

The New Craftsman's Vinyl Installation Guide

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FORWARD

This guide has been designed & created to optimize graphic presentation potential as well as to insure the most cost efficient outcome. Using specific methods developed over many generations by many qualified craftsmen this guide outlines time honored skills and techniques originated by tradesmen known as Sign Writers. In their time they were highly paid, union & non-union Journeyman. The following will state the reasons for & the purpose of this guide.

Over time the skill set of the Sign Writer adapted to the tools & materials available at that specific time. In the early days they used natural brushes, pigments & hand tools to create beautiful, practical & profitable graphic presentations for their customers. As the industrial revolution arrived the range of available materials and tools changed in many ways. This change was for the involved for the most part across the board benefits for both the Sign Writer & his customers allowing for faster production, an increase in options and longer lasting products. However, sometimes these changes brought about new unexpected, negative changes such as in the case of lead based paints, which caused a variety of illnesses that befell several generations of craftsmen.

As we entered into the computer age the age of the old world Sign Writer came to a virtual end (no pun intended) due to new technologies including the personal computer, computer aided design programs, robotics, adhesives and plastics. All of the newest changes resulted in the loss of the artist in the art form, ultimately standardizing layout, fonts and artwork. In effect the graceful and artistic Sign Writers of by gone days has been reduced to not only a mind boggling array of fonts, clip art, machines and materials designed to eliminate the need for the highly paid craftsmen. All and all this has been mostly to the benefit of the consumer, making available inexpensive products that for the most part result in mediocre and misguided results, you could say it has become "cookie cutter" like.

As one of the last of the old world Sign Makers I have decided to make an effort to share, more precisely the excellence and artistic craftsmanship of the old world Sign Writer while implementing the technologies of the present day. I would ask that you keep in mind the artists/craftsmen who inspired this effort as you gain the very valuable knowledge, benefits and profits from the information presented.

Make it amazing!

R. Thomas Boyd (Tom)

LAYOUT

One of my mentors used to say that it took 15 years for any apprentice Sign Writer to learn proper layout & I agree. With the technologies today certain issues are prevalent when making layout choices. I must mention most importantly that computers do only as they have been told and without extra effort in the design and layout stage the standard font styles, kerning (letter spacing) & line spacing are more then likely to prevent the proper execution of any given layout, causing it to be more then likely disjointed, bland & less effective then it should be. Note also that color choices are also something to be reckoned with (but we'll address that later). Reference images 1 & 2.

This is where the old world sign techniques can make the greatest difference. These things cannot be taught in a guidebook and are only available through years of practice and experience. Issues such as logos & practical copy, size, placement as well as outlines, shadows and embellishments are the key to completing the appropriate presentation for any given purpose. To address this issue you must insure that any vinyl graphics provided to you are designed by an appropriately trained craftsman and that you have received some basic layout training or at least read this guide completely so that the final installation of your graphics will be completed properly.

Most people don't realize that the preparation of a vinyl graphics project is the most difficult and time-consuming part. Here I'll outline the procedure...

1. Make general decisions on overall size, sizes of lettering, letting styles, logos & additional graphics and colors. Finally add some creativity and or consider what the final presentation must feel like to suit the people and purpose involved.
2. Evaluate the finished design for material usage for all, adding a bit extra for changes, tech problems or mistakes. Inventory in house stock of materials & tools. Order tools & the appropriate (quality 1st!) materials then setup time schedules for the shop and customers.

3. Use the computer and plotter systems to print vinyl, cut vinyl and draw plans or patterns.

4. Weed vinyl (remove excess vinyl around or in vinyl to be applied). Tape vinyl (apply transfer tape to the surface of the weeded vinyl to prepare for transference to surface receiving the lettering & or graphics). Cut/separate vinyl into appropriate sections, Mark all centers and any other helpful marks onto the pre-applied transfer tape. Make sure to do as much preparation as possible to minimize time of application.

Note: The above steps are all to be done by a highly trained professional with specialized equipment and that this guide states them only to give the reader the perspective not only of what goes into the graphics they are about to apply, but also to clarify the guide's final purpose, which is to teach those who wish to learn some simple techniques to do an excellent job applying vinyl lettering and graphics themselves. If you wish to get more involved in the step listed above just call me or another qualified Sign Writer and set up an appointment. Don't forget to show up bearing very expensive gifts=).

Now there's a reason I'm still writing in the "Layout" chapter of this guide. This reason is that the final application of any vinyl graphics must concern the consideration of the surface of & space shape it is to be applied to. I'll start by listing the materials & tools needed to prepare the surface and apply said vinyl.

1. Your copy of "The New Craftsman's Vinyl Installation Guide". Keep it handy, it can help you do the best job possible!

2. Cleaners are a bit of a trick. Surface contamination such as tar, wax, oil, grease, salt residue, bugs, tree sap, bird dropping etc. are all made up of all sorts of tough contaminants which can compromise your graphics installation. The only way to resolve this problem is to make sure you've cleaned the surface very thoroughly. Certain solvents can be very caustic and hurt the finish of your surface so read all labels and directions well before using them to prep your surface. I tend to stick with such products as Kleenz Easy (sold at Napa parts stores) or any comparable product used to remove wax or grease from painted surfaces as your first wash. Use these sparingly. Rinse with water well after each cleaning, Take your time here and do a good job, it make a big difference. For the second wash I use alcohol and or soap and water. Again rinse well and in the case of alcohol make sure to buff the surface to remove any excess residue.

3. A Stabilo pencil (available at any art supply store) or other light grease pencil though stabilos are the standard and my recommendation. If you have a white Stabilo pencil and a blue Stabilo pencil you'll no doubt have all you need in most cases. Always press lightly and clean off exposed makes on completion. Leaving lines on too long can make them very hard to remove later. Don't use black, they can leave marks on rare occasion.

4. A good wooden yardstick. Use wood only to protect the surface from scratching. A tape measure can be useful as well but must be used with caution as to not mar surfaces.
5. A Squeegee in the vinyl application field is unlike one you might use for cleaning a window. It's (as a standard) an approximately 3.5" to 4" plastic tool used to press the vinyl down to the surface (I'll tell more about this tool later in the guide).
6. Masking tape. Get the good kind. Cheap masking tape can lead adhesives behind and cause problems.
7. Application fluid is used in certain instances, which I will illustrate later in the guide. There are many brands available on the market though almost everyone uses a large utility spray bottle filled with water and One (that is 1) drop of dish soap added. Shake well and let sit in advance.
8. Some good, clean, lint free rags.
9. An Exacto knife or a razor blade. Make sure the blade is new and sharp.
10. A scrap or two of extra vinyl in the correct colors for the job your doing.

Don't let this list distract you. I'm very sure you'll be able to collect these things more easily then you might think.

On considering applying your vinyl you should first take a few thing in mind. Make sure that the temperature of your work area is between 40 and 90 degrees. Below 40 degrees the adhesives are to cold to work well. (a heat gun used sparingly can overcome this if its 39 degrees, but don't push it). Over 90 degrees the application fluid can evaporate and make things problematic. You might have to resort to a dry application although this may not be possible in certain applications. Consult a professional. Another consideration is the workspace. Make sure you have a large clean table or other flat surface to work from as well as helpful things like low stools, A-frame ladders & or planks to help you get face to face with your work the job. It is an understated fact when installing vinyl lettering and graphics that you must make an effort to have a head on view as you apply. Proper alignment and straightness counts. Lastly keep your work area clean as you go along. You'll find it makes for a better job. Oh! one more thing... the Wind! If you're outside or exposed in any way to the outside make sure its not to windy. Wind can blow up dust, cause you to loose grip on your vinyl during application and cause alignment issues. A very experienced vinyl installer can apply in a wind but it makes it very difficult.

Now that we have the logistics out of the way its time to get to work. After thoroughly cleaning your surface comes the time to add layout lines. Depending in the area you're applying the vinyl to you may have to implement certain rules and considerations. There are so many varieties of surfaces that one might apply vinyl lettering and graphics to it's impossible to state them all. With sign faces and other standard surfaces we often are presented with rectangular or square shapes to work

with. The vinyl graphics you have must be pre-designed to fit accurately or at least generally into the area, though some spaces can be somewhat enigmatic. Consider the case of vehicle doors, window and even the entire side surface. When approaching surfaces such as this we notice that there are many associated curves, lines, curving lines and obstructions such as handles, locks and latches. There are also other important things to note such as the angle of the vehicle itself to the ground. Many vehicles tend to be lower in front than in back. This is where making a good decision is imperative and where you the vinyl installer must focus your attention to the layout. I'll call this the "final layout". It can change and will from one side of a vehicle to the other. It can need to bend over an arching glass surface and more. Considering these variables is without a doubt your biggest challenge. Discussing these issues with your Sign Writer can help in every tricky case but in the following passages of this chapter I'll try to address most of the issues.

To complete the final layout you will be drawing marks & lines using your Stabilo pencils and measuring devices (wooden yardstick). As a first step I often recommend that you use your masking tape to temporarily place your vinyl. Do not remove vinyl from the backing paper at this point. This step is only to establish final placement and give visual cues so that you can accommodate any angles or obstructions before the final placement. If your surface is poorly painted or has recently been re-painted use low tack tape and don't press it down too hard. A gentle hand is a great thing for a vinyl installation in almost every instance.

Upon establishing the placement of your vinyl make marks to indicate the bottom of the outermost (left & right) flat bottomed letters and make reference marks to remind you which lines of copy go on which lines as shown in [Image #3](#) below. Remove the vinyl and connect any points to create the final placement lines, not forgetting to write gently. Note: if the surface you are working on is curved you may have to arch the copy to accommodate the curve and if there are multiple lines of stacked copy you may have to gradually "un-curve" the lines as they come down in sequence, Reference [Image #4](#). An artist would say that here you must practice "artist license" which would be to visually give and take the space to achieve the proper appearance. Do your best to use your measurements to keep the lines equally or more so appropriately spaced above and below. This is often the case when lettering the rear windows of mini vans and SUVs. Just make sure to place your marks and lines accordingly & I'll explain how to apply that vinyl soon.

As you consider the final placement of your vinyl lettering you should keep in mind just a few rules of thumb:

Negative Space: Refers to the space not occupied by any graphics or lettering. There are some age-old rules that involve each type of negative space. The types include letter spacing, word spacing, line spacing and graphic spacing.

The rule for letter & word spacing is to imagine marbles or balls of some sort between the letters and or words. If you space letters using an equal amount of balls between each letter in a word or between words you will achieve consistent spacing visually. Reference Image #5. Note to all the engineers, draftsmen and font designers out there: "put away your rulers". This is the realm of the artist and to date I've yet to see the computer that can get this right completely. Although when setting up the final placement of you vinyl you most likely won't have to concern yourself with letter and or word spacing it is a very useful skill to develop for the moments when an issue arises (and they do).

Line spacing is the space above and below any given line of copy. This is an imperative issue. Appropriate line spacing is again the realm of the artistic eye and addresses concerns such as letter height, consistency, accent and readability. If you neglect proper consideration when it comes to line spacing you can completely compromise the final outcome. Reference Image #6 & #7. Make sure that you increase or decrease the space between the lines to accent important statements, keep multiple line statements together and allow for enough negative space to achieve optimum readability.

Graphic spacing refers to the space around all lettering and graphics in any given design. Having the appropriate amount of negative spacing in an overall sense is the issue here. if you make spaces too tight or too loose your final presentation will look disjointed or crowded and thusly become less effective. This is a biggie. Reference Image #7 & #8.

Having addressed layout from a technical perspective we can finally finish marking the lines and move on to application. as a final note in reference to layout, please remember to question your decisions and experiment with your thoughts before making your final placement marks

APPLICATION

There are a few variations when it comes to applying vinyl lettering and graphics. These include squeegee technique, wet application, dry application, freehand placement and the hinge methods. In this chapter I'll outline each method and how they differ as well as relate to each other.

Squeegee technique is a very important thing to keep in mind. Doing this right or wrong can make all the difference in the world. I've found that depending on the size and shape of any given piece of vinyl your best bet is to go from the center out. some folks like to push the squeegee as if they were scraping paint, see Image #10. I prefer holding it at about a 30 degree angle and pulling it like a paint brush would be pulled. Considering the vinyl has been set into position lightly to start and that you overlap your strokes in opposing directions you should be able to adhere it flawlessly, see Image #11. If you should have a problem such as a wrinkle, crease or bubbles I have a few tips. To remove a wrinkle or crease you must be sure not to squeegee that area down after the wrinkle/crease appears. Complete squeegeeing the rest of the piece and very carefully remove the transfer tape. You can now gently lift the wrinkled area and squeegee it back into place smoothly. Be careful not to stretch the vinyl in the process. Wrinkles and creases are usually only a real problem when doing dry applications due to the fact that wet applications allow for more movement. Bubbles however can appear in both wet and dry applications and in many cases can be carefully squeegeed away. However there always seems sooner or later to be some stubborn ones that won't go away so easily. In

the case of stubborn bubbles you must carefully pierce the bubble using you exacto or razor blade, then squeegee it down. You'll find that if you leave small bubbles or creases behind and they get to heat up in the sun over and over again they go away on their own.

One last remark in reference to squeegee techniques. From time to time you may find it necessary to go over a raised object, such as rivets, panel seams or other raised areas. Dealing with these things requires a bit of extra work and thought. In the case of rivets I've found that piercing a small hole and using a heat gun works well. See [Image #12 & #13](#). Don't imagine you'll get a perfect rivet every time. This is why you have that extra vinyl with you. You may have to make a small overlapping patch to cover any substrate you expose. They also make special vinyl for this issue. It's a bit more expensive has some other limitations I won't go into but can make a difference. As for seams and raised areas. Just be careful to squeegee the vinyl down as completely and evenly as possible. If you're pressing along a seam be careful not split the vinyl. If you do make sure to make an overlapping patch with at least a 1/4 inch overlap on all sides (vinyl shrinks over time and if you don't make an overlap of 1/4 inch or more when splicing or patching, you would find a space would appear later.

Wet application is applying your vinyl using an application fluid such as is described in the previous chapter. The application fluid is sprayed lightly onto the surface that your lettering/ graphics will reside as well as the back of the vinyl you're placing. The application fluid allows the installer to move the vinyl to get sure positioning. It also helps the vinyl to evenly adhere to the substrate. When the wet application vinyl is in position the installer must use the squeegee to remove excess water from behind the vinyl and adhere it to the surface. This is done by dragging the squeegee at about a 30-degree angle across the transfer tape covering the vinyl. Refer to [Image #14](#). When the vinyl is well in place wait a few minutes before removing the transfer tape and completing the install.

Dry application is exactly what you might assume. That is, it is the application of vinyl without the use of application fluid. Dry application requires a bit more skill and practice. If your feeling confident and don't mind making a mistake, by all means.. go for it! There is some wiggle room when it comes to dry application. Being as if you haven't yet placed it down completely and your substrate is anchored well and is sound, you can pull it away with a quick movement and still re-align your vinyl. This is as risky as it sounds but it's done every day by experienced vinyl installers. In the next paragraph you can read how to use "the hinge method", which allows you to use the dry application method more safely.

The hinge method is an excellent way to insure as perfectly as possible the correct installation of vinyl lettering or graphics. As illustrated in Image #15 & #16. Using a piece or pieces of masking tape along an edge of the vinyl to be applied, you can pre-attach the vinyl in place. By "hinging" the piece of vinyl away from the surface to remove the backing paper, you can then hinge it back carefully into place and squeegee it down.

The previous pages complete a study in basic vinyl lettering and graphics installation. For very large or complex applications seek the help of a seasoned professional, preferably us. We're here to supply you and yours with the best options in Design, Vinyl Lettering & Graphics preparation, Knowledge & Service.

Tom

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