

# **LinkMotion and Adobe Illustrator CS4:**

After you install LinkMotion software and set up all settings make sure to select landscape or portrait mode ( this is dependent on your machine's table size) and then launch Illustrator software.

## **Important notes:**

**Zero or thinnest line width and No fill are the most important things to remember when you are designing a file for Vector or line output. Line type of output is required by rotary tool machines like engraving, routing, and CNC. Do not fill shapes with bitmaps for any line or vector output. Raster or bitmap fills are used by laser machines. It is important to remove fill when you import scanned files.**

**Adobe Illustrator by default works in 1000 DPI mode and it does not have the flexibility like Corel DRAW to change this mode using smaller DPI value which allows for output on a larger table size. In other words, it has limitation for outputting 65"x65" table size job or not exceeding the value of multiplication of X and Y dimensions to be more than 4225. Please refer to Linkmotion manual for detail explanation in Machine properties area.**

**Solustan's LinkMotion driver tests the primary function of accepting hairlines (vector lines) generated by popular application software packages for job design. It is important for the user to learn the job design software and to make sure that the jobs are properly prepared for successful execution of a job.**

**Do not check Design Using Plate Size feature in LinkMotion Material properties.**

**Solustan's liability is limited to the purchase price of the LinkMotion driver software.**

It is necessary for the user to acquire the application that will be used for the job design. There are many books of various levels available for all these popular applications. This document is simply a guideline to point the user in the right direction. We welcome feedback from our users. Share your findings with us and we will include them here for all users benefit.

Following are helpful details for a user of Adobe Illustrator design software:

## **(1) How to do all basic settings in Illustrator?**

**The line width of .07 Pt, .06 Pt and as low as .01 Pt and No fill are the most important things to remember when you are designing a file for Vector output. Do not fill the shape for any vector output. Raster will have the fills and it is used mostly for the laser output. (We have not done testing for raster work)**

Illustrator allows you to set up any page size. You can set that up by clicking on the File menu and then Document Setup sub-menu. In AI the Artboard is referred as the Document Size to control the size of

the table. Illustrator allows maximum page size to be 227.5". Make sure to design the page size either the same or smaller for your machine. Also, remember to make the page size in proportion to the table size declared for it to be consistent as far as portrait and landscape modes are concerned. Once the design is done with no fill and .01Pt line thickness click on the print command. In print dialog box following settings are necessary.

**Printer:** Select the printer you have installed. This is the machine name you selected when you installed LinkMotion driver software. My Machine-USB for LinkMotion USB product or Roland GX 24 for LinkMotion Vinyl product is an example what machine name you can select.

### **Media**

**Size:** Define by Driver should be selected.

**Width and Height** are grayed out and you cannot change them. This is shown from the Machines table size from Machine setup area of LinkMotion (Maximum travel for X and Y axis) or in case of vinyl cutting it is material length (X-axis) and width (Y-axis).

Next, to Width and Height, you will see the symbols for printing position. Make sure to select **Portrait or Landscape** mode depending on the machine's table size you have declared.

### **Options**

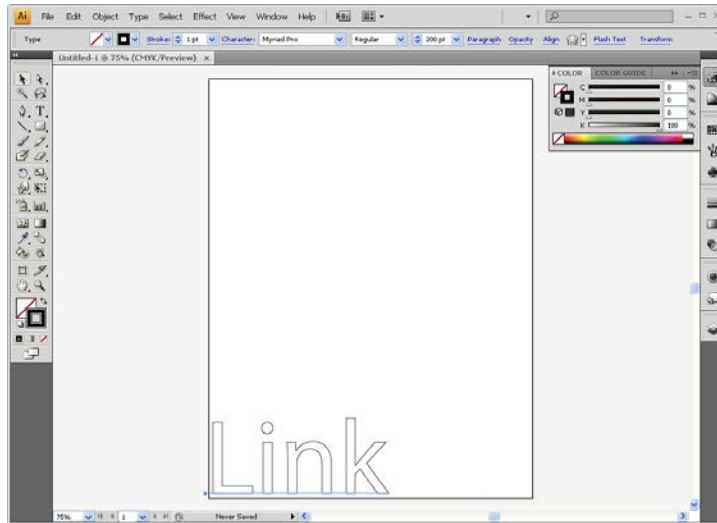
Here most of the time center should be selected if design page size is same as your machine's table size. Bottom right should be selected to minimize the travel if the page size is smaller than the table size. Also, remember to make the page size in proportion to the table size declared for it to be consistent as far as portrait and landscape mode are concerned. Experiment with other positions before cutting the final vinyl or other material that you are using on your machines.

### **Print**

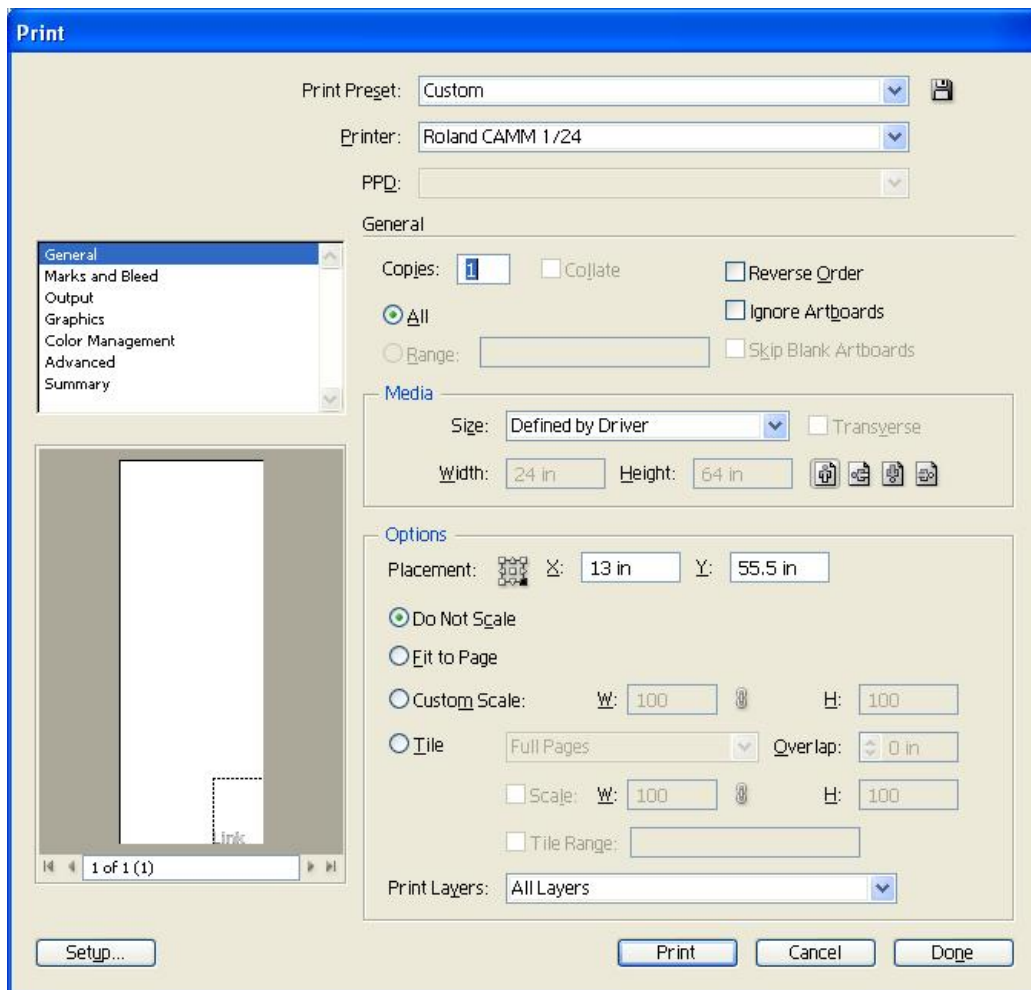
When the final print is selected illustrator respects where it will output in relation to your page design. If your design shape is .5" away from x and y-direction it will also output that far away from the starting position. If your shapes are designed all the way at the beginning of the page then it will output in that location.

## **(2) How to use Illustrator CS4 with proper output print commands with LinkMotion for Vinyl cutting?**

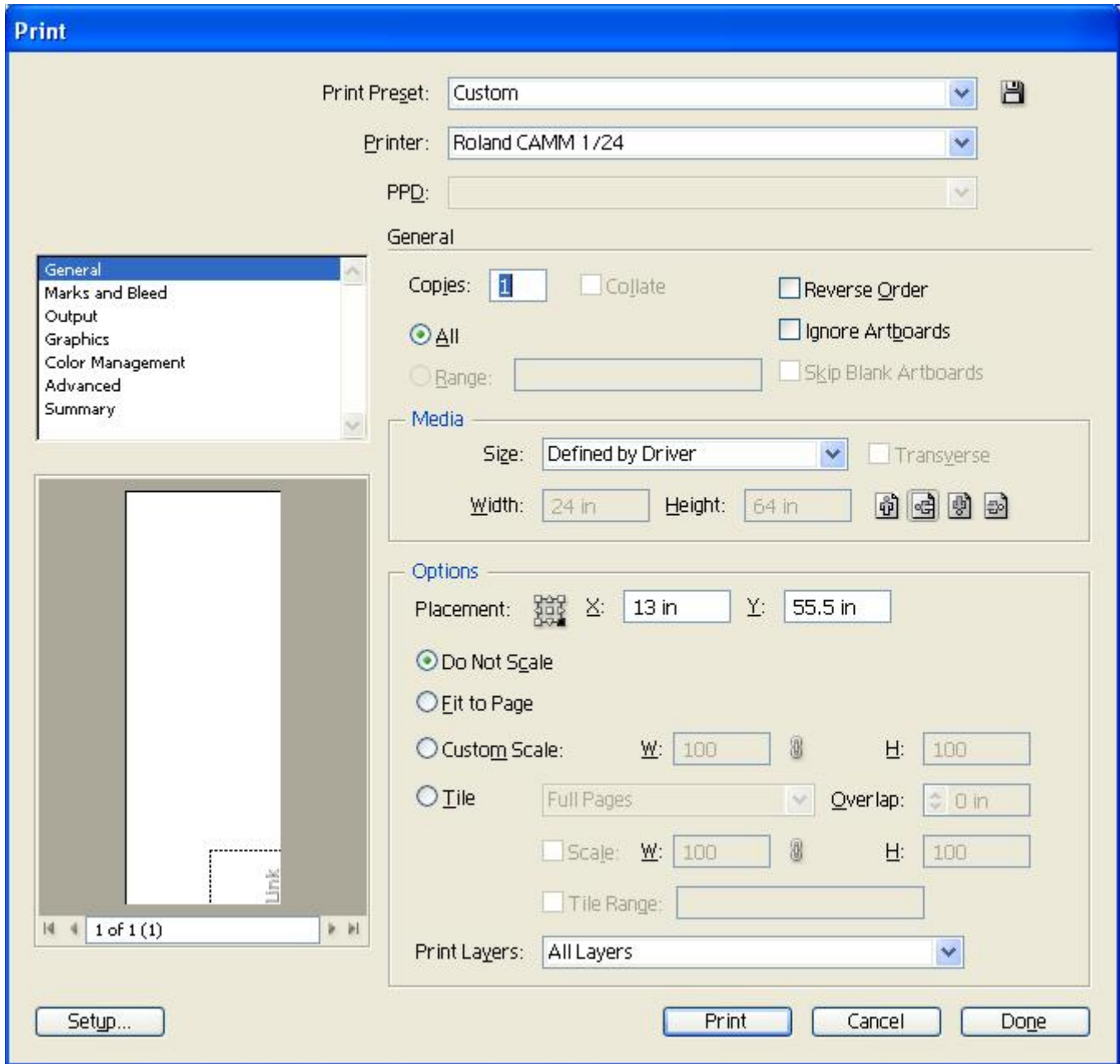
Following is a Vinyl cutting example and can explain how the job is designed and where it will output working with LinkMotion for Vinyl.



The print command with Portrait position is shown below.

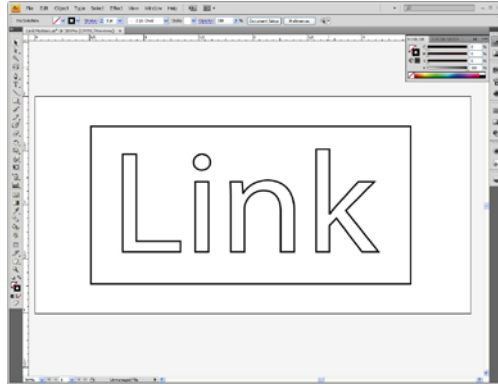


The print command with Landscape position is shown below.

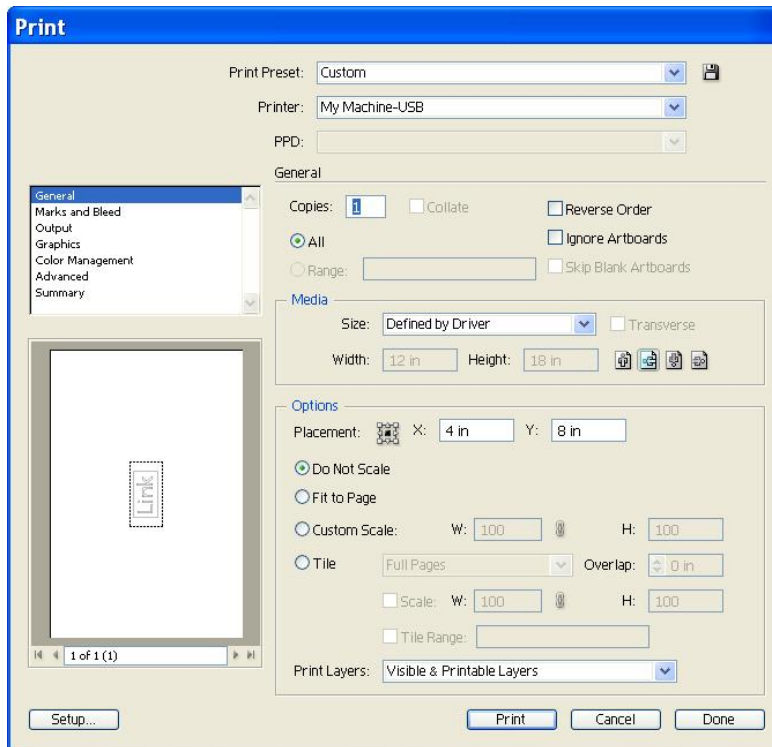


### **(3) How to use Illustrator CS4 with proper output print commands with LinkMotion for USB controller with Design using a material size?**

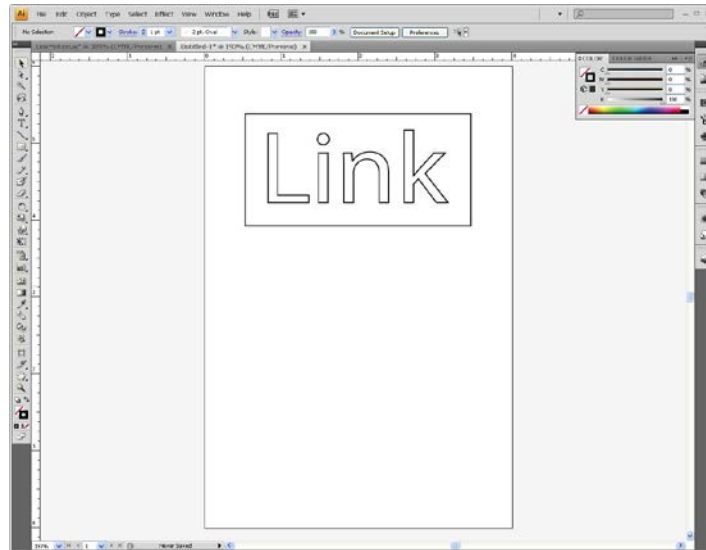
If your machine table size has X-axis maximum travel larger than Y axis maximum travel then you need to select Plate width larger than the plate height. Make sure to select landscape mode for the output and Print without changing anything. Placement should be the center. Following example shows your settings.



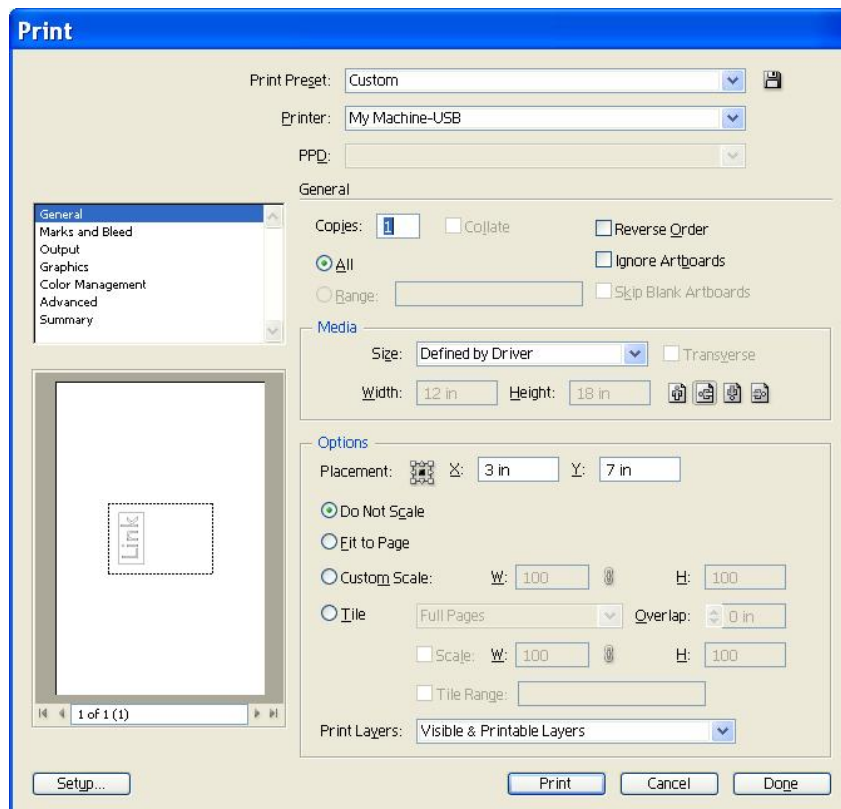
Above plate, size is 4” wide and 2” height and picture below shows the print settings in Illustrator.



If you design plate size width smaller than the Height you can select landscape mode for the output in print dialog box. The example shown below has plate width 4" and height is 6".



Now following example shows the print settings.



# **LinkMotion and Adobe Illustrator CS2:**

After you install LinkMotion software and set up all settings launch Illustrator software.

## **Important notes:**

**Zero or thinnest line width and No fill are the most important things to remember when you are designing a file for Vector output. Do not fill the shape for any vector output.**

**Raster will have the fills and it is used mostly for the laser output.**

**Solustan tests the primary function of accepting hairlines (vector lines) from the third party application software to make the vector moves on the machine using LinkMotion driver. Solustan may test additional functions. However, it is not a detailed testing. The developer and marketer of the third party software make changes to their applications quite often. It is the responsibility of the user to make sure that the necessary functions are available while making the choice of off-the-shelf application software.**

**Solustan's liability is limited to the purchase price of the LinkMotion driver software.**

It is necessary for the user to own the application that will be used for the job design. There are many books of various levels available for all these popular applications. This document is simply a guideline to point the user in the right direction. We welcome feedback from our users. Share your findings with us and we will include them here for all users benefit.

## **(1) How to do basic settings in Illustrator?**

**.01 Pt. Or .0001 IN Size line width and No fill are the most important things to remember when you are designing a file for Vector output. Do not fill the shape for any vector output.**

**Raster will have the fills and it is used mostly for the laser output. (We have not done testing for raster work)**

The document size corresponds to the Table size. Illustrator allows you to set up any page size. You can set that up by clicking on the File menu and then Document Setup sub-menu. In AI the Artboard is referred as the Document Size to control the table dimension. Most of the time you will be using

Custom

as your table size. **Illustrator has a problem with orientation in print dialog box** if the width of the page is

greater than the height. For example you machine table is 20x10. You design your page size to be 20x10. It automatically changes orientation to be sideways. However, machine dimensions remain to be 10x20. As a result, your **job does not output properly.**

## **(2) What do we recommend?**

For 20x10 table change your table size to be 20x21. In Illustrator set the page size to be 20x21. Now, remember to place your artwork within 20x10 area of the page only. This 20x10 area can be at the top or the bottom depending on your machine's starting position. Also in the **Print** dialog box select **Setup**. Now you will see the **Placement** Area on the right. Here make the selection of positioning of the artwork. Select **top left** if your machine's start position is Top left. Similarly select bottom left if your machine's start position is bottom left.

Use 0.01 Pt. Size line weight for strokes and no fill for any drawn objects to avoid repeated tool movements.

All vector lines have to be **.01 Pt. Or .0001 IN Size stroke** width for proper output. Text also should be **.01 Pt. Or .0001 IN Size stroke** width and no fill. **Do not use any filled object.**

**Color support does not work properly.**

I had three rectangles. First black, second red, third green. In LinkMotion we had selected job feed rate to be 2in. Color selection output was following: Black at 100%, Red at 50% and Green at 20%. Actual output was following: Black at 50%, Red at 100% and Green at 100%.

**(3) How to create a dot and drill the hole?**

Draw a circle with .001" diameter (X and Y dimensions should be the same) with **.01 Pt. Or .0001 IN Size stroke** width and no fill and when this small size circle is sent for the output you can use a proper bit to create the hole.