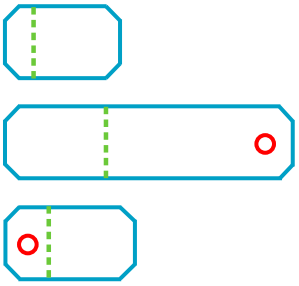
# Chapter 6 Sheet Metal Patterns



## A. Create 3 Rectangles.

Step 1. If necessary start a new Mastercam file, click **New** on the Quick Access Toolbar QAT (**Ctrl-N**).

Step 2. On the Wireframe tab WIREFRAME click **Rectangle** Rectangle.

Step 3. In the Rectangle function panel:
under Dimensions, **Fig. 1**
**Lock both Width and Height**
**Width .9**
**Height .5** and press ENTER
Press **O key** on keyboard to select AutoCursor **Origin** override, **Fig 2**
Click **OK and Create New Operation** .

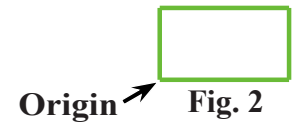


Fig. 2

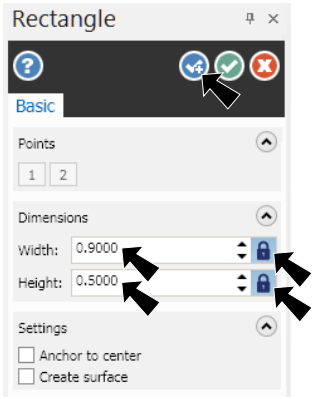


Fig. 1

Step 4. In the Rectangle function panel:
under Dimensions, **Fig. 3**
**Width 2** and press **ENTER**
Press **spacebar** to activate AutoCursor
**Fast Point**
Key-in **0**, **.7** 0,.7 and press ENTER
Click **OK and Create New Operation** .

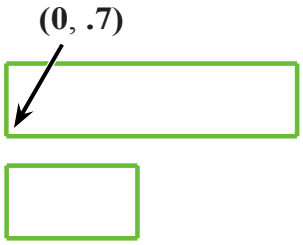


Fig. 4

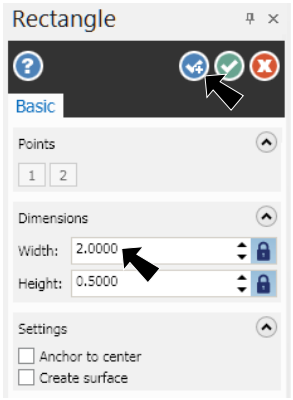


Fig. 3

Step 5. In the Rectangle function panel:
under Dimensions, **Fig. 5**
**Width .8** and press ENTER
Press **spacebar** to activate
**Fast Point**
Key-in **0**, **1.4** 0,1.4 and press ENTER **twice**
Click OK .

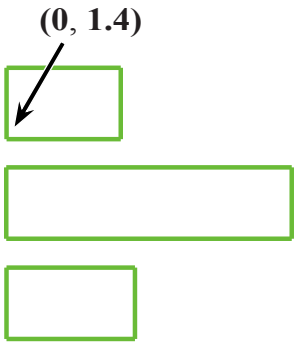


Fig. 6

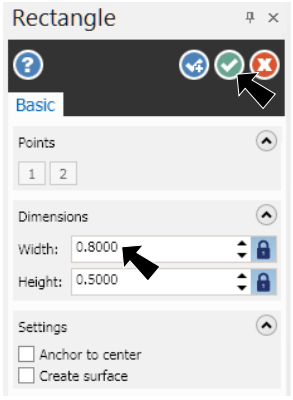


Fig. 5

## B. Save As "SHEET METAL PATTERNS"

Step 1. Click **Save As** (**Ctrl-Shift-S**) on the Quick Access Toolbar QAT.

Step 2. Key-in **SHEET METAL PATTERNS** for filename and press ENTER.

## C. Set Grid and Snap .1.

Step 1. On the View tab VIEW click **Show Grid** and **Snap to Grid** .

Step 2. Click the **Dialog Box Launcher** **(Alt-G)**, **Fig. 7**.

Step 3. In the Grid Settings dialog box:
under Spacing, **Fig. 8**
**X and Y Spacing .1**
Click OK .

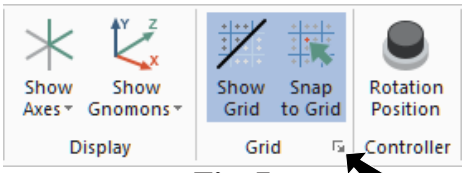



**Fig. 7**

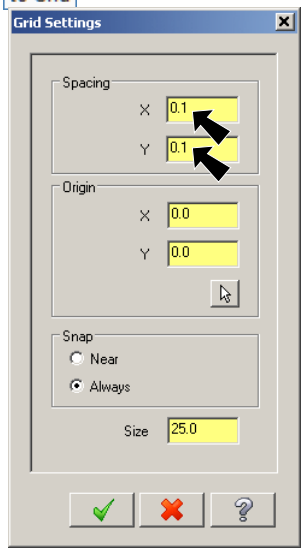



**Fig. 8**

## D. Add Note to Each Rectangle.

Step 1. On the Drafting tab DRAFTING click **Note** Note.

Step 2. In the Note dialog box:
Lock the Caps, key-in: **L BRACKET**
Select **Multiple Notes**
Click **Properties**
Click OK, **Fig. 9**.

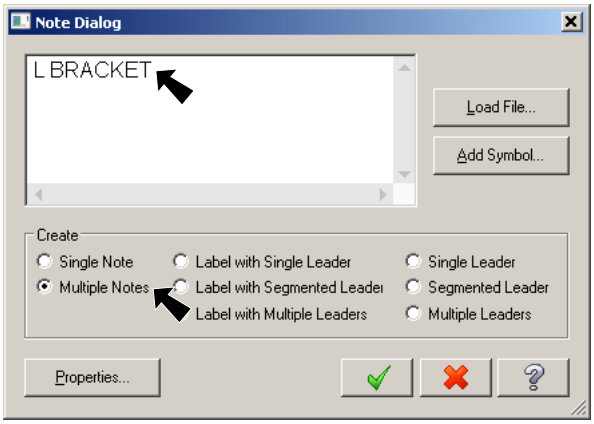


Fig. 9

Step 3. In the Note Text dialog box:
set **Text Height .1**
click OK, **Fig. 10**.

Step 4. Back in the Note dialog box click OK.

Step 5. Click **Position 1 in bottom rectangle**, **Fig. 11**. Click **OK and Create New Operation** in the Drafting function panel.

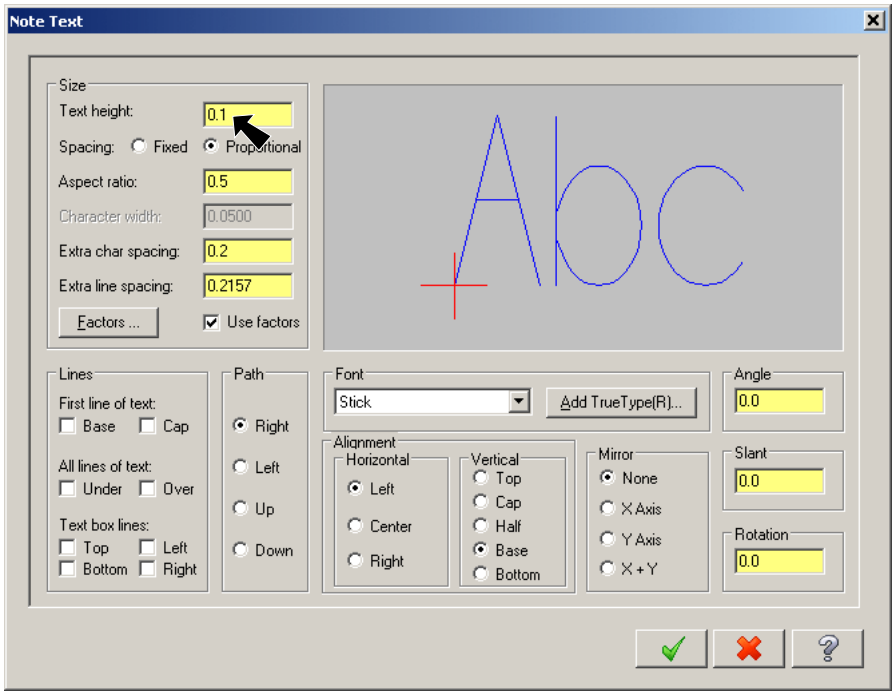


Fig. 10

Step 6. In the Note dialog box key-in: **SWITCH** and click OK.

Step 7. Click **Position 2 in middle rectangle**, **Fig. 11**. Click **OK and Create New Operation** in the Drafting function panel.

Step 8. Add **WEDGE** to top rectangle, Position 3.
Click Cancel when done.

Step 9. Save (**Ctrl-S**).

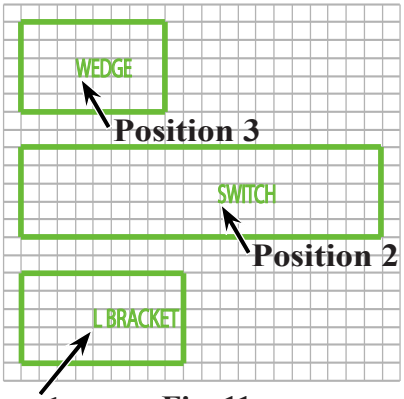
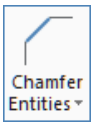


Fig. 11

## E. Chamfer Corners.

Step 1. On the Wireframe tab WIREFRAME click **Chamfer Chains** on **Chamfer Entities** drop down.




Step 2. Click a line of **each** rectangle to chain all rectangles, **Fig. 12**.

Step 3. Click OK in the Chaining dialog box, **Fig. 13**.

Step 4. In the Chamfer Chains function panel:

under Entity, **Fig. 14**

**Distance .1**

Click OK .

Step 5. Save (**Ctrl-S**).

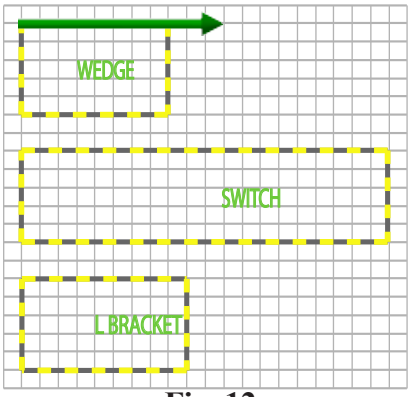



**Fig. 12**

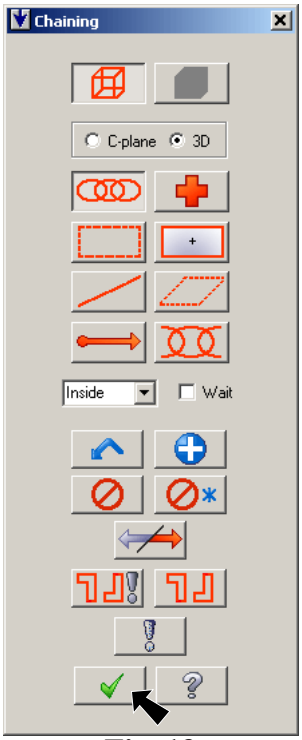



**Fig. 13**

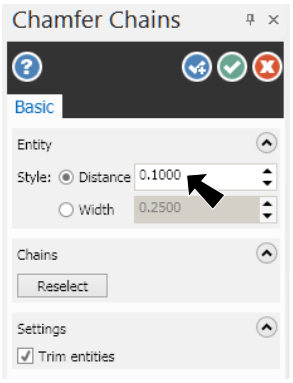



**Fig. 14**

## F. Set Attributes-Cyan/Dash.

Step 1. Sketch the next lines, the bend lines cyan color and dashed line style. **Right click** in the graphics window and on the Mini Toolbar click **Wireframe Color** drop down arrow, set line style to **dashed** and select **cyan**, **Fig. 16**.

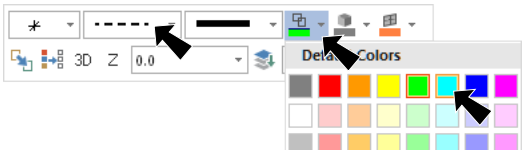



**Fig. 16**

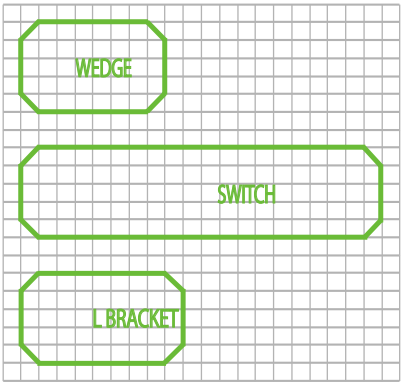
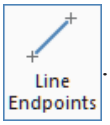



**Fig. 15**

## G. Sketch Bend Lines.

Step 1. On the Wireframe tab WIREFRAME click **Line Endpoints** 

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Step 2. Sketch the lines in **Fig. 17**.
Use grid to determine location of lines.
Click OK when done.

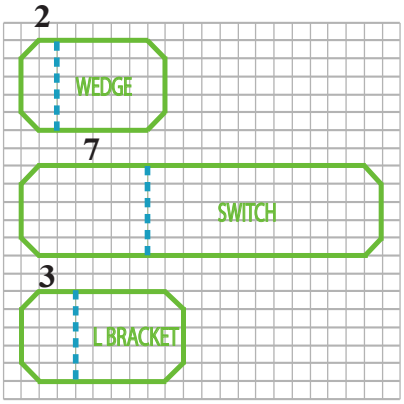


**Fig. 17**

## H. Set Attributes-Red/Solid.

Step 1. Sketch the holes **red** color and change line style back to **solid**. **Right click** in the graphics window and on the Mini Toolbar click **Wireframe Color** drop down arrow, set line style to **solid** and select **red**, **Fig. 18**.

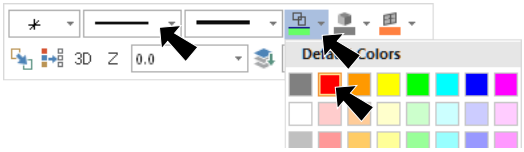
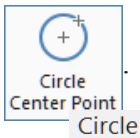


**Fig. 18**

## I. Holes.

Step 1. On the Wireframe tab WIREFRAME click **Circle Center Point** 

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Step 2. In the Circle Center Point function panel:
under Size, **Fig. 19**
Click **Locked**
**Diameter .125** and press ENTER

Press **spacebar** to activate AutoCursor **Fast Point** 
Key-in **.15**, **.25** .15,.25 and press ENTER

Press **spacebar** to activate **Fast Point** 
Key-in **1.8**, **.95** 1.8,.95 and press ENTER **twice**

Click OK .

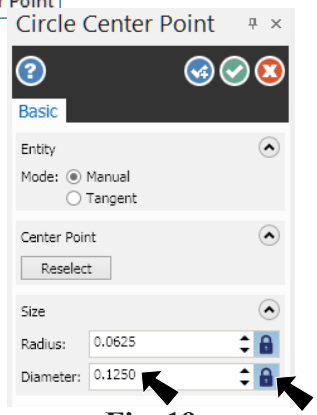

**Fig. 19**

Step 3. Save  **(Ctrl-S)**.

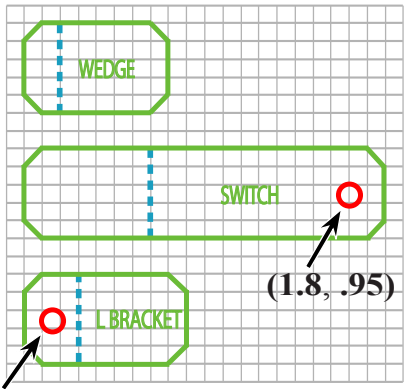

**Fig. 20**