

Bitmap Function

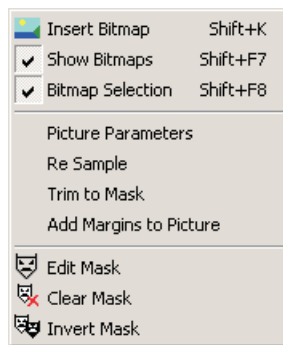
The GEM-RX supports the new and unique U-MARQ Picture Engraving (this is an optional extra and has to be purchased separately), This Dialogue box is not available unless you have purchased the Scanning and Logo Generation or the Picture Engraving modules.

Bitmap Menu

U-MARQ GEM-RX Engraving supports many bitmap formats including BMP, Tiff, Gif, JPEG, Exif, WMF, PNG and EMF. These formats enable you to insert pictures in many formats to engrave.

Insert Bitmap

Hot Key < Shift > + < K >



This function is only available if you have purchased the Picture Engraving or the Scanning and Logo Generation module.

Selecting this function from the Bitmaps menu, allows you to Insert a Bitmap into your drawing, this can be placed and scaled using the tools provided.

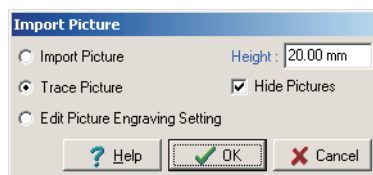


Figure 1

- **Options**

Import Picture : Select this to import the picture for normal viewing in the Workspace.

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Trace Picture : Select this option to Vectorised the bitmap in preparation for normal engraving.

Edit Picture Engraving Settings : Select this function to proceed to the parameter settings Dialogue Box for picture engraving.

Height : Enter the required height, the Bitmap will be scaled proportionally.

Hide Pictures : Select this function to hide the bitmap on the screen, you may wish to use this when vectorising an image.

Show Bitmap

Check this to show bitmaps in your drawing, uncheck to hide.

Bitmap Selection

Check this to allow the selection of bitmaps in your drawing.

Insert a Bitmap in a Drawing

How to

- 1 Select Insert Bitmap.
- 2 The Import Bitmap file Selector Dialogue box is made available for you to navigate to the Folder containing the required Bitmap.
- 3 Once you have Selected the file the Bitmap Parameters Dialogue box will now be available so you will be able to pick your preferences.
- 4 Click On OK.

The Bitmap will now be placed in your drawing.

How to

Trace Bitmap

Hot Key < Shift > + < T >

Selecting Trace Bitmap from the Bitmap Menu, enables Universal Engraving's Vectorising function to be applied to the Selected Bitmap. This function is only available if you have purchased the Scanning and Logo Generation Package.

How to

- 1 Pick your Scanner in the Select Source Dialogue box.
- 2 Scan you artwork (remember to scan in Grayscale).
- 3 When your scan is finished, select Trace Bitmap, select the quality of the original artwork i.e. Fine, Medium or Course, this will determine the accuracy of the Vectorisation process.

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- 4 Click On OK Universal Engraving it will automatically Vectorised the scan, (that is Universal Engraving will take the bitmap file and trace the outline to make a vector file), the outline will then be placed in your drawing for use.

The definition of Fine, Medium and Course Vectorising is as follows :

Fine : This setting is normally used when the original artwork is of Bromide quality or this taken from high quality black and white images.

Medium : This setting is normally used for 300 dpi Laser or Photocopy quality artwork.

Course : This setting is normally used with Fax or poor quality Printed artwork.

Note : All Vectorised images are created as closed paths, this allows you to create Toolpaths without any editing.

Show Bitmap

Hot Key < Shift > + < 7 >

This function will toggle the Bitmap to be visible or invisible in your drawing, this can be very useful when editing after Vectorization.

Picture Parameters

This function is only available if you have purchased the Picture Engraving module. Before you can use this function you must have a suitable picture on the screen see Figure 2.



Figure 2

How to

- 1 Place your chosen picture in the workspace at the size you wish to engrave it at using "Insert Bitmap". This should be a suitable image for picture engraving see Page .
- 2 Select the image if not already selected, then select "Picture Parameters" from the Bitmap Menu.
- 3 You will now have your picture ready to edit in the Picture Editor, see Figure 3. This is how your picture will look when engraved on an object.

If you look at Figure 4, you will see the results are quite striking using the default values.

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You can enhance the quality of the picture for engraving, if you think the results could be bettered by accessing the Advanced functions. You will now be able to adjust various parameters setting to accents certain areas of the picture.



Figure 3



Figure 4

How to

- 1 Right Click somewhere on the picture and select "Picture Parameters" from the menu.
- 2 From the Bitmap function dialogue box select "Advanced". You will now be presented with an extended set of editing parameters, see Figure 5.
- 3 We will now look at a description of how these extra parameters should be used.
- 4 First select the number of Grey Levels, a lower number gives you more details (higher resolution), a higher number gives a smoother picture, but takes longer to engrave.
- 5 Choose the desired Sharpness using the slider, a higher the value may make the face look older and takes longer to engrave.
- 6 You should then increase the black level as much as possible, without losing important details.
- 7 Decrease the white level as much as possible, without losing important details.
- 8 Set the gamma value to emphasise features.

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You are now ready to engrave your picture. When selecting your engraving process you should use the one for picture engraving for optimum results.

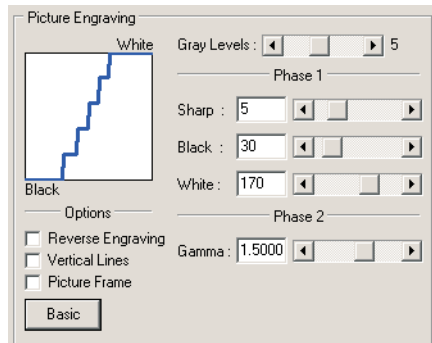


Figure 5

Note : The picture that was used in the above example, has a black background. The Picture Engraving software will not engrave black, therefore only the portrait will be engraved and the background will be ignored, see Page 63 for more details. Your picture will look normal in your drawing and will not reflect any changes made.

Masking

In some circumstances you may wish to remove the background from the picture, just leaving the portrait to be engraved.

Edit Mask

If you Right Click on the picture on your screen, you will be able to access the Transform menu, select "Edit Mask".

You will now have access to the Masking Toolbar.

The Masking functions all have easy access from the Masking Toolbars, which by default are docked on the right-hand side of your screen. These are only visible when the Masking function is accessed.

Masking Toolbar



Normal Brush

The Normal Brush is used to paint and flood fill a mask.

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Magic Brush

The Magic Brush is used to pick out edges when masking and has some special properties.



Clear Mask

Clear Mask is used to delete a mask from a picture.



Invert Mask

Invert Mask will cause all masked areas to be unmasked and all unmasked areas to be masked.

Mask Settings Toolbar

Depending on the colour of the background you wish to mask, you have a choice of colours to paint the mask.



Mask Setting Red

Mask setting red sets the mask to be red in colour.



Mask Setting Green

Mask setting green sets the mask to be green in colour.



Mask Setting Blue

Mask setting blue sets the mask to be blue in colour.

You can vary the intensity of the chosen mask colour by selecting one of the grayscale boxes on the right of the Mask Settings Toolbar.



Mask Intensity Low

Select the above to give the chosen mask colour a transparency.



Mask Intensity High

Select the above to give the mask a solid colour.

You now need to see how to use the Masking Tools, to remove the background of a picture before engraving.

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How to

- 1 Insert a picture using the methods described previously, see Page 59. Right Click on it and select "Edit Mask" from the Dialogue Box.
- 2 You will now be able to use the Masking Tools. Select the "Magic Brush" and a mask colour, the best colour is one that is a complete contrast to the background you wish to mask.
- 3 You can adjust the size of the mask brush, using the scroll wheel on your mouse. Now start to follow the edge of the person with the Left Mouse Button held down, the background will now be painted over. You do not have to be very accurate when using the Magic Brush, the idea is to detect the edges for you, see Figure 1.



Figure 1



Figure 2

- 4 Do not worry if you stray over the edge, to remove any excess just Click and hold down the Right Mouse Button over the excess and it will be removed. To finish off your mask once you have completed the outline just Click somewhere on the background holding down the shift key, see Figure 2.
- 5 To exit the masking function press < Esc > you will now see the picture with the background removed. You can then go on to process the picture ready for engraving, using the Picture Parameters as before see Page 61.

• Options

Re Sample

You can alter the size of your picture by Clicking on Re Sample. You will be presented with a dialogue box similar to above, just enter the size in pixels you wish to alter your picture to. Your picture will now be changed to the size, by re sampling the quality of your picture is maintained.

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Arrange Functions

Trim to Mask

You can trim your picture to the extremities of the mask you have painted.

Clear Mask

Clear Mask is used to delete a mask from a picture.

Invert Mask

Invert Mask will cause all masked areas to be unmasked and all unmasked areas to be masked.

U-MARQ Picture Engraving software produces some excellent results and is really worth spending the time learning how to get the best results.

Note : To get the best result your picture should be brought in to the software at the highest resolution possible, i.e., a minimum of 120dpi.
