

CD REPLICATION SPEC KIT

06/02/2016

Replication: "molding" discs from a glass master. **Duplication:** "burning" discs using recordable media. This Kit is for "Replication" projects. See our web page for "Duplication" pricing, order form, and specs.

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PLEASE CAREFULLY REVIEW THE FOLLOWING PAGES

(not doing so usually results in time delays, additional costs, nail biting, and insomnia.)

If you have any questions, don't hesitate to call.

Standard Order Flow

- 1) **You** contact us for a quote and send source materials.
- 2) **We** confirm receipt of materials and review project details.
- 3) **We** forward art proofs for your approval before production begins, and send estimated ship dates after approval.
- 4) **We** confirm order status around mid-point of production.
- 5) **We** notify you when order ships and send tracking information.

Turnaround Time

- **CD replication** turnaround is usually 7-8 working days (discs only). Before production can begin, we must have the Return Pages from this kit, prepayment/PO, and approval of the art proofs. Printed packaging usually adds a few days.
- **Rush turn** options are usually available, (call for fees & availability.) If your turnaround will be rushed, please send two source discs on different brands of media and mark one "Master" and the other "Backup" and send your art files as early as you can.

Source CD

We prefer a CD for mastering and replication, and store it for future orders. If you want to send us files, we can handle the premastering for you, but we will have to overnight a disc back to you for approval, (call for quote.)

- **CD-ROM:** We recommend a mint condition mode-1 single-session closed disc written in "Disc-At-Once" mode. Please call if you plan to create an alternate format, (i.e. CD-Extra/CD-Plus/Enhanced-CD, Multi-session, etc.)
- **Audio CD:** Please refer to the Redbook Audio specs (see Wikipedia.com.)

Tips:

- Use quality media and record at 4x or less.
- Don't record to the limit of the media. Round down 3-5%.
- Burn disc with "verify" option and "finalize" the disc.
- Use premastering software to burn your master, like Toast, Nero, iTunes, etc. Do not burn in "Packet" mode. (If you get a compatibility warning when you eject the disc, it was probably Packet mode.) If you burn the disc using your operating system instead of a Premastering program, it might be packet written, which is not an acceptable source for replication or duplication.

Licensing

When submitting your order to us, please be sure to provide the "Return Pages" found at the end of this Kit. Having this paperwork and any required licensing information completed in advance can help prevent delays once your project has been submitted.

Reorders

We store your source materials for up to 1 year at no charge. (replication reorder minimum 500 discs.)

MISCELLANEOUS

CD-Text

If your master is encoded with "CD-Text," so the track names display on compatible players, mark "Contains CD-Text" on your master. Even though CD-Text is not within Redbook Audio specs, we'll do our best to preserve this when mastering.

If you want computers to display the track names, you must enter your CD info into the Gracenote database, "CDDB" (iTunes, Toast, or Winamp can do this.)

650MB CD-ROM Limit

Need to pack 700MB/80min onto your CD? Can do, but know that exceeding 650MB (681,984,000 bytes) / or 74 minutes of audio violates the recommended CD limit, and we will need you to sign a waiver.

Storage Capacity	
Card CD	30-100 MB
8CM Mini CD	180 MB
ClearDisc CD	270 MB
Standard CD	650 MB
ClearDisc DVD	1,370 MB*
DVD-5	4,482 MB*
DVD-9	8,144 MB*

*See our DVD Kit for details.

4th Quarter Turnaround

Around the 4th quarter of the year, rush turns can be harder to get and overall turnaround times can be longer due to the industry being much busier.

TIPS

PLAN

Allow plenty of time for your project. Most everyone underestimates the time it takes to create, proof, revise, test, replicate, and package their CD. This is not a process you want to rush through.

FOOL-PROOF

If you are making a CD ROM, make installing and running your CD-ROM simple. Place as few files as possible in the root directory. Provide your end user with a clear and concise "READ_ME" file in the root directory along with any last minute notes.

TEST

If there is a problem with your CD that was not found before replication, there could be great sorrow and gnashing of teeth, but you will have plenty of drink coasters to give away. **Test your CD on as many different systems/players as possible** and keep a log of results.

Be sure and **perform a "binary compare" or "verify pass" between the CD and the source files** for any mismatches.

PROOFREAD

Carefully proofread all text on the packaging and the disc before sending your materials to us. If you catch a typo and want to correct it after we've gone through the prepress process and generated your proof, there will be an additional charge.

SUCCESS

We focus on providing quality products with honest and forthright dealings with our clients. Always feel free to call with any questions or concerns you may have. We want you and the end user of your discs to be absolutely satisfied.

PRINTING LINGO

CMYK vs Pantone

These are terms for the two standard printing processes.

- **CMYK** "4 color process": Method of mixing Cyan, Magenta, Yellow, and black to produce full color printing
- **PANTONE** "spot colors": Method of picking specific colors from the *Pantone Solid/Spot Color Guide* to print the precise colors you desire.

4/0 - 4/1 - 4/4

Refers to how the two sides of the stock are printed. Said, "four over ..."

4/0: CMYK on one side with no ink on back

4/K: CMYK on one side with black on back

4/4: CMYK on both sides

Gang Printing

Like most printers, we "Gang Run" most jobs; meaning, the job is run on the same press sheet with other jobs. If you have a project that requires color "tweaking" on press, call for an exclusive press run quote.

Duplication vs Replication

Replication: "stamping" out discs from a glass master. The industry standard method produces discs that are tough, compatible, having none of the concerns of duplicated discs.

Duplication: "burning" discs using recordable media. Great for short runs, however, some drives have trouble reading recordable media.

[<more info online>](#)

Printing your replicated disc artwork

As an industry standard, Replicated discs are printed with semi-opaque inks, and because parts of the disc are silver and clear, for better color accuracy and legibility, we recommend a white background. Even though we

use the finest equipment available, due to the inherent challenges of printing onto plastic, precise color matching is not always achieved. We can print discs through two methods (Offset CMYK & Screen Print): [<see our Disc Art Examples page online>](#)

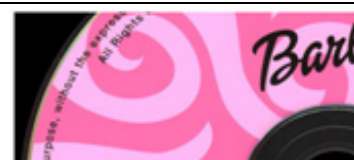
Offset CMYK Printing: Best for full color art

- The **CMYK process** works best with raster pictures, not even color fills.
- **RGB objects** will be converted to CMYK which can result in a color shift.
- **Small type** should be 100% black, not a CMYK build.



Screen Printing: Best for Pantone color art

- **Small type** should be 100% of one color.
- **Percentage** of a spot color "tint" results in a dot pattern.
- Choose Pantone colors from the "[Pantone Solid Coated Spot Color Guide](#)"
- **Overprinting Colors:** If your disc art is made up of 2 or more Pantone colors, we recommend knocking out the color underneath when *overprinting* a color. Overprinting colors without *knock-out* usually produces color shift due to the semi-transparent nature of the inks. Knock out is not necessary when overprinting any color with black, or when overprinting any color onto a white background.
- **Trapping:** When knocking out, in order to minimize gaps between colors, adjacent colors must overlap slightly (the definition of *trap*). For example, to trap in Illustrator, apply strokes to objects and text at twice the desired trap, check the "overprint stroke" box, and uncheck the "overprint fill" box. Strokes should be set to 1 point to achieve the trap we recommend of .5 point.
- **Gradients, Tints & Halftones:** Due to the limitations of screen printing onto plastic, it is best to avoid gradients, and only use tints, duotones, or halftones if you have experience using these methods with screen printing. [<see our Screen Print Examples page online>](#). When Screen Printing the dot density of tints should fall between 15% and 85%. Gradients crossing the 60% tint density usually show a slight banding line due to a jump in density when the screen dots begin to touch each other. If you must have a gradient, then run it from 10 - 55%. or 65 - 90%. or run it "CMYK" and bypass these concerns.



Screen Printing Minimums:	1 or more colors	CMYK
Type - Positive / Negative	6 / 7 points	8 / 8 points
Line - Positive / Negative	.5 / 1.5 points	.5 / 1.5 points

**Larger type recommended for serif or fine fonts.*

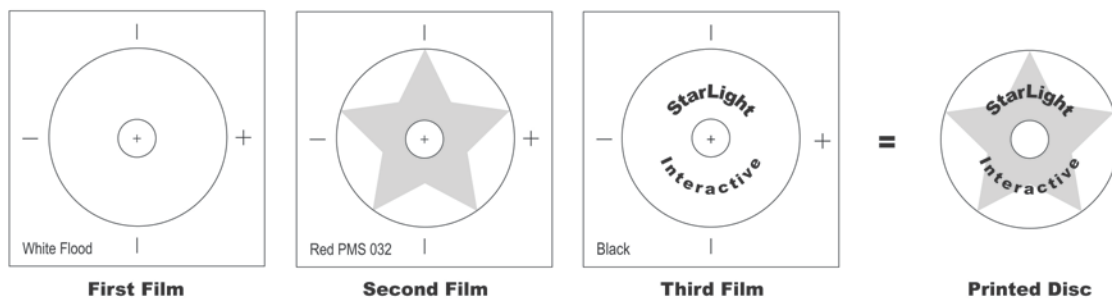
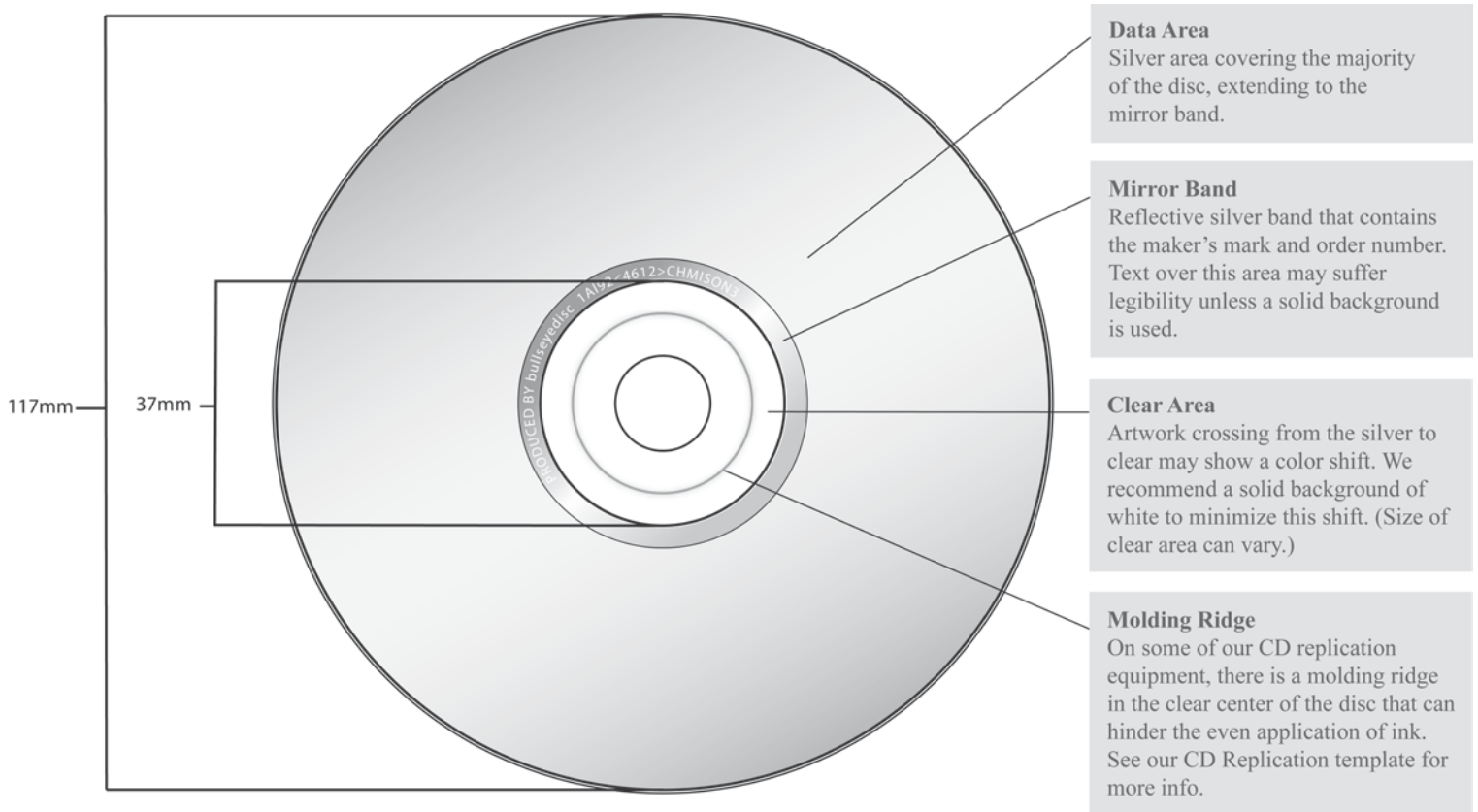
Tips & Specs

- **Printing onto a plastic disc does not result in the same look as printing onto paper stock; therefore, we do not recommend trying to color match the same colors between the disc and packaging.**
- We accept Illustrator (our favorite), InDesign, and Photoshop files for disc art (We do not recommend using Photoshop for Pantone color artwork with more than one color.). If you don't have one of these programs, then send us your art as a 300 DPI full size JPEG or PDF.
- **Proof:** Be sure to include a proof with your files, (printed hard copy or PDF/JPEG) and all fonts and linked graphics if needed.
- **Rush:** For rush turn orders, we recommend sending the artwork as early as possible.
- **Template:** Let our template "mask" your artwork on a separate layer. Don't cut your art down to the inner and outer limits, or, simply provide your art as a square and we will mask it to the disc shape for you.
- **Art Symmetry:** Due to the high spin rate of some drives, asymmetrical art or unbalanced ink application to the disc may cause vibrations. We recommend creating the artwork so the ink is distributed as evenly as possible across the surface of the disc.
- **VECTOR -VS- RASTER:** When possible, use vector elements, because vector graphics produce crisper results than raster graphics.
 - **Vector:** composed of lines and arcs based on mathematical data. Resolution independent. Think line-art & fonts. Edit with Illustrator.
 - **Raster:** composed of dots. Raster / bitmapped elements should be at 300dpi. Resolution dependent. Think photographs & halftone images. Edit with Photoshop.



The Standard CD (5" / 12cm)

We have the ability to submit your order to multiple CD Plants, however, each Plant has unique printing specs. To give your order the quickest turnaround and the advantage of being run at any one of our Plants, use our [Universal CD Template](#) ([available on our web site](#)). If you want to print closer to the center, call for a plant specific template.



Prepress Tips for Packaging



To help your job go to press smoothly, avoiding extra costs and delays, check your art against this list. We will work diligently to prepare your files for printing and are happy to make a simple change to your art if possible before proofing at no charge (changes made after PDF proof creation incurs a fee). We will apply our experience to your project to help it look its best and sidestep potential problems.

Art Preparation Checklist:

- Document is spell checked.
- Document has minimum bleed of 1/8", (artwork extends 1/8" past cut edge).
- Super blacks, and other color builds, should not exceed 300% total ink. Our recommend Rich Black is C: 30 M: 30 Y: 0 K: 100.
- Color profile set to: US Web coated SWOP V.2.
- Proofs of artwork included with files, (hardcopy printout, full size JPG, or PDF w/ embedded fonts).
- Artwork is laid out to BULLSEYEDISC template, (leave template in document on a separate layer).
- Images are high-resolution (300 - 600dpi).
- Photos and Colors are CMYK (RGB & Pantone items will be converted to CMYK which usually results in a color shift). Use of Pantone spot colors adds \$250/PMS/side per item. If you would like to use Pantone colors, please let us know in advance.
- Images and graphics are CMYK: TIFF, JPG, or EPS files only.
- All linked image and graphic files are included.
- All screen and printer fonts are included with a list of all fonts used, (or text is converted to outlines/paths).
- All elements should be set to knock out for auto-trapping to work, (trapping spec: .002" / .144points.).

Supported Art Files:

- Illustrator
- InDesign
- Photoshop
- CMYK Jpeg
- PDF

Proofing:

An emailed PDF is our standard proofing method. If you would like a more color accurate proof, we recommend having us overnight you a hard copy proof – (extra charge applies).

General Tips

FILES

- Please organize your files with the master layout files at the root level and all linked files in a subfolder.
- Do not use screen resolution images captured from the web. Images should be CMYK, actual size at 300dpi.

TEXT

- Allow for 1/8" 'safety area' between text and template edges.
- Small black type should be 100% black, not a CMYK build.

FONTS

- If you are using Illustrator or InDesign, *please* convert all type to "Outlines", and you will not have to send us any fonts. Font problems often cause delays.
- IF YOU CHOOSE TO SEND FONTS:
 - MACs: For Postscript fonts (.pfb and .pfm files), be sure to provide both the screen font file and PostScript print driver file for each font. TrueType fonts have only one file per font.
 - PCs: Use TrueType fonts (.tff files) or convert to outlines, as we are usually not able to use PostScript fonts (.pfb and .pfm files) on PC artwork.

MISC.

- Set layout program's output resolution to 1200dpi or more.
- Make a folding mock-up and send it to us with your files.
- Do not set white type to Overprint.
- Don't set thin lines to "hairline" – set them to .25 point.
- Leave Stroke and Fill check boxes for Overprinting unchecked for colors imported from draw programs (EPS files).
- Avoid "nesting" EPS files (placing an EPS within an EPS file).
- BOOKLETS: If you are using InDesign, submit booklets in the *Book layout*, a "reader's spread". If you are using any other program, submit booklets as a "printer's spread".

Adobe Illustrator

- When saving files, if you have embedded your images into the document, then do not check the box, "Include Linked Files".
- To help avoid issues with Illustrator's "Transparency" feature, save file as flattened EPS.

...questions? –call us

Return Page 

bullseyedisc

Intellectual Property Rights (IPR) Form

To be submitted with every order. Orders without this form cannot be

- OWNED content indicates the individual/organization completing this form is the IPR owner.
- LICENSED content requires proof of licensing for replication. Letters of indemnity are not adequate.
- This form must be completed by the organization ordering replication and not an intermediary.

Project Title: _____	
Distribution of Discs: ___Within an organization ___Retail ___Free to Public Other_____	
Countries of Distribution _____	
Are you the IPR owner for the <u>entire</u> disc contents? ___ YES ___NO*	
Complete the section(s) below describing the content that is applicable to the media you have ordered.	
Does your CD include ISRC codes or CD Text? ___ YES ___NO	
Data/software content:	
*If you are not the IPR owner, list all included non-owned software, freeware, and shareware products. Attach necessary distribution licensing documentation from the IPR owner. Some shareware and freeware products require distribution licensing. Consult the software vendor for what is necessary.	

Audio/Video Content: (If Audio is separately licensed, provide necessary Audio/Video Synchronization licensing)	
Content used: _____	
* If you are not the IPR owner, proof of replication licensing from IPR owner for licensed tracks is required. An attached list of track title, artist, and IPR owner is REQUIRED. Sampling/mixing of additional recordings not owned (regardless of type, quantity, and length) requires licensing of those original recordings.	
<i>I declare that all information provided herein is true and that all disc contents indicated as being "licensed" are properly licensed for replication under the terms of the original rights holder(s). I further declare that I am the intellectual property rights owner for all contents indicated as being "owned" and I authorize replication of the above listed title by BullseyeDisc. I understand that in accordance with the Anti-Piracy Compliance Program procedures and standards of the International Recording Media Association (available at www.recordingmedia.org), the replicator reserves the right to refuse the processing of any order not complying with the Anti-Piracy Compliance Program guidelines.</i>	
Company: _____	Phone # _____
Contact: _____	Title _____
Signed _____	Date _____
Billing address: _____	Shipping address: _____
_____	_____
_____	_____
_____	_____
Ship to phone number: _____	



TERMS & CONDITIONS

Materials: Customer is responsible for disc content and unless hired to do so, BullseyeDisc does not modify or test disc content. We rigorously respect the privacy and security of Customer's materials, ideas, and artwork and will make every effort to protect intellectual property of both Customer and third parties. We use extreme care when handling Customer's source materials, however, we are not liable for any damage to materials. We will store source materials for one year. After one year, if Customer fails to claim its source materials, BullseyeDisc may dispose of Customer's source materials. We reserve the right to refuse any order.

Delivery: BullseyeDisc will do everything possible to make delivery dates, however, delivery dates are estimates and we shall not be liable for any delays in delivery. In no event shall BullseyeDisc be liable for any of Customer's lost profits or any other special or consequential damages. Orders are FOB at the Plant.

Copyright: Customer represents and warrants to BullseyeDisc that (1) Customer owns and/or has the right and authority to possess, use, and replicate any and all materials provided for replication; (2) neither such materials, nor the replication, reproduction or use of the same in any way is defamatory or violates or infringes any copyright, trademark, patent, other intellectual property right or any other right of any third party or entity and will not cause injury to any third party or entity; and (3) such materials are not vulgar, obscene or invasive of public or private rights and do not give rise to civil liability or otherwise violate any local, state, or federal law or regulation. BullseyeDisc reserves the right to immediately halt production and/or delivery of any Customer product which, in its sole discretion, may appear to infringe the rights of any third party. In such cases, all sums due by Customer to BullseyeDisc shall become immediately due and payable. Customer agrees to indemnify, defend and hold harmless BullseyeDisc, its members, successors and assigns, jointly and severally, from any and all claims, suits, liabilities, losses, damages and expenses (including, but not limited to, reasonable legal fees and expenses) which are related to or arise out of any breach of the representations made by Customer herein, whether during the service and/or manufacturing relationship or at any time thereafter. BullseyeDisc reserves the right to participate in the defense of any third party claim which Customer is obligated to indemnify BullseyeDisc as provided above at the expense of the Customer.

Pricing/Billing: Prices and specifications are subject to change without notice. Disc orders are subject to a 5% under or over run and printing is subject to a 10% under or over run. Though under runs rarely occur, customers will only be charged for actual quantities manufactured.

Warranty: BullseyeDisc will manufacture exact copies of the data source provided. Our products are warranted against manufacturing defects in quality and workmanship. Customer must make any claims of nonconformity to BullseyeDisc in writing with reasonable particularity within ten days following the date of delivery. The Customer's exclusive and sole remedy, and BullseyeDisc's sole obligation, for breach of such warranty reported during the warranty period shall be, the replacement of nonconforming products. This limited warranty does NOT apply to any product that has been subjected to misuse, negligence or accident. BullseyeDisc shall make the final determination as to the existence and cause of any alleged defect.

EXCEPT AS EXPRESSLY STATED HEREIN, BULLSEYEDISC MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE OR ANY OTHER MATTER. The remedies set forth herein are the exclusive remedies available to Customer for losses or damages of any kind. IN NO EVENT SHALL BULLSEYEDISC BE LIABLE TO ANY PERSON FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, OR SPECIAL DAMAGES OF ANY KIND, WHETHER ARISING OUT OF WARRANTY OR OTHER CONTRACT, NEGLIGENCE OR OTHER TORT OR OTHERWISE. No agent, employee or representative of BullseyeDisc has any authority to bind BullseyeDisc to any affirmation, representation or warranty except as stated herein.

Venue: This Agreement shall be governed and construed in accordance with the laws of the State of Oregon. Any controversy or claim arising out of, or relating to, this Agreement, shall be submitted to arbitration in Multnomah, County, Oregon. Customer consents to the jurisdiction of the District and Circuit Courts of Multnomah County, Oregon in any action or proceeding relating to this Agreement and waives any claims that such forum is inconvenient.

Conclusion: This agreement is accepted by BullseyeDisc and (a) is a complete, final, and exclusive statement of the terms of the agreement between the parties, (b) is intended to supersede and replace all prior and coexisting agreements, whether oral or in writing, (c) may be modified or rescinded only by a writing signed by authorized representatives of the parties, and (d) applies to all orders submitted to BULLSEYEDISC.

Customer has read, understands, and accepts these terms and conditions:

Signature / Date

Printed name

Company / Title