

WEINTEK LABS., INC.

# Dynamic Drawing

Applied to a Wood Cutting Machine

Demo Project

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## 1. Overview and Operation

### Overview

Dynamic Drawing object enables drawing shapes on HMI screen, and this feature can be very useful for a wood cutting machine. Before cutting the woods, the wood pattern can be drawn on HMI according to the specified parameters, for the operators to preview.

This demo project shows how to apply a Dynamic Drawing object to a wood cutting machine.

### Operation

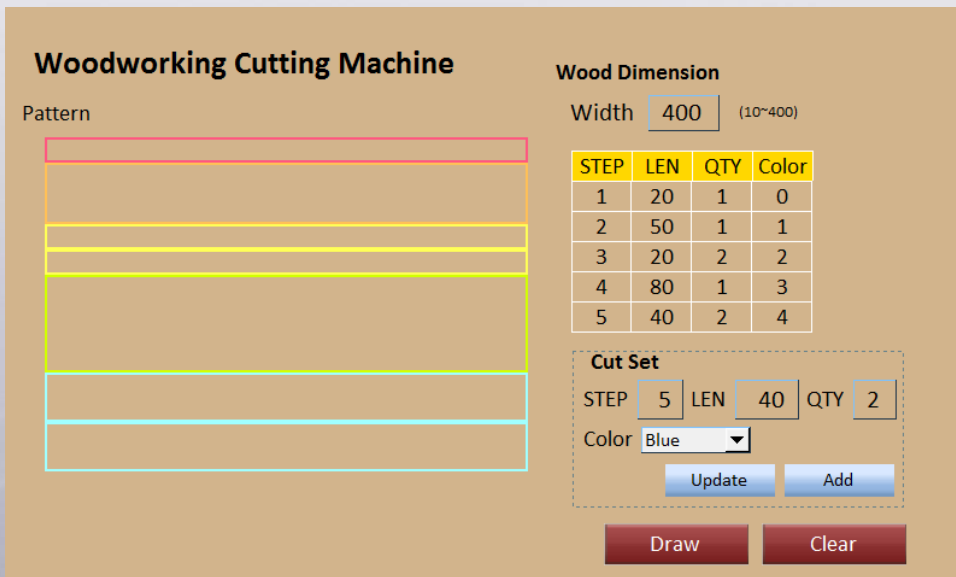
Run the demo project and then start off-line simulation.

[Draw]: Draw a shape on the screen according to the parameters in Recipe Database.

[Clear]: Clear all drawing.

[Cut Set]: Add / Modify cutting parameters.

[Width]: Adjust the cutting width.



The HMI interface for a Woodworking Cutting Machine is displayed on a tan background. It features a 'Pattern' section on the left with a large rectangular area containing several horizontal lines of different colors (red, yellow, green, cyan). To the right of the pattern is a 'Wood Dimension' section with a 'Width' input field set to '400' and a range '(10~400)'. Below this is a table with columns 'STEP', 'LEN', 'QTY', and 'Color'. The table contains five rows of data. At the bottom right is a 'Cut Set' section with input fields for 'STEP' (5), 'LEN' (40), and 'QTY' (2), a 'Color' dropdown menu set to 'Blue', and 'Update' and 'Add' buttons. At the very bottom are 'Draw' and 'Clear' buttons.

STEP	LEN	QTY	Color
1	20	1	0
2	50	1	1
3	20	2	2
4	80	1	3
5	40	2	4

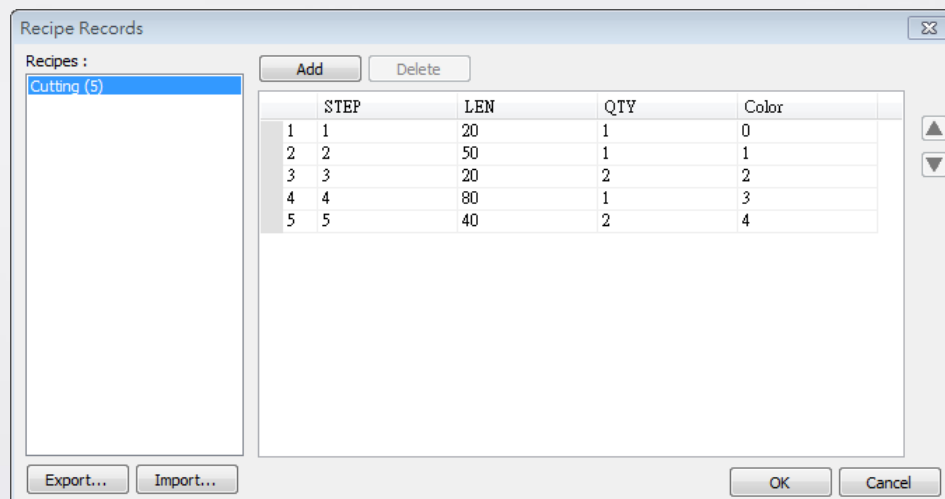
**Cut Set**

STEP  LEN  QTY

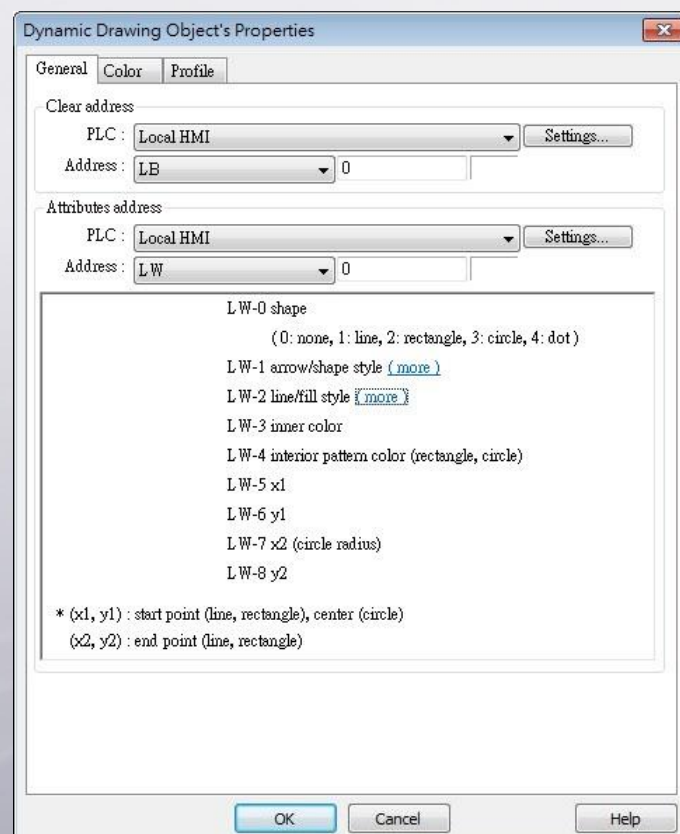
Color

## 2. Setting up the Screen

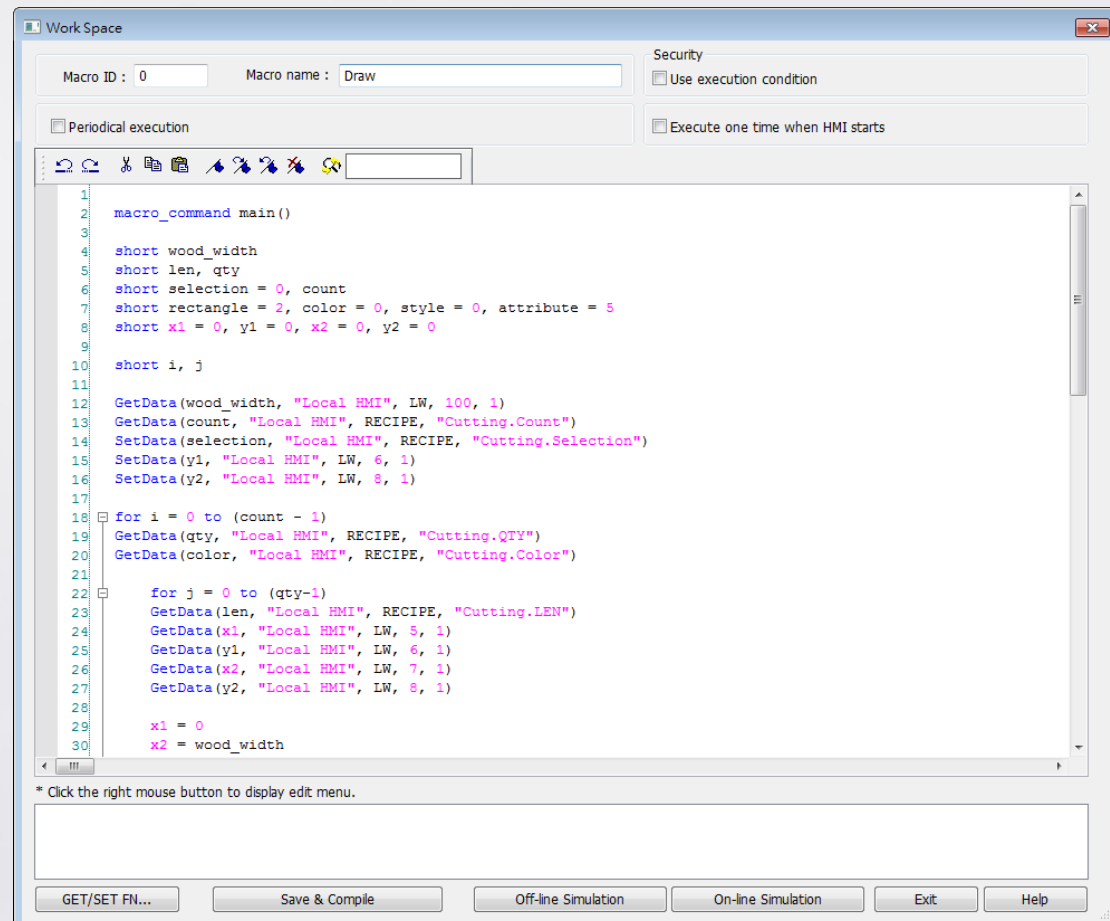
**Step 1.** In EasyBuilder, open [System Parameter Settings] » [Recipes], and [Library] » [Recipe Records] to set the cutting parameters.



**Step 2.** Create a Dynamic Drawing object, and set the parameters as shown below.



**Step 3.** Build Macro, when hitting [Draw] button, the parameters will be sent from Recipe Database to Dynamic Drawing object, and the wood pattern will be drawn accordingly.



### 3. Addresses

The addresses of key objects used in this demonstration are listed below.

Object	Address	Object ID	Description
<b>Window 10</b>			
<b>Dynamic Drawing</b>	LB-0, LW-0	DO_0	Dynamic Drawing area.
<b>Recipe View</b>		RV_0	Shows recipe data.
<b>Numeric</b>	LW-100	NE_1	Set width.
<b>Numeric</b>	Recipe-Cutting.LEN	NE_2	Shows length.
<b>Numeric</b>	Recipe-Cutting.QTY	NE_3	Shows quantity.
<b>Numeric</b>	Recipe-Cutting.STEP	NE_4	Shows step number.
<b>Option List</b>	Recipe-Cutting.Color	OL_0	Shows color number.
<b>Set Word</b>	Recipe-Cutting.Command	SW_0	Change data in Recipe Database.
<b>Set Word</b>	Recipe-Cutting.Command	SW_1	Add new recipe into Recipe Database.
<b>Set Word</b>	LW-100	SW_2	When the window is opened, set a width for Dynamic Drawing.
<b>Function Key</b>		FK_0	Start drawing.
<b>Set Bit</b>	LB-0	SB_0	Clear drawing.