



LABELFILM SPECIFICATION

This document relates to the screen printing process used for the decoration of compact discs.

1. DEFINITIONS

SPOT COLOUR DISC: An image created from up to six spot colours (Pantone™ colours).

HALF-TONE disc: Single colour half-tone printed disc.

DUO-TONE disc: Two-colour half-tone printed disc.

FOUR COLOUR PROCESS / PICTURE DISC: An image which has been colour separated for printing using the four process colours (Cyan / Magenta / Yellow / Black). Even if the image is made up of only three of the four process colours (e.g. cyan, yellow, black) this will still be classified as a picture disc as the printing process used is the same. The image does not have to have a white base to qualify as a picture disc. **See Note 1.**

PROOF: ***A CONTROLLED, CONSISTENT & CALIBRATED image on a suitable base, which contains a recognised target. A recognised target is a series of solid and half tone patches which have been closely controlled and which will be measured.***

Proofing systems which are suitable include: Cromalin, Matchprint, Iris, Epson, Agfa, Polaroid, Kodak.

A proof is a colour representation of the final image to be printed. Some proofs and proofing systems may not be acceptable. This is because they may not be sufficiently well calibrated, controlled or compatible with the printing process and thus do not give a satisfactory representation of how the final image / colours will appear on the printed disc.

2. COLOUR REFERENCING

It is **ESSENTIAL** that a proof is supplied with **all picture disc/four colour process artwork** in order for suitable colour match to be made. Unless we receive an appropriate proof, or are requested to provide a proof which is subsequently approved we cannot guarantee that the intended colours will be satisfactorily reproduced. This description of proofs applies to both Digital and Analogue Proofing Systems.

Note 1 *Due to the reflectivity of the aluminium discs, the overall effect of printing a four colour process image onto the silver substrate will be significantly different from that of printing on white paper. We will automatically print the image onto a white base to get this effect. Should you not wish to achieve this effect then it this has to specified on both the purchase order and on the films that no white base is required.*

We use the **Pantone Matching System™ (PMS)** colour chart as the guide for matching all special colours, including the metallic, day-glo and pastel range. Please ensure that each film separation states the required Pantone™ reference or process colour.

Due to the variety of proofing systems available and the Pantone™ reference substrates, tolerances in the final printed colour may vary.



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3.SCREEN RULING

The film separator scans the image, transforming it into a half tone dot pattern with a specific number of lines per inch (lpi). The shape of the dot should be elliptical.

- Single and duo process images 100 lpi but we can use films up to 133 lpi
- Four colour process images (CMYK) 100 lpi but we can use films up to 133 lpi

Resolutions below the recommended lpi will result in grainy, low quality images on the disc. Resolutions above 133 lpi will also result in poor quality print.

4.HALF-TONE DOT RANGE (Tone Values)

- * Minimum = 15%
- * Maximum = 85%

Ranges above or below these guidelines may not print, be invisible to the eye or introduce undesired patterns.

5.SCREEN ANGLES

This is the angle at which the dots on a half-tone image have been defined or imaged and are necessary to avoid the appearance of undesired patterns.

Half tone screen angle requirements are as follows: 0 degrees = the three o'clock position, angles are measured positive in the anti clockwise direction.

a) Four colour Process Images	1 st Colour	Cyan (C)	15°
	2 nd Colour	Yellow(Y)	0°
	3 rd Colour	Magenta (M)	45°
	4 th Colour	Black (K)	75°
*			

The relationship between the colours should be maintained if other angles are employed. The angles refer to the angle of the primary join in the elliptical dot shape.

b) Duo-tone Process Images	1st colour	0°
*	2nd colour	30°

6.LINE WIDTH

Minimum line width = 0.10mm.

7.REGISTER MARKS (CROSS HAIRS)

Register marks must be included in the image area and outside the disc area. They will be aligned horizontally to the artwork / disc centre and at an equal distance from the artwork / disc centre. See diagram 1 later in this document.

The distance from the centre shall be **75mm + / - 1mm**. Film images will be centred on an area **no less than 26 cm²**.



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8. TYPE SIZE

Minimum type size = 4 point sans serif. (5 point serif)

*Reversed out Minimum type size = 6 point sans serif

If the text is to be reversed out, the use of more than one colour should be avoided as movement in registration will cause the serifs to become blurred.

9. TRAP

Also known as 'overdraw', 'bleed', 'spread', 'choke' or 'key', this prevents thin lines of the base colour / silver disc showing through when a slight movement in the register of the image occurs. Your reproduction supplier should be able to advise you and implement the function.

We require trap of approximately 50 microns / 0.15pt.

10. COPYRIGHT WORDING

Wherever possible you should incorporate copyright wording into your on-body artwork e.g.

*"ALL RIGHTS OF THE PRODUCER AND OF THE OWNER OF THE RECORDED WORK RESERVED.
UNAUTHORISED COPYING, PUBLIC PERFORMANCE, BROADCASTING, HIRING OR RENTAL OF THE
RECORDING PROHIBITED."*

It is also advisable to incorporate the © and ® symbols and declaration of rights ownership - this may also give your copyright additional protection in certain territories.

11. CD LOGOS

We recommend that the official appropriate CD logo is incorporated into your on-body artwork. Please refer to the CD Graphic Standards Manual for correct logo usage.

12. CATALOGUE NUMBERS

We strongly advise that you incorporate your product's catalogue number into the label artwork to be printed. This helps identification of discs during packing, and provides clear final product identification.

The catalogue number must consist of ***not more than 12 alphanumeric characters***.



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13.FILMS

Films should be supplied ready for production of screens, i.e.

- Right reading
- Emulsion up
- Positive
- Hard Dot Quality
- Colour separated (i.e. separate films are required for each colour)
- Each film labeled with the Pantone™ /process colour required
- Labeled for orientation (i.e. 'TOP' & 'BOTTOM') as some designs can be confused
- Marked with the order in which the colours should be printed onto the disc
- Include registration marks (5 small cross-hairs on each film) for alignment to the disc and respective colours
- Clean and free from scratches or any other defect
- Flat (not rolled or folded)
- Made from original artwork (not photocopies)
- Density > 3.0
- Fogging <0.05
- Conform to : Dot Range
Screen Ruling
Screen Angle Requirements

14.ELECTRONIC MEDIA

We use Apple Macintosh hardware and compatible software for all artwork generation.

a) Main applications used:

- Quark Xpress
- Adobe Illustrator
- Adobe Photoshop

b) Preferred file formats:

**** PDF, EPS, TIFF, JPEG, GIF***

When converting PC files to Apple Macintosh, some formatting may be lost in the process - a problem inherent in file translation. You should provide files in final format ready for running out films to our specification.

c) File content:

Unless advised, we will assume that all supplied data and constructs meet the both the Customer's and Deluxe' requirements and that these have been verified and validated by your supplier.

d) Media types:

We are able to accept artwork via the following media:

- ISDN
- FTP
- CD
- E-mail (up to 10Mb)

Printable Area of Disc

