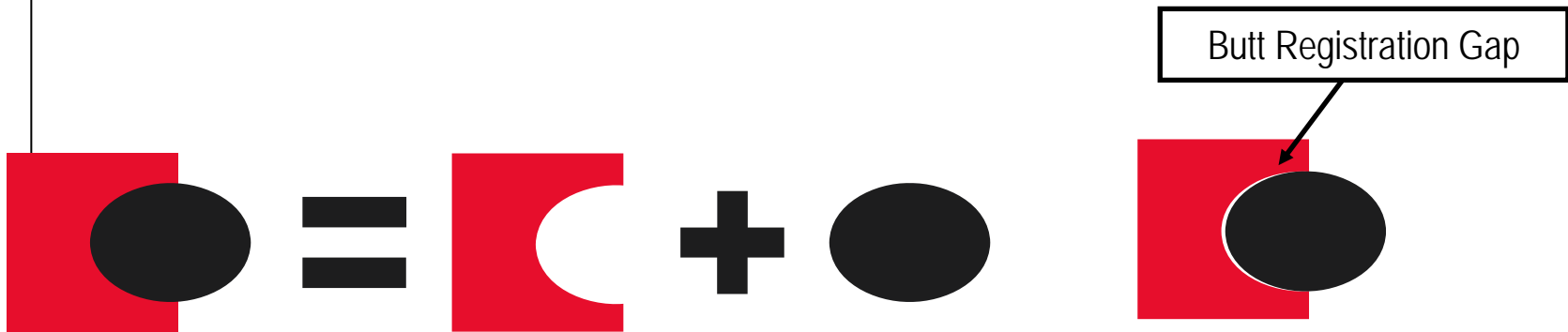


GERBER EDGE Color Registration Solutions

January 2010

Improving Color Registration with the EDGE

- Problem: EDGE and OMEGA Default: Colors Knock each other out:
- Sometimes the printed result has a gap



Improving Color Registration with the EDGE

- Overlap shapes: Prints one color on top of another without knocking out
 - Very easy to use. Use for printing dark colors on light colors.
- Overlap strokes
 - Use for colors that abut each other
- Tools>Choke Spread
 - Automatically adds and subtracts shapes from each other and turns on overlap
- For CMYK vectors, make process black objects into C+M+Y+K Black



Improving Color Registration: Overlap Shapes

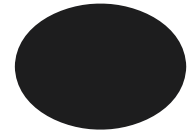
- Solution: when printing dark colors on top: Turn on Overlap for the top shape



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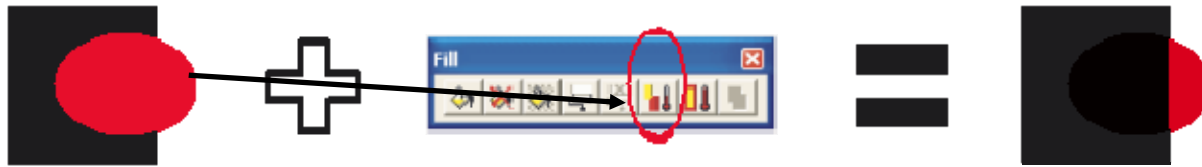
1 shape on top of another = No Gap

Black Overlaps Red: NO Butt
Registration Gap



Improving Color Registration: Overlap Strokes

- Problem: Cannot overlap light colors on dark colors. Lighter colors disappear!



- Solution: Put a small red stroke on the circle and turn on overlap for the stroke ONLY
- Do NOT Turn on overlap for the circle itself, only the stroke.

Improving Color Registration: Overlap Strokes


- Solution: Add a small stroke to the oval using the same color as the oval
- Turn on overlap for the stroke ONLY
 - Do NOT Turn on overlap for the circle itself, only the stroke.

The diagram illustrates the solution for improving color registration by overlapping strokes. It shows a red circle with a stroke, the 'Assign Colors' dialog box, and the resulting registration mark.

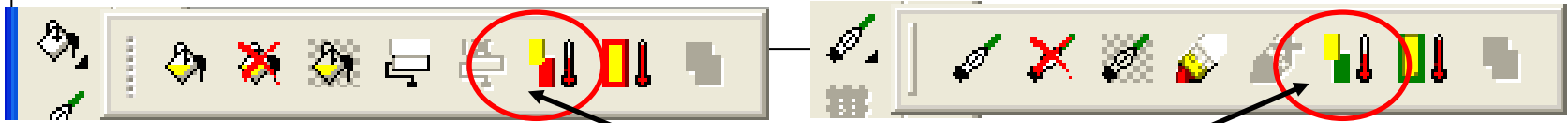
The 'Assign Colors' dialog box is shown with the following settings:

- Stroke Type: Solid
- Stroke Attributes: Scale
- Width: 0.020
- Selected Color: Intense Red GCS-663
- Print Attributes: Overlap/print

The resulting registration mark is shown as a red circle with a stroke, where the stroke is slightly larger than the circle. The text indicates: "The red shape is slightly larger. Set stroke to .02 so not too large".



What is the difference between Overlap and Overprint?

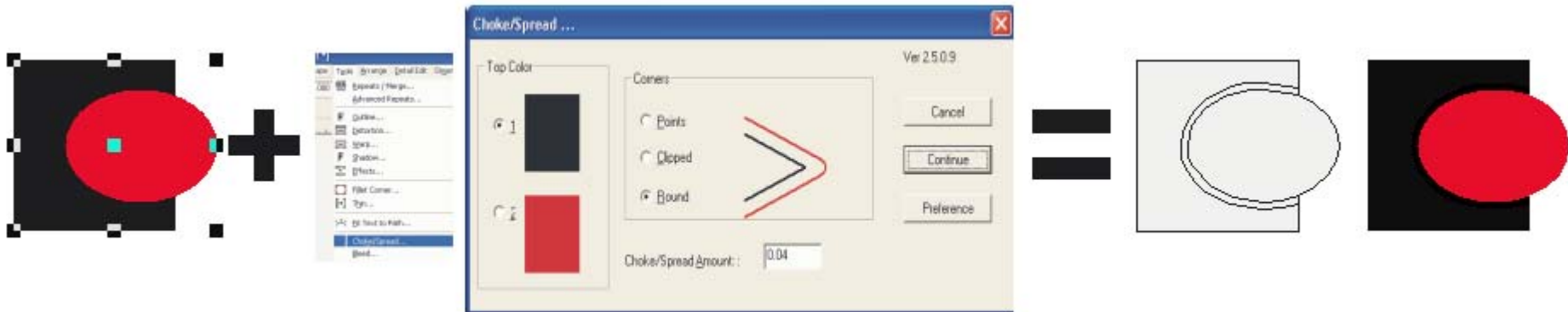


USE OVERLAP instead of overprint for shapes and strokes to prevent the EDGE from printing the same color twice !!!

- Overlap and overprint both prevent knock outs during printing, BUT:
 - Overlap uses the same heat settings as regular EDGE print settings
 - Overprint uses more heat than regular EDGE print settings
- The EDGE can only print one heat setting per pass. Therefore, if you have some BLUE objects that are regular heat settings and some blue objects that are OVERPRINT, then the regular blue will print first, the EDGE will rewind, and the OVERPRINT blue will print second without even prompting you.
- Use overLAP in MOST CASES
 - Use overPRINT only when needed.
 - overLAP eliminates printing the same color twice.
 - Instead I use overLAP if I want to prevent knocking out during printing.
 - The reason for overprint is to print large areas of foil on foil because foil is not as “sticky” as vinyl. The higher heat setting promotes . But Overlap works fine in the vast majority of cases.
 - Use overPRINT only when absolutely required for foil on foil adhesion

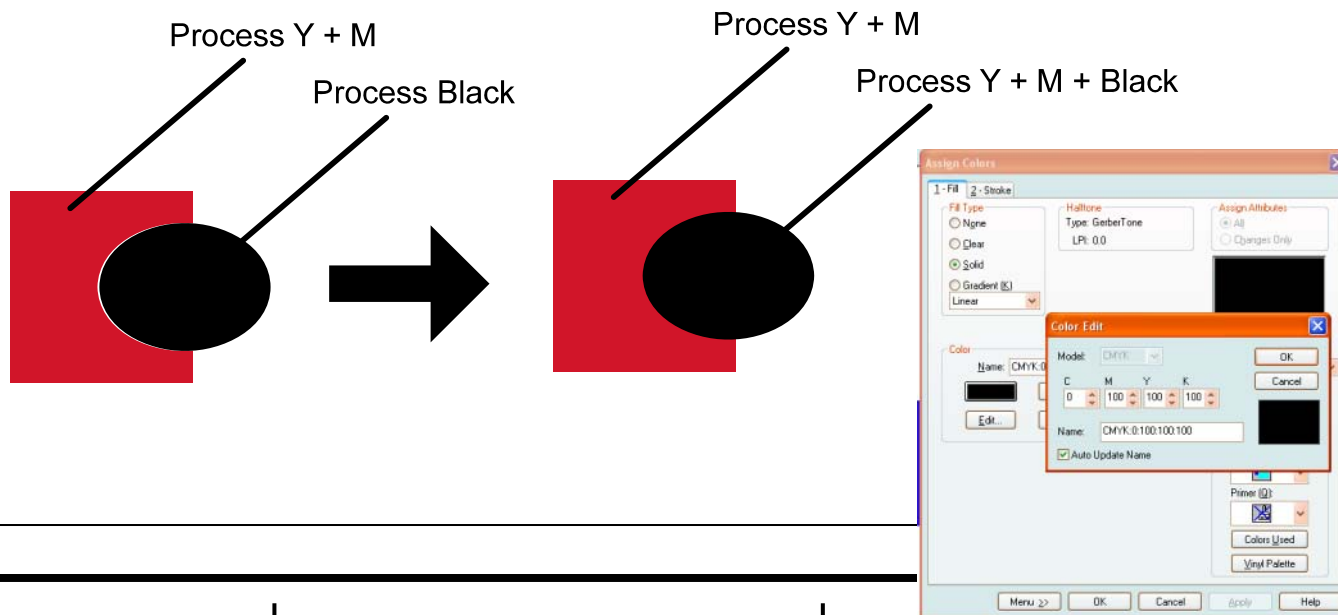
Improving Registration: Tools>Choke Spread

- Problem: Sometimes cannot use strokes with overlaps because of the slight size change.
- Solution: Use Tools>Choke Spread to automatically make shapes subtract and overlap.
 - OMEGA 2.6 Choke Spread works with 2 colors only, but can choose top "hiding" color
 - OMEGA 3.0 can use more than 2 colors and results are more reliable



Improving Registration: CMYK Black

- Problem: When printing Process Black on top of other process colors, there may be a gap between the black and other colors.
- Solution: Change the 100% Process Black to include the other colors that it is abutting. be 100% Cyan+100% Magenta+100% Yellow+100% Black.



Improving Registration: OMEGA 3.0 Regfixer.exe

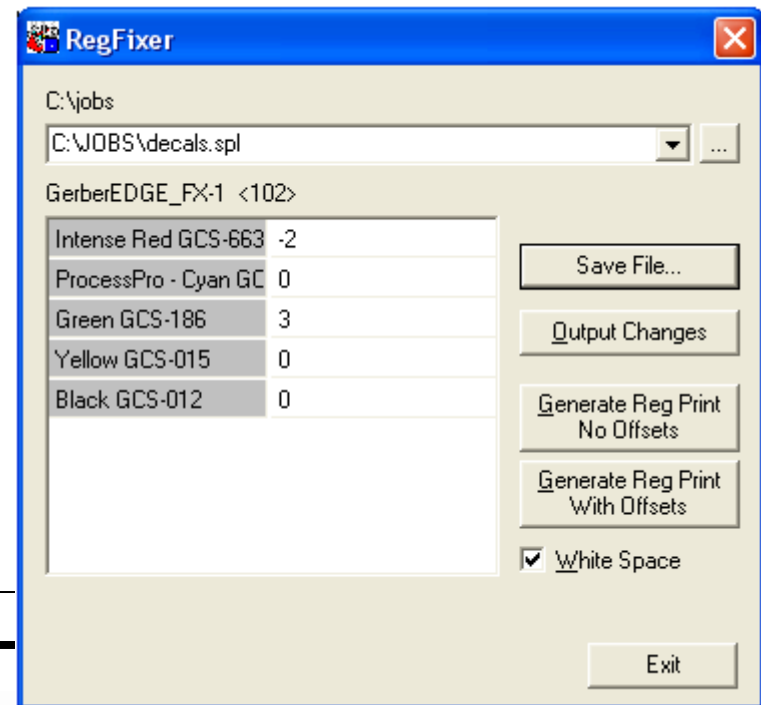
- Problem: When printing GERBERCOLOR SpectraTone, or very small objects, or other cases where nothing else works...Try REGFIXER.EXE

REGFIXER.EXE OMEGA® 3.0 Utility Can Help EDGE Color-to-Color Registration

- See a narrated video tip about Regfixer.exe at
 - <http://www.gspinc.com/mtssandbox>
- or
- http://gspinc.com/downloads/video/OMEGA/totw_regfixer/totw_regfixer.html

What is Regfixer?

- The premise of this utility is that EDGE / EDGE 2 / EDGE FX color registration is off on a consistent basis for an entire job.
- This is not always the case, but this tool has shown color registration improvement, especially when outputting GerberColor Spectratone or small jobs that cannot tolerate large choke spread values.



Steps to use REGFIXER.EXE

- Regfixer.exe is in the MISC folder of the Omega DVD. It must be manually copied from the DVD:\MISC folder into the C:\PROGRAM FILES\GERBER SCIENTIFIC PRODUCTS\OMEGA 3.00\SOFTWARE\ folder.
- Determine if EDGE colors are mis-registered. This is done by creating a small-run SPL file from GSPPlot of the actual job with 1 or 2 columns of repeats.
- Or you can use RegFixer to GENERATE REG PRINT NO OFFSETS to print a small file using the colors in the job to give you an indication of the color registration for the colors in the job.
- Look at the colors in either or both of the above samples to see if they need to be adjusted.
- Create a spool file for the final job to be printed.

Steps to use REGFIXER.EXE

- Start REGFIXER.EXE and open the spool file with this utility.
- The numbers next to the colors are pixel movement adjustments for the colors in the job.
- +1 moves the entire color plane 1 pixel to the right.
- -1 moves the entire color plane to the left. As an example, you might print color #1 with 0 offset, then adjust the rest of the colors to match to color #1 based upon the test print.
- NOTE: the movement amounts should be small and there is no checking for very large changes.
- Leave White Space ON.
- To test the adjustments, either run the short SPL file from step 1 with the adjustments, or click on GENERATE REG PRINT WITH OFFSETS to see if the registration improved. Adjust further or output the final job.
- Once satisfied with the adjustments, create a SPL file for the entire job, open it with this utility, put in the adjustment numbers, and either SAVE THE FILE with the adjustments and output via GOMgr, or simply OUTPUT CHANGES to output directly from this utility. If you do OUTPUT CHANGES, the original SPL file will remain unchanged.