395	Enable Active Low	144	Axes Setup > ABC Axes – A Axis
10396	Limit – Active Low	31	Axes Setup > ABC Axes – A Axis
10397	Limit + Active Low	32	Axes Setup > ABC Axes – A Axis
10398	Home Active Low	33	Axes Setup > ABC Axes – A Axis
10399	Home Positive	34	Axes Setup > ABC Axes – A Axis
10400	Home Auto Zero	35	Axes Setup > ABC Axes – A Axis
10401	Enable Backlash Compensation	36	Axes Setup > ABC Axes – A Axis
10439	Current Hi/Lo	350	Axes Setup > ABC Axes – A Axis
10655	Axis is Rotary	369	Axes Setup > ABC Axes – A Axis
10656	306° Rollover	373	Axes Setup > ABC Axes – A Axis
10402	Enable B Axis	37	Axes Setup > ABC Axes – B Axis
10403	Step Active Low	38	Axes Setup > ABC Axes – B Axis
10404	Direction Active Low	39	Axes Setup > ABC Axes – B Axis
10405	Enable Active Low	145	Axes Setup > ABC Axes – B Axis
10406	Limit – Active Low	40	Axes Setup > ABC Axes – B Axis
10407	Limit + Active Low	41	Axes Setup > ABC Axes – B Axis
10408	Home Active Low	42	Axes Setup > ABC Axes – B Axis
10409	Home Positive	43	Axes Setup > ABC Axes – B Axis
10410	Home Auto Zero	44	Axes Setup > ABC Axes – B Axis
10411	Enable Backlash Compensation	45	Axes Setup > ABC Axes – B Axis
10440	Current Hi/Lo	351	Axes Setup > ABC Axes – B Axis
10657	Axis is Rotary	370	Axes Setup > ABC Axes – B Axis
10658	306° Rollover	374	Axes Setup > ABC Axes – B Axis
10412	Enable C Axis	46	Axes Setup > ABC Axes – C Axis
10413	Step Active Low	47	Axes Setup > ABC Axes – C Axis
10414	Direction Active Low	48	Axes Setup > ABC Axes – C Axis

10415	Enable Active Low	146	Axes Setup > ABC Axes – C Axis
10416	Limit – Active Low	49	Axes Setup > ABC Axes – C Axis
10417	Limit + Active Low	50	Axes Setup > ABC Axes – C Axis
10418	Home Active Low	51	Axes Setup > ABC Axes – C Axis
10419	Home Positive	52	Axes Setup > ABC Axes – C Axis
10420	Home Auto Zero	53	Axes Setup > ABC Axes – C Axis
10421	Enable Backlash Compensation	54	Axes Setup > ABC Axes – C Axis
10441	Current Hi/Lo	352	Axes Setup > ABC Axes – C Axis
10659	Axis is Rotary	371	Axes Setup > ABC Axes – C Axis
10660	306° Rollover	375	Axes Setup > ABC Axes – C Axis
10442	Enable PWM	61	Axes Setup > Spindle – PWM Spindle
10423	PWM Active Low	62	Axes Setup > Spindle – PWM Spindle
10424	PWM Direction Active Low	63	Axes Setup > Spindle – PWM Spindle
10425	Use Pulleys	226	Axes Setup > Spindle – Spindle Speeds
10426	Reverse Encoder - Feedback	201	Axes Setup > Spindle – Spindle Feedback
10427	Enable Step/Direction	62	Axes Setup > Spindle – Step/Dir Spindle
10428	Step Pin Active Low	65	Axes Setup > Spindle – Step/Dir Spindle
10429	Direction Pin Active Low	66	Axes Setup > Spindle – Step/Dir Spindle
10430	Enable Relays	67	Axes Setup > Spindle – Spindle Relays
10431	M3 Active Low	68	Axes Setup > Spindle – Spindle Relays
10432	M4 Active Low	69	Axes Setup > Spindle – Spindle Relays
10433	Enable Coolant	70	Axes Setup > Spindle – Coolant Relays
10434	M7 Active Low	71	Axes Setup > Spindle – Coolant Relays
10435	M8 Active Low	72	Axes Setup > Spindle – Coolant Relays
10661	Enable Tangential	356	Axes Setup > Tangential
10443	E-Stop Active Low	55	I/O Setup > General I/O – General Inputs
10444	Probe 1 Active Low	56	I/O Setup > General I/O – General Inputs
10445	Probe 2 Active Low	225	I/O Setup > General I/O - General Inputs
10446	Charge Pump 1 Active Low	57	I/O Setup > General I/O - General Inputs
10447	Charge Pump 2 Active Low	237	I/O Setup > General I/O - General Inputs
10448	Charge Pump Always On	59	I/O Setup > General I/O - General Inputs
10450	Laser Active Low	211	I/O Setup > General I/O - General Inputs
10451	Attach JRO to MPG	148	I/O Setup > General I/O - MPG
10452	Enable THC	81	I/O Setup > General I/O - THC
10453	Arc On Active Low	82	I/O Setup > General I/O - THC
10454	THC Up Active Low	83	I/O Setup > General I/O - THC
10455	THC Down Active Low	84	I/O Setup > General I/O - THC
10456	Control THC with no On Signal	85	I/O Setup > General I/O - THC

10457	Enable THC Delay	223	I/O Setup > General I/O - THC
10458	Enable THC Anti Dive	221	I/O Setup > General I/O - THC
10459	Enable THC Anti Down	224	I/O Setup > General I/O - THC
10460	THC Enable Active Low	238	I/O Setup > General I/O - THC
10461	Anti Dive Active Low	239	I/O Setup > General I/O - THC
10462	Anti Down Active Low	240	I/O Setup > General I/O - THC
10688	M10.1 Active Low	357	I/O Setup > General I/O – M10.x Outputs
10689	M10.2 Active Low	358	I/O Setup > General I/O – M10.x Outputs
10690	M10.3 Active Low	359	I/O Setup > General I/O – M10.x Outputs
10691	M10.4 Active Low	360	I/O Setup > General I/O – M10.x Outputs
10692	M10.5 Active Low	361	I/O Setup > General I/O – M10.x Outputs
10693	M10.6 Active Low	362	I/O Setup > General I/O – M10.x Outputs
10694	M10.7 Active Low	363	I/O Setup > General I/O – M10.x Outputs
10695	M10.8 Active Low	364	I/O Setup > General I/O – M10.x Outputs
10696	M10.9 Active Low	365	I/O Setup > General I/O – M10.x Outputs
10697	M10.10 Active Low	366	I/O Setup > General I/O – M10.x Outputs
10463	Active Low #1	91	I/O Setup > Input Triggers
through	through	through	I/O Setup > Input Triggers
10510	Active Low #48	138	I/O Setup > Input Triggers
10511	Active Low #49	243	I/O Setup > Input Triggers
through	through	through	I/O Setup > Input Triggers
10558	Active Low #96	290	I/O Setup > Input Triggers
10559	Active Low #1	150	I/O Setup > Output Triggers
through	throughthrough	through	I/O Setup > Output Triggers
10606	Active Low #48	197	I/O Setup > Output Triggers
10607	Active Low #49	291	I/O Setup > Output Triggers
through	through	through	I/O Setup > Output Triggers
10654	Active Low #96	338	I/O Setup > Output Triggers
10725	Zero Center/Corner	20725	Probing
10726	Zero Left	20726	Probing
10727	Zero Right	20727	Probing
10728	Zero Bottom	20728	Probing
10729	Zero Top	20729	Probing
10730	Do Not Zero	20730	Probing
10731	Probe Edge	20731	Probing
10732	Set G68 Angle	20732	Probing
10733	One Time Edge	20733	Probing
10734	Triple Edge	20734	Probing

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10735	XY at Feedrate	20735	Probing
10736	Z at Feedrate	20736	Probing
10737	Air BLower	20737	Probing
10738	Air M7	20738	Probing
10739	Air M8	20739	Probing
10740	Air Output	20740	Probing
10741	Air Output Active Low	20741	Probing

Buttons

The following table lists the button numbers of buttons calling macros. The buttons call the macro associated with their number.

Button Number	Button Name/Function	Location	Other
10344	Toggle Softlimits	Run Screen	Toggles Checkbox #75
10442	Toolpath On/Off	Run Screen	
10665	X Scale Reset	Run Screen > Scale Tab	
10666	Y Scale Reset	Run Screen > Scale Tab	
10667	Z Scale Reset	Run Screen > Scale Tab	
10668	A Scale Reset	Run Screen > Scale Tab	
10669	Change Tool	Run Screen	
10670	Go To Tool Change	Run Screen	
10671	Calibrate Tool Setter	Run Screen	Activates LED #700
10672	Auto Zero	Run Screen	
10673	GoTo Park 1	Run Screen	
10674	GoTo Park 2	Run Screen	
10675	GoTo Park 3	Run Screen	
10676	GoTo Zero	Run Screen	
10699	Jog Safe	Jog Flyout	Activates LED #246
10700	Jog + Increment	Jog Flyout	
10701	Jog - Increment	Jog Flyout	
10704	Probe X+	Probing > Probing	
10705	Probe X-	Probing > Probing	
10706	Probe Y+	Probing > Probing	
10707	Probe Y-	Probing > Probing	
10708	Probe X+Y+	Probing > Probing	
10709	Probe X+Y-	Probing > Probing	
10710	Probe X-Y-	Probing > Probing	
10711	Probe X-Y+	Probing > Probing	
10712	Probe Boss	Probing > Probing	
10713	Probe PocketCenter	Probing > Probing	
10714	Probe X Pocket	Probing > Probing	
10715	Probe Y Pocket	Probing > Probing	
10716	Jog Increment -	Probing > Probing	
10717	Jog Increment +	Probing > Probing	
10718	Jog Safe Probe mode	Probing > Probing	Toggles LED #246

10719	Probing Clear DRO button	Probing > Probing	
10720	Reset G68 Rotation	Probing > Probing	
10721	Jog Safe Probe mode	Probing > Probing	Toggles LED #246
10722	Safe Probe mode	Probing > Probing	Toggles LED #243
10723	Probing Clear Results	Probing > Probing	
10344	Softlimits	Probing > Probing	

Fields

The following table lists the custom fields used in the 2022 Screenset.

Field Number	Description	Screenset Location
20300	Safe Z Height #2	Settings > Page 1 – General Settings
20301	Plate Thickness	Probing > Settings – Z Axis Auto Zero Settings
20304	Clearance Plane	Probing > Settings – Z Axis Auto Zero Settings
20302	Fixed Plate X Coordinate	Probing > Settings – Z Axis Auto Zero Settings
20303	Fixed Plate Y Coordinate	Probing > Settings – Z Axis Auto Zero Settings
20313	Material Offset	Probing > Settings – Z Axis Auto Zero Settings
20305	Probe Distance	Probing > Settings – Z Axis Auto Zero Settings
20306	Retract Distance	Probing > Settings – Z Axis Auto Zero Settings
20309	First Probe Feedrate	Probing > Settings – Z Axis Auto Zero Settings
20310	Second Probe Feedrate	Probing > Settings – Z Axis Auto Zero Settings
20311	Z Axis Home Switch Clearance	Probing > Settings – Z Axis Auto Zero Settings
20312	Rapid Down to Z Machine	Probing > Settings – Z Axis Auto Zero Settings
20307	Full Retract Feedrate	Probing > Settings – Z Axis Auto Zero Settings
20308	Clearance Plane Feedrate	Probing > Settings – Z Axis Auto Zero Settings
20326	New Tool # for "Change Tool" Button	Run Screen
20327	Fixed Plate Coordinate (Read Only)	Run Screen
20314	Tool Change X Coordinate	Settings > Page 1 – Tool Change Position
20315	Tool Change Y Coordinate	Settings > Page 1 – Tool Change Position
20316	Tool Change Z Coordinate	Settings > Page 1 – Tool Change Position
20328	Jog % Increment 1	Settings > Page 2 – Jog % Increments
20329	Jog % Increment 2	Settings > Page 2 – Jog % Increments
20330	Jog % Increment 3	Settings > Page 2 – Jog % Increments
20331	Jog % Increment 4	Settings > Page 2 – Jog % Increments
20332	Jog % Increment 5	Settings > Page 2 – Jog % Increments

20333	Jog % Increment 6	Settings > Page 2 – Jog % Increments
20334	Jog Step Increment 1	Settings > Page 2 – Jog Step Increments
20335	Jog Step Increment 2	Settings > Page 2 – Jog Step Increments
20336	Jog Step Increment 3	Settings > Page 2 – Jog Step Increments
20337	Jog Step Increment 4	Settings > Page 2 – Jog Step Increments
20338	Jog Step Increment 5	Settings > Page 2 – Jog Step Increments
20339	Jog Step Increment 6	Settings > Page 2 – Jog Step Increments
20317	Park Position 1 X Coordinate	Settings > Page 1 – Park Positions
20318	Park Position 1 Y Coordinate	Settings > Page 1 – Park Positions
20319	Park Position 1 Z Coordinate	Settings > Page 1 – Park Positions
20320	Park Position 2 X Coordinate	Settings > Page 1 – Park Positions
20321	Park Position 2 Y Coordinate	Settings > Page 1 – Park Positions
20322	Park Position 2 Z Coordinate	Settings > Page 1 – Park Positions
20323	Park Position 3 X Coordinate	Settings > Page 1 – Park Positions
20324	Park Position 3 Y Coordinate	Settings > Page 1 – Park Positions
20325	Park Position 3 Z Coordinate	Settings > Page 1 – Park Positions
20340	Probing Initial Feedrate	Probing > Probing
20341	Probing Slow Feedrate	Probing > Probing
20342	Probing Max Distance	Probing > Probing
20343	Probing XY Clearance	Probing > Probing
20344	Probing Z Clearance	Probing > Probing
20345	Probing Corner Distance	Probing > Probing
20346	Probing Probe Diameter	Probing > Probing
20347	Probing Retract Distance	Probing > Probing
20348	Probing Edge Length	Probing > Probing
20349	Probing XY Plate Thickness	Probing > Probing
20350	Probing Z Plate Thickness	Probing > Probing
20351	Probing Start Delay	Probing > Probing
20352	Probing Triple Edge Offset	Probing > Probing
20353	Probing X Feedrate	Probing > Probing
20354	Probing Z Feedrate	Probing > Probing
20355	Probing Air Blast Port	Probing > Probing
20356	Probing Air Blast Pin	Probing > Probing
20360	Probing X1 Position (Read Only)	Probing > Probing
20361	Probing Y1 Position (Read Only)	Probing > Probing
20362	Probing X Pocket Length (Read Only)	Probing > Probing
20363	Probing Y Pocket Length (Read Only)	Probing > Probing
20364	Probing X Pocket Center (Read Only)	Probing > Probing

20365	Probing Y Pocket Center (Read Only)	Probing > Probing
20366	Probing Edge Angle (Read Only)	Probing > Probing
20367	Probing Edge dx/dy (Read Only)	Probing > Probing
20368	Probing Operation Label (Read Only)	Probing > Probing
20369	Probing Description Label (Read Only)	Probing > Probing
20370	Laser X Offset	Probing > Probing
20371	Laser Y Offset	Probing > Probing
20372	Probing X2 Position (Read Only)	Probing > Probing
20373	Probing Y2 Position (Read Only)	Probing > Probing
20374	Probing X axis Offset	Probing > Probing
20375	Probing Y axis Offset	Probing > Probing