

# Technical Reproduction Guidelines

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## Delivery Requirements

The delivery and receipt of advertising material via Addelivery, Quickcut and Adsend is an automated workflow. As a result material instructions are not able to be viewed and should be communicated to your Nine publishing sales contact.

### Booking Number

There are a number of mandatory fields that must be completed prior to your ad being transmitted via one of our approved delivery channels. One of these fields is the booking number/material id number. Please contact your Nine Publishing sales representative to obtain this number.

### Storage & Repeats

Nine will store digitally supplied material for a period of three months. Repeat material instructions are to be supplied to your Nine sales representative (not Quickcut or Adsend). Nine Publishing requires the booking number and publishing date of the material to be repeated. It is, however, advisable to re-send the ad material for each insertion, to ensure that you run the material you require.

## Material Requirements / Production Guidelines

### General

PDF version	1.3	ICC compliant	No
PostScript level	3	Colour model	CMYK only

### Fonts & Type

**Type that has been set outside the recommendations shown is likely to reproduce poorly. Nine will not accept any claim for compensation for poor type reproduction where these recommendations have not been met. Ads with type set outside Nine recommendations are accepted and run entirely at the advertisers risk.**

Font embedding required	Yes
Font subsetting allowed	Yes
Recommended point size for coloured type	8pt
Recommended weight for coloured type	Bold
Recommended plates allowed for coloured type	3
Recommended point size for reversed type	12pt
Recommended weight for reversed type	Bold
Recommended plates allowed for reversed type	3
Recommended point size for single colour type	(100% C,M or K) 6pt

### Images

Format	EPS, TIFF	Dot aim point (C,M,Y,K) for essential whites	3%,2%,2%,0%
Minimum resolution for colour images	150dpi	Dot aim point (Colour) for midtones	30%
Minimum resolution for greyscale images	150dpi	Dot aim point (Colour) for shadow (max)	240%
Minimum resolution for black & white (single bit) images	600dpi	Dot aim point for shadow (black max)	80%
Total ink weight	240%	Dot aim point (Mono) for Catchlights	0%
Dot aim point (C,M,Y,K) for Catchlights	0%,0%,0%,0%	Dot aim point (Mono) for non essential whites	0%
Dot aim point (C,M,Y,K) for Highlights	0%,0%,0%,0%	Dot aim point (Mono) for midtones	30%
Dot aim point (C,M,Y,K) for non essential whites	0%,0%,0%,0%	Dot aim point for shadow (max)	92%

### Auto Ink Weight Management

Nine Publishing has state of the art ink weight adjustment software in place, any material supplied with ink weight exceeding the specified 240% limit will be automatically adjusted.

**Please consult Technical Reproduction Guidelines for each newspaper before submitting any artwork.**

### Vector art (logos)

Format	EPS
PostScript level	3
Colour model	CMYK only

### Screen Rulings

- 4 Colour and Mono Digital artwork files should be set for screen ruling of 100LPI / 40LPC

## Technical Reproduction Guidelines

### Material Requirements / Production Guidelines

For Digital copy:

**Transparency/all transparent objects must be flattened on output.**

#### Colour Models:

#### Spot Colour

- Spot colours must be modified to separate in CMYK
  - This is achieved using the four colour printing process by combining varying percentages of process colours, comprising the CMYK (cyan, magenta, yellow and black).
  - PMS colour values must not be used.
  - When producing spot colour mechanically with process colour inks, it is important to take dot gain and secondary colour contamination into consideration.
  - N channel/device colours must be converted to CMYK.

#### Dot Aim Points - Colour

- Images should allow for a dot gain of up to 30% in the mid-tone area. Ensure mid-tones are lighter and have more contrast for newsprint reproduction to compensate for the above dot gain. The mid to three-quarter tones have to be adjusted as newsprint tends to flatten these areas.

### Colour Tonal Reproduction Guidelines

#### Grey Component Replacement (GCR)

When separating material for newspaper reproduction Nine recommends the use of GCR.

- Grey component Replacement (GCR) is a procedure used in the colour separation process. GCR uses the black printer to replace cyan, magenta and yellow, not only in the neutral areas throughout the tonal range, but also in the colours of the separation.
- The application of GCR improves the shadow detail, helps compensate for dot gain and reduces the ink weight carried, thus reducing ink set-off and show-through. This function helps produce more stable greys/ neutrals and minimises colour shifts due to slight ink variances on press. Ink trapping within the separation also improves.

The following are the reasons Nine specifications require the scanner operator to apply GCR.

- Figures supplied serve as general guidelines only. It will be up to the trade house or scanner operator to assess each image and subject individually, and apply the suitable range of GCR.
- Depending on the original, for better printing quality, a GCR value of 80% is suggested for use in separations for maximum results. Any higher than this benchmark could result in a coarse (grainy) result.
- Many GCR programs use full-range application, which places black in the highlight and quartertones. However, if the resulting black dot is too large, colours and flesh tones will become grey and dirty on the press.
- Most line illustrations with wash colours or pictures containing pastel colour should not have GCR applied and will reproduce better if conventional UCR (under colour removal) techniques are used.

In addition to the issues addressed in "Tonal reproduction guidelines", the following are strategies which, from a technical standpoint, further determine the success of the process colour image separations and their final reproduction.

**Disclaimer:** Whilst internal production processes may verify that material is within specifications the onus is firmly on the tradehouse to supply material within specification. It is also a requirement of our specifications that advertising material be delivered on time so quality checking procedures can take place. Late material is liable to incur additional production costs.  
 Nine Publishing reserves the right to refuse any material that does not meet our specifications

Effective as of February 2013. Nine Publications reserves the right to change the specifications without notice at any time.

#### Process Colour

- Every colour specified in every application used must be defined using the CMYK colour model.

- Process Colour is specified in percentages of CMYK-the primary colours (Cyan, Magenta, Yellow and Black). Four-colour process is achieved by over printing different proportions of two or more of the primary colours to produce a wide range of colours and tones.
- Screen ruling: 100LPI / 40LPC**
- Dot Structure: Round.**
- Screen angles: Cyan 15°, Magenta 75°, Yellow 90°, Black 45°**
- Print sequence: Cyan, Magenta, Yellow, Black.**

	C	M	Y	K
Catchlights	0%	0%	0%	0%
Highlights	0%	0%	0%	0%
Non detail whites	0%	0%	0%	0%
Essential whites	3%	2%	2%	0%
Midtones	Allow up to 30% dot gain			
Shadow	not to exceed 240%, limit black to 80%			

#### Grey Balance

- Maintaining grey balance throughout the separation is extremely important for quality four-colour reproduction.
- Separations without neutral greys will reproduce with perceivable colour casts on press. As a general rule for newsprint reproduction, grey balance requires slightly more cyan relative to less amounts of magenta to yellow, (E.g. 32 cyan, 20 magenta, 24 yellow).

#### Colour Correction

- In addition to addressing colour casts in an original, colour correction takes on greater meaning in complimenting the inks and the stock used.  
 Colour correction should be utilised in all colour separations generated for newsprint reproduction.
- The main purpose of colour correction is to reduce the underlying colours, which tend to dirty the colours on newsprint stock. Significant improvement in reproduction quality can be obtained by keeping images clean and bright through minimising contaminated colours. For example, taking yellow out of blues, magenta out of greens, cyan out of yellows and so on without sacrificing detail to obtain clean colours, which significantly increases the quality of the reproduction.

These colour techniques and recommendations will produce cleaner, brighter images and can be applied to any kind of creative without the need to sacrifice mood. Following these recommendations will provide the best opportunity of reproducing colour on press.

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### Colour Tonal Reproduction Guidelines

#### Total Four Colour Ink Weight

- Four-colour separations supplied for newspaper reproduction should have a total combined shadow or solid ink weight of no more than 240%.
- The total saturation for process colour material should be no greater than 240%. This helps compensate for dot gain and allows for maximum shadow detail with minimum ink set-off. Saturation exceeding 240% (typical commercial/heat-set specifications) will not result in darker shadows on newsprint. It simply leads to excessive set-off and causes shadow areas to plug; thus reducing printed shadow detail.
- **Please note: Nine checks all material for ink weight coverage. Material supplied with an excess of 240% will warn, and if not resupplied at or below the 240% level, the ink limit on all objects in excess of 240% will be reduced accordingly on output.**

#### Trapping

- In order for black to knockout, the use of a customer black comprising of 1% Cyan, 1% Magenta, 1% Yellow and 100% Black should be used. This is because the In RIP trapping used in production forces all 100% black to overprint.
- By placing a 1% dot of the other process colours in the black, forces the rip to ignore this black and knockout.
- Below describes situations when black should knockout or trap with underlying elements: Where black type is placed on top or overlapping images use the custom black as mentioned above.
- If the black text overlays a solid red background panel of (100% yellow, 100% magenta) for example, then the assigned needs to be a custom black for it to knockout the underlying colours (as the sum of these overprinting would be 300%).

### Mono Tonal Reproduction Guidelines

#### Non Essential White Drop Out

- Remove all printing dots from the non-essential whites to maximise the entire available print range between paper brightness and total ink saturation.

#### Dot Gain

- Allow for a 20% dot gain in the mid-tone range.

#### Contrast

- Allow at least 20% difference between adjoining tones to allow for the above dot gain. Exaggerate contrast, as newsprint will flatten the mid-tone areas so allowances must be made to this area.

#### Sharpness (U.S.M.)

- Sharpness should be a little exaggerated with a distinct tonal adjacency (break between the tones), as this will soften when reproduced on newsprint.

#### Midtones

- Original manipulation of mid-tones must be adjusted correctly, if not it will result in images printing too dark or flat, even though specifications have been adhered to.
- Mid-tone replacement is dependent on each image or subject content.
- Mid-tones should be lightened (less printing weight) for dark images.

#### Shadows

- A common error made in tone reproduction is to make necessary mid-tone adjustments without restoring the shadow range. Because the shadow is pulled open by the mid-tone adjustments, it is important to restore the shadow end to its maximum density. Shadows are black but no three-quarter detail should be missing.

#### Screen

- Nine Publishing recommends that a minimum 10% stipple be used when creating a background screen.

### Dot Aim Points - Mono

- Material dot aim points for normal full tonal range originals.

Catchlights	0%
Non essential whites	0%
Essential whites	2%
Midtones	Allow up to 30% dot gain
Shadow	92%

# Technical Reproduction Guidelines

## Typeface Guidelines

**Nine holds no responsibility for the printed reproduction of any typeface that does not fit the following specification.**

### Fonts

- Always use Postscript (or Postscript compatible) fonts.
- Nine recommends that no True Type fonts be used in any applications. True Type fonts can be identified by looking at the font properties in Adobe Type Manager, or file information on the Macintosh. They will be identified as True Type font rather than postscript font.
- CID / Unicode / Double Byte fonts are not supported.
- Although Nine supports all fonts in the Adobe Type family, version differences can cause problems.

### Embedding Fonts

- All fonts must be embedded and subset when creating PDF files. (Fonts not embedded will revert to Courier default at the RIP).
- Go to - Downloads for Font embedding and step by step instructions.

### Typefaces

Sans serif typefaces are the recommended choice for newsprint reproduction. They reproduce easily with the desired readability.

## Production Tips When Using Typefaces in Colour

### Coloured Type on white background

- The best Sans Serif typefaces to use in design of coloured type on white background should be bold and solid and have no fine line work in them.
- The recommended type size for (Coloured Type on White Background using single colours) is - **6pt**.
- The recommended type size for (Coloured Type on White Background using two or three colours) is - **8pt**.
- It is not recommended that typefaces print using four colours. If used it should be Sans Serif and bold the recommended type size is. - **12pt**.
- Type with fine serifs or are screened to make up a required colour should be **12pt** or greater in size. Smaller typefaces will create registration and legibility problems when printing.
- Final reproduction results should be considered when attempting to reproduce type as a light screen tint. For best results, avoid screening type styles with a fine to medium weight and those with serifs. Minimum type size for this application is. - **12pt**.
- Due to the relationship of ink, newsprint and the press, small type tends to lose definition when printed. Typefaces with thin or delicate serifs and strokes should be avoided. Extremely fine strokes can drop out, while thick strokes can plug in on the press.
- The recommended type size for (Reverse Type using one process colour) is - **8pt**.

**It is not recommended to reverse type out of single colour yellow.**

### Overprint type

- When using solid coloured type overprinting a background tint, it is suggested that type not overprint a background screen (tint or ghosted image) greater than 30% visual density. This allows for dot gain and provides the necessary contrast between text matter and the background image.
- When using black type smaller than 12pt it is recommended to overprint a background tint to prevent key lines.

**Type size recommendations for overprint type: As above for coloured type on white background.**

### Reverse type out of coloured / solid or halftone panels

- When reversing type out of panels it is recommended that this be limited to using three colours only and a minimum of 12pt or a thickness of 1pt on the type stroke, whichever is the greater.
- For contrast and readability, reverse type should not be positioned within screened areas less than 50% or in yellow or light coloured backgrounds.
- Recommended text size of reversed type out of a four-colour image, type with fine serifs or type with screens, is **12pt and should be in bold face**. This allows for press variations in register while maximising legibility.
- The minimum thickness on all reversed type out of 2 or 3 colours should be at least 0.75 point thickness, it is not recommended to reverse serifed faces at all or out of 4 colours.

### Colour Saturation Tip

- Coloured type or solid panels with reverse type can print using a single colour at 100%. When a second, third or fourth colour is required for colour makeup, these extra colours should be limited to 90%, keeping within the total ink limit of 240%. This will allow the ink to trap on the press and result in consistent and balanced printing.

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## Point Sizes

1	The recommended text size for a SINGLE solid colour of (100% C, M, Y, K)	6pt
2	The recommended type size for coloured type on white background using two or three colours	8pt
3	The recommended type size for coloured type on white background using four colours (It is not recommended that typefaces print using four colours. If used should be sans-serif and bold)	12pt
4	The recommended type size for type with fine serifs (Type screened to make up a required colour)	12pt
5	The recommended type size for type as a light screen tint.	12pt
6	The recommended type size for reversed type, out of a four-colour image, reversed type, with fine serifs, reversed type, with screens.	12pt

Typefaces reversed out of two or more colours should have a recommended thickness and be sans-serif (See above typeface points for what to avoid); again this will allow for press variation in register while maximising legibility.

## Line Thickness

- Minimum width 0.125mm (0.005 inch) with a maximum of two colours overprinting.
- Avoid line art less than 1 pt.

## File Format

Standardising on the following files formats when creating the material is essential to providing accurate output results.

### Colour bitmap images

Colour bitmap images are generally 8 bit that are device dependent, these images should be saved at twice the line screen ruling of the publication to ensure proper reproduction while allowing for a safety margin.

#### Recommended effective resolution for Colour images: 150dpi.

Colour images should be saved in TIFF or EPS format, without compression, transfer or screen functions, alpha channels or any other colour profiles associated.

1. To avoid PostScript errors, most drawing packages can automatically split complex paths into smaller ones (i.e. split long paths) Nine recommends using this option.
2. The resolution standards recommended for Colour images as shown above should be adhered to when placing scanned images into vector art.

### Standard file formats for Mono

#### Single bit Images.

Single bit images are typically used for scanned line art. Although single bit images can be scanned up to the resolutions of the output devices being used no discernable difference has been found when using the Nine recommended settings.

**Recommended effective resolution for single bit images: 600dpi.**  
Single bit images should be saved in TIFF format, without compression.

### Grayscale bitmap images

Grayscale bitmap images are generally 8 bit that are device dependent, these images should be saved at twice the line screen ruling of the publication to ensure proper reproduction while allowing for a safety margin.

#### Recommended effective resolution for Grayscale images: 150dpi.

Grayscale images should be saved in TIFF or EPS format, without compression, transfer or screen functions, alpha channels or any other colour profiles associated.

### Vector art

Vector is typically produced using Bezier curves and lines, using products such as Adobe Illustrator. As vector art is device independent, no minimum resolution is applicable.

1. To avoid PostScript errors, most drawing packages can automatically split complex paths into smaller ones (i.e. split long paths) Nine recommends using this option.
2. The resolution standards recommended for Single bit and Grayscale images as shown above should be adhered to when placing scanned images into vector art.

#### Vector art should be saved in EPS format.