

Media Printing Specifications

ELECTRONIC ARTWORK SPECIFICATIONS

As a full-service e-Media provider, layerONE media can accept a variety of electronic input formats for print and label artwork. There are three levels of artwork manipulation that we offer. For all levels, 1/2 hour of manipulation is included in the quoted price. Artwork, depending on complexity, may migrate between the levels as the project progresses. We make every effort to maintain job scheduling. However, artwork that requires extensive manipulation may cause adjustments in scheduling. layerONE media will notify you of any significant problems or changes. It is important to review proofs and other communications regarding your artwork carefully and in a timely manner, in order to minimize any potential impact on your project.

Level 1.

Artwork is provided in complete form. This artwork requires minimal manipulation and conforms to both file format specifications, gamut and dimensional requirements.

Level 2.

Artwork provided in generally complete form. This artwork conforms to most of the specifications as laid out in this document, but requires significant manipulation on gamut or dimension fronts. Manipulation at this level carries a charge of \$75.00 per hour after the initial 1/2 hour, which is included at no charge.

Level 3.

Artwork does not exist, or is in such a state that is it not suitable for press use or label printing use in current form. Manipulation at this level carries a 1 hour minimum charge of \$75.00, and is billed at \$75.00 per hour thereafter.

ARTWORK FORMATS

layerONE media supports a wide variety of formats. Our primary creative application is Adobe Illustrator. Artwork developed in other applications is supported as listed below. Failure to follow these recommendations can result in delay or expense.

1. Electronic Artwork in CMYK, Pantone® or Duotone gamuts
 - a. Formats. Electronic artwork can be accepted in the following formats. Raster artwork should be provided in 32 bit color depth. Preferred development applications are indicated with an asterisk (*):
 - *Adobe Creative Suite Applications version CS3 and below
 - Macromedia Freehand (native and EPS formats) MX and below
 - Corel Draw v12 and below
 - QuarkXpress v7 and below
 - Adobe PageMaker v6.5.2 and below
 - *General EPS
 - *TIFF
 - WMF (Windows Metafile)
 - PDF (Portable Document Format) This format could require extensive manipulation and is not recommended.

2. Electronic Artwork in RGB gamut

- a. Conversion. RGB gamut images will be converted to CMYK. Every effort will be made to preserve color accuracy, but inconsistencies are inherent in the conversion process. Conversion before delivery is highly recommended.
- b. Formats. Electronic artwork can be accepted in the following formats. Raster artwork should be provided in 32 bit color depth. Preferred development applications are indicated with an asterisk (*):
 - *Adobe Creative Suite Applications version CS3 and below
 - Macromedia Freehand (native and EPS formats) MX and below
 - Corel Draw v12 and below
 - QuarkXpress v7 and below
 - Adobe PageMaker v6.5.2 and below
 - *General EPS
 - *TIFF
 - WMF (Windows Metafile)
 - PDF (Portable Document Format) This format could require extensive manipulation and is not recommended.
 - BMP
 - PICT
 - IFF

3. Delivery and design preferences for electronic artwork.

- a. All artwork shall be in the CMYK gamut whenever possible. RGB gamut artwork may require Level 2 manipulation.
- b. Vector based artwork is preferred. If vector based artwork is not available, 300 DPI shall be the minimum resolution of all raster artwork. No artwork that has been scanned from a previously printed source can be accepted.
- c. Supply ALL linked images and fonts used to create artwork.
- d. When masking vector or raster art, it is not necessary to completely exclude non-printing areas (i.e.; create compound paths). These areas need only be specified as white.
- e. Bleed past the maximum dimension of the printable disc area as defined in your selected printable area specification is not necessary.
- f. White flood “donuts” must be provided separately from the main artwork if they are to be used. “Donuts” must comply with dimensional specifications for both size and trapping as set forth later in this document.
- g. Minimum text size is 6 point for positive text, and 7 point for reverse. Small reverse text sizes in four color process are not recommended.
- h. Fonts shall be converted to paths whenever possible. If this is not possible or practical, fonts shall be included in the artwork submission.
- i. Minimum line size is .15 mm (.43 pt) for positive, .20 mm (.57 pt) for reverse.
- j. A color hardcopy proof should be provided with the artwork. If Pantone® colors are being used, indicate their numbers.
- k. Artwork that arrives formatted for a program other than those listed will be delayed.

4. Methods for the submission of electronic artwork.
 - a. E-mail. Files can be e-mailed to graphics@layer1media.com.
 - b. Stuffit! or ZIP compression may be used. Please indicate the file and application type, as well as version number. Please append file extensions where appropriate.
 - c. FTP site. Contact your Sales Rep or CSR for instructions.
 - d. CD Media. Files may be submitted on CD Media in ISO-9660, HFS, or Hybrid formats. Please indicate the format on the disc's surface.
 - e. A hardcopy color proof should be submitted as well, via courier, US mail, or other method. If you cannot generate one, layerONE media can do so for you, and will work to achieve color matching to that proof.

5. Available press colors. Offset presses can accommodate any combination of up to 6 colors. Screen presses can accommodate up to 5 colors. Our digital press uses standard four color process, plus white. On ALL of our presses, white, if used, MUST be counted as a spot color, and without a white flood under process ink, colors will appear differently than on paper. Variations in the disc technology (i.e. CD vs. DVD) can also cause variation. The full gamut of colors included in the Pantone® Color Formulator Guide 1000 and Pantone® Metallic Color Guide, Overprint Clear, and Matte are available. In addition, fluorescent colors are available, but are not recommended due to their high potential for fade. Be advised that although every effort will be made to make an exact color match, the nature of printing on the surface of disc media will cause slight variations. **For example, Pantone® and process tints that are less than 15% are unlikely to print properly. Tints less than 10% will not print.** Please notify us of the need for this correction should it be necessary. Pantone® inks are not available on the digital press, and a maximum of one Pantone® color may be used with offset printing. Four color process must NOT overprint Pantone® inks when offset printing.

DIMENSIONAL SPECIFICATIONS

Different types of Media print differently. The dimensions of the printable area on disc Media are not constant, and vary according to media used, and Customer request. The following specifications have been developed to accommodate most jobs.

1. **Offset/Screen Print Specification, Full Size Discs**
 - a. Prints from edge to center of disc, 118 mm - 22 mm.
For discs WITHOUT white flood, care should be taken to avoid the mirror band area of the disc, yielding a 118 mm - 42 mm print area.

2. **Offset/Screen Print Specification, 80mm Diameter Media**
 - a. Prints from edge to center of disc, 78 mm - 22 mm.
For discs WITHOUT white flood, care should be taken to avoid the mirror band area of the disc, yielding a 78 mm - 42 mm print area.

3. **Digital Print Specification, Full Size Discs**
 - a. Prints from edge to center of disc, 119 mm - 21 mm.
For discs WITHOUT white flood, care should be taken to avoid the mirror band area, yielding a 119 mm - 42 mm print area.

4. **Digital Print Specification, 80mm Diameter Media**
 - a. Prints from edge to center of disc, 79 mm - 21 mm.
For discs WITHOUT white flood, care should be taken to avoid the mirror band area of the disc, yielding a 79 mm - 42 mm print area.

5. "Business Card" media

- a. Various specifications are possible for "business card" or "hockey rink" media, as these discs can be cut to suit the application. Contact your CSR or Sales Representative for further information. It is NOT possible to print this media on the digital press at this time.

6. PerfectPrint Thermal Printing Technology Specification

- a. Our equipment supports Rimage thermal after printing. For a detailed and thorough explanation, Print Specifications can be downloaded from Rimage Corporation directly. The current link is: <ftp://ftp.rimage.com/public/systems/manuals/PerfectPrintSpec.pdf>

7. Trap Specifications

- a. Our presses have highly precise registration. We will add an appropriate amount of trap to your artwork where necessary and possible. However, situations do arise in which trapping of flood colors is necessary, particularly with artwork that falls out of the above specifications. For such cases:
 - b. White flood edge trapping WITHOUT overlying color flood
 - i. When a white flood is used as a background for artwork that does not contain an overlying flood or color block that reaches the edge of the printable area, the artwork should be kept .25 mm from the edge of the flood.
 - c. White flood edge trapping WITH overlying color flood
 - i. When a white flood is used as an underlay for an overlying color flood, the dimensions of the white flood should be .25 mm less than the overlying color. Example: 12 mm diameter circle of PMS® 1375 over white flood. Dimensions: PMS® 1375 circle, 12 mm, underlying white flood circle, 11.5 mm (- .25 mm for each "side")

8. Specification Exceptions

- a. Exceptions to the above specifications can be made under special circumstance. In some cases, this may involve extra cost, due to materials expended during the printing process. Exceptions may also cause the time table of your job to be extended. Your Representative can help you determine which specification is right for you, and what exceptions may or may not be appropriate.
- b. Due to the nature of disc printing, variations can occur that might not ordinarily be accounted for in normal artwork preparation. To ensure your job looks its best, the Graphics department and/or your Representative may recommend a change to the artwork that may increase the overall cost of the job. No changes will be made, however, without approval from the Customer and Representative.

FILM SPECIFICATIONS

Although layerONE media will also accept films as an input format, we **STRONGLY** recommend that films be produced by layerONE media. **WE CANNOT NOT BE RESPONSIBLE FOR THE QUALITY OF PRINT PRODUCED WITH SUPPLIED FILMS.**

If supplied, films **MUST** conform to the dimensional specifications as mentioned above. Contact your representative for details regarding film output specifications for the particular printing technology you have chosen.