

# RanDot v.9α

This is RanDot version .9 alpha.

While it is still only an alpha release, Randot is now much improved, and with just a few more changes, and one or two major bug fixes, it will be ready for the assembly line and will be released as version 1.0. I have spent a lot of time developing this program to be bug free (WHICH IT STILL ISN'T), user friendly, and support as many options as possible. If you do happen to discover any undocumented bugs, please send me mail (snail or internet) telling me so I can fix the problem. Also PLEASE read the [credits](#) for my address, and a list of all contributors. If you want to know what is new, go to the [new](#) menu, which lists most changes since the previous version.

## Overview

RanDot is a program which makes random dot stereograms, supporting more features than any other program similar to it.

## What is a Random Dot Stereogram?

A random dot stereogram (or RDS) is a picture which appears in three dimensions when you view it [Cross Eyed](#) or [Wide Eyed](#). This program can only generate them in black and white, because colored RDS pictures are much more difficult to see, and are of much lower quality. There is one other type of "color" RDS pictures, which I may possibly support in the future. These pictures simply have different background colors, and different colored dots.

## How Do I Use RanDot?

See [Using RanDot](#)

## How do RDS pictures work?

In truth, I still don't fully understand it, but in general, they are seen by defocusing the eyes so that you see more than one point on the picture at the same time. If you are totally confused, well, so am I, so get the book Random Dot Stereograms (see the [credits](#) for more info).

## Other stuff:

[Future Enhancements](#)

[Contacting the Author](#)

[New Items in this release](#)

[Known Bugs](#)

[Credits](#)

## Credits and other miscellaneous info.

RanDot v.9 alpha was written by:

Geoffrey L. Hausheer

48 Ten Eyck Ave

Albany, NY 12209

Until May 1994, I can also be contacted at:

433 Mary Donlon Hall

Cornell University

Ithaca, NY 14853

my internet address is:

glh1@cornell.edu

While I have not had any direct help in writing this program, I have found many useful sources of information:

This help file was generated using:

Help Pre-Compiler v3.0 by Antonio Balcazar

A book containing over 50 RDS pictures, as well as miscellaneous source code and other cool information:

Random Dot Stereograms by Andrew A. Kinsman

Published by Kinsman Physics P.O. Box 22682, Rochester, N.Y., 14692-2682

ISBN 0-9630142-1-8

PC Magazine's Windows 3.1 Graphics Programming by Ben Ezzel

ISBN 1-56276-055-6

Miscellaneous freeware source code from microsoft for dealing with Bitmaps

Windows 3.1 Programmer's Reference by James W. McCord

ISBN 0-88022-787-7

RanDot was written using Borland C++ 3.1

## Cross Eyed Viewing

Note: Cross Eyed viewing is not recommended. The pictures do not look as good when viewing this way, and therefore this method should only be used if you cannot view the pictures Wide Eyed.

To view RDS pictures cross eyed:

first: load one of the precompiled pictures into either a paint program or into RanDot. The precompiled pictures have black dots at the top which facilitate learning to view RDS pictures.

now place your head about 1 to 2 feet from the screen, and hold your index finger about halfway between your head and the monitor. Now focusing on your finger (do NOT look at the screen) move it closer or farther from your head until the two dots at the top of the screen become three (If you see four dots, you are getting closer). NOTE: You will see the dots out of your peripheral vision. If you look at the screen instead of your finger, you will not be able to do this.

After you see three dots, continue to stare at the tip of your finger until the 3-d picture forms on the screen.

Some people can see these pictures almost instantaneously, while for others (like me) it takes quite a bit of practice, so try not to get discouraged.

Unfortunately, I have not yet added the ability to place the black focusing dots onto the pictures generated by RanDot, so you will need to become proficient at viewing RDS's with the pictures I have distributed with this program.

If you have a laser or inkjet printer, I recommend printing out the pictures. RDS pictures do not print well using dot matrix printers so don't be too disappointed if you attempt to print them out with one.

## Wide Eyed Viewing

Wide Eyed viewing is the best way to see RDS pictures. Unfortunately, most people find it harder than the Cross Eyed way.

there are several ways to try to view RDS pictures Wide Eyed:

first: load one of the precompiled pictures into either a paint program or into RanDot. The precompiled pictures have black dots at the top which facilitate learning to view RDS pictures.

1) If you have glare on your screen, get about 3 feet from the screen, and look at your reflection on the screen. After maybe a minute or so you should see the 3-d picture "appear" on your screen.

2) Move your head 1 to 2 inches from the screen and look straight ahead. Slowly move your head back always looking straight ahead (not at the monitor) until you start to see "depth" on the screen. Stop then and try to hold the image. After you see the image clearly you can move your head back farther until you are at a comfortable distance from your screen.

3) With your head about 2 feet from the screen, try to look at something (a spot on the wall, etc) about 6 feet behind your monitor. Then slowly move your head so that you are looking past your monitor, but can see it in your peripheral vision. YOu should notice some "depth" in the picture, and be able to focus on it, and "pull" it out.

NOTE: Do NOT look directly at the monitor. The only way to see these pictures is by defocusing your eyes, so looking directly at the picture will not help you at all.

## Future Enhancements

Ok, here are all many of the things I want to add to this program in the future. If you want stuff added, look at [Contacting The Author](#) or [credits](#) for how to get in touch with me.

- 1) I want to be able to type text to the screen in real time (like in Windows Paintbrush). I have no idea how to do this, so this one probably won't be too soon unless one of you would like to give me a suggestion or two.
- 2) I want to add BETTER printer support. This is not too hard, and should be in version 1.0.
- 3) I want to add support for animation. This is really cool (I have seen something like it before), but requires a LOT of work on my part, and so it probably won't come around too soon.
- 4) I want to add support for telescoping text, This would be kind of neat, and might not be too hard. I have no idea how long it will take to do.
- 5) I want to be able to make background filler, so that the backgrounds aren't just flat. This isn't too hard to do, and should be implemented fairly soon.
- 6) I want to be able to save to other output formats. This isn't too bad, but requires me to do some rewriting of large code segments, and so I probably won't do it for a while.
- 7) I want, I want, I want....Well, I want to do a better job on the help file. I just threw this one together in one night so I could distribute this thing FINALLY!
- 8) I will optimize a lot of the code for the next revision. The code is currently a mess, and while it probably won't be faster when I'm done, it will be much easier to work on. (well, I didn't get around to it in v .9, but 1.0 will definatly be neat and tidy)
- 9) I want support for different sized pictures than just 640\*480
- 10) I will make a seperate window for the Stereograms (maybe), instead of having to hit the Show Stereogram button
- 11) The next release will include adjustable displacement, for easier viewing.
- 12) In the next release I will also add adjustable dot density (This will fix the print output)
- 13) The next release will include actual documentation, and a much more comprehensive Help file.
- 14) The next release will probably have the option of a grid overlay to facilitate drawing.

15) The next release will also have improved error handling, so the computer doesn't die off on you.

well that is it. If you have any suggestions jsut send them to me.

**See also:**

[Contacting The Author](#)

[Credits](#)

[New Items in this revision](#)

## Contacting The Author of RanDot v.9 alpha

The author of RanDot is Geoffrey L. Hausheer (that is me). I am currently a freshman at Cornell University, and an Engineering major. This program was written because I have been interested in Random Dot Stereograms for about a year and a half, and have been looking for an exceptional computer program to create them. I have seen many excellent viewers, and some good miscellaneous programs, but have not seen any programs specifically geared towards creating good 3-d RDSs. This is the biggest program I have ever written, and the first program I've ever written for Windows.

I wrote this program completely from scratch with no prior training in Windows programming, and very little help as far as writing bitmap routines goes.

### Registration:

This program is freeware, and can be used completely free of charge. If you feel this is the most incredible program you've ever used, or you REALLY want to see some new features added, feel free to send me a donation, and I'll probably even include your name so that everyone else who gets this will see that you are a generous person, but I don't expect it. I mean, I have only registered three pieces of public domain software in my entire life, and all of them because they offered tons of bonuses if you did. I would, however, like to get e-mail from anyone who gets this program, just to see how many people actually find it useful.

Alright, now that all that is said, if you want to contact me, either:

1) write mail to:

Geoffrey L. Hausheer

48 Ten Eyck Ave

Albany, NY 12209

(If you write something about RanDot on the outside of the envelope, I am guaranteed to get this at any time)

2) Write mail to:

Geoffrey L. Hausheer

433 Mary Donlon Hall

Ithaca, NY 14853

If it is before May 1994, I will get this, otherwise, I probably won't

3) E-mail me at:

glh1@cornell.edu

I have no idea what will happen to this account once the summer comes, but for now, it is the fastest way to get a response

Please also look at the [credits](#). They contain lots of neat info (besides just names and etc).

## Bug List

Alright, this program has been tested pretty well, but that doesn't mean too much. There are a few known bugs though. If you happen to find a bug, PLEASE contact me (see [Contacting The Author](#) or [credits](#))

- 1) The program will sometimes give a division by zero error and crash. Why I haven't the foggiest..yet.
- 2) The program will sometimes crash if you add too many points (or add them too fast) when creating a polygon. I don't understand this one yet either.
- 3) The program may not give you back 100% of the ram it allocates for pictures. I have been working on this for a LONG time, yet the program still keeps between 2 and 5 k per time it is run.
- 4) This help file must have lots of typos in it since I wrote the whole thing in one night.
- 5) Setting the Height Levels much above 15 will crash the computer. So don't.
- 6) The program will crash the computer if it is run too many times (about 10) without restarting Windows. This is a side effect of my not being able to free all memory, and will be fixed whenever I fix problem 2.

See also:

[Contacting The Author](#)  
[Credits](#)



## Using RanDot v.9 alpha

Ok...umm...most of the commands are self explanatory, and I am getting sick of writing this help file, so I will just skim over stuff, and let you just play around.

In the Set Options menu, you can set whether you want to view the RDS Cross Eyed (X-Eyed) or Wide Eyed. This just determines whether the objects come out at you or go in. What can I say but play around with it.

Also in the Set Options menu is a box which says angle. That is the angle you want to rotate a polygon per step. Therefore, if you have 10 steps and want the polygon to do a 360 as it comes out, you would put 36 in the box.

When you select Create Stereogram, I have added the hourglass cursor, and a progress bar at the bottom right of the screen.. It takes a long time to make a picture, even on my 486/66...Give it a minute or so.

Printing does work, but the quality is currently quite poor (although I haven't tried it on a laser or inkjet printer yet). You can try playing around with the printer settings to lighten the output, but I don't even know if they work yet. This was a last minute change I tacked on in about 10 minutes. NOtice that you can only print your stereograms. Therefore, if you haven't made one yet, the printout will not be very good.

There are 5 buttons on the left side of the screen:

Top left button: This one will let you make ellipses, circles etc.

Top right button: This one will let you make rectangles, squares, etc.

Middle left button: This one will let you make polygons. Just close the shape (put the last point on the first point), then select the point you want to be the highest (or the lowest). This is kind of hard to describe, just play around with it,

Middle right button: This one will let you place text in the window. Just click somewhere on the window to get the dialog box. When you are done, hold down the mouse button and drag the text wherever you want it.

Bottom left button: This one is used to copy and paste parts of the bitmap to and from the clipboard. To Cut or Copy to the clipboard, after selecting the bottom left button, drag your mouse around the box you want to cut or copy. then go and hit the appropriate button in the menu. To paste, select the bottom left button, then click on the paste menu item. NOw hold down the mouse button, and move the pasted section wherever you want it to go.

There are two slide bars at the top left of the screen.the left one is the color (or height) that you want to start at, the right one is the color (or height) you want to end at. The brighter the color, the "higher" it is. Use the Height Levels setting in the Set Options box to change how many steps there are. Don't put that number much above 15 or the computer will probably die.

## New features in this release

version .9a 3/10/94

Fixed Saving routines to work finally.

A new menu command, Show Stereogram, will bring up the last generated RDS

The focusing bars are now in place (they were there in the last version, but what the heck)

The Rotation command now works for Polygons (yes, only Polygons). See the documentation for more info

I have added a status line at the bottom of the screen.

There is a Progress bar (in the status line) that shows you how close to done the RDS generation is.

The Cut, Copy, and Paste routines now work. Note that exiting Randot will clear the clipboard (if Randot changed it), and afetr something has been pasted from the clipboard, it is removed, and cannot be repasted.

Printing now works to a limited degree. Until I add adjustable dot density, it wont be very useful though.

The menus now work better with the RDS on the screen.

A few miscelaneous problems have been corrected.

version .1a 3/3/94

first release, lots of bugs, minimal features.

**See Also:**

[Future Enhancements](#)

[Contacting the Author](#)

[Known Bugs](#)

[Credits](#)



