

## How to GoDot #8

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### Patterns and Textures

To fill any given area with a certain pattern and even with a texture (which is another picture wrapped to that area) is what we cover in this eighth workshop about using GoDot to your benefit.

Pic #1 ensued from the material in Pic #2: a pattern, a clipart image, and a headline. It demos how to darken colors by applying a black tessellation pattern to it, and consists of three layers. These are the background (a simple pattern), the middle ground (where the clipart resides), and the foreground (a twofold patterned writing – the pattern is inverse as compared to the background).

We have to perform three processing steps and need these modifiers for it: `ldr.4BitGoDot`, `ldr.4Bit&Mask`, `mod.ClipWorks`, `mod..Histogram`, `mod.TileClip`, `mod.Flip&Mirror`, `mod.QuickMask`, `mod.DrawMask`, `svr.4BitGoDot`, and `mod.Cartoon`. Sounds like drudgery? No, just follow me.

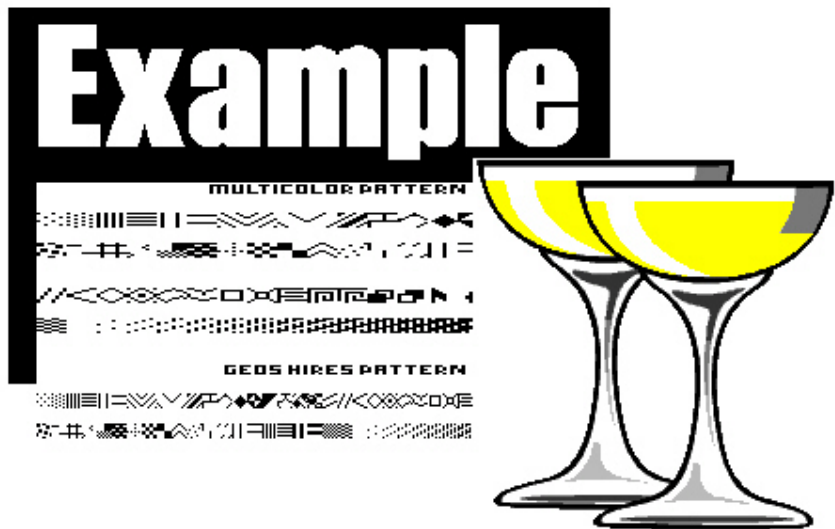


Pic #1: A simple pattern to darken colors.

Step #1 (creating the background): Load image "pattern.4bt" (with `ldr.4BitGoDot`) and *Display* it with screen mode set to *Hires*. You'll see the well known geoPaint filling patterns - in the lower half of the image in their original habit and

in the upper half stretched to double width (two cards). This is to have them properly set up for multicolor mode which we will use here.

The pattern of interest is just a checkerboard pattern of 50% black and 50% white. It's located at row 4 and column 38 (set a clip there



Pic #2: Three individual images to be combined to pic #1.

with `mod.ClipWorks` (height is 1, and width is 2). Now install `mod.TileClip` and spread this clip all over the canvas, letting *TileClip Snap to Border* (thus the filling of the canvas starts in the upper left corner of the image). Display the result with *Exec Area* set to *Full* and *Multi* mode on. Looks like GEOS in multicolor mode. ;-) Next, we clear half of the screen to have it unpatterned: go back to *ClipWorks* and set a clip of 0,0,20,25 (you just enter 20 at *Wid*). Then click *ClrClp*, select white and apply this to *Inside*. Leave *ClipWorks* and *Display* again: Pattern on the right, no pattern on the left. The last to do is to change the color. Enter `mod..Histogram` and *Swap* white and brown. *Display*, and you'll see brown and dark brown. This is the background image. Save it for later use (with `svr.4BitGoDot`).

To have the proper texture for the foreground layer later on, we will now turn this image *upside down* with `mod.Flip&Mirror` (*Area: Full*). Do save this second image, too.

Step 2 (applying a clipart to the background): Discard the background by loading image

“glasses.4bt”. Enter **mod.QuickMask** and set white as the transparent color (click white and then *Generate*). Since white is also inside the glasses which we want to expose, we have to edit the mask a little. Change to **mod.DrawMask**, set the *Brush-*



Pic #3: The mask to expose the two glasses.

*size* to 4, and fill everything black inside the glasses resulting in a mask like in Pic #3 (edit via *Draw Mask*). Now install **ldr.4Bit&Mask** and apply the first saved background to the image in memory (Pic #4). Save the resulting image for later use. If you like, you can scratch the first background image from disk now. It is not needed anymore.

Step 3 (texturing a headline and applying it to an image): Discard what you have in memory and load image “example.4bt” which is just a white headline on black. It’s located in the upper half of the image, so the first we do is move it to the bottom. Install **mod.Scroll**, enter a value of 44, set the *Direction* to upwards and *Execute* twice. Since everything that scrolls out at the top gets scrolled in



Pic #4: Background and middle ground finished.

at the bottom, our writing is in place now.

We first rim it using **mod..Histogram**. *Swap* black and blue. After that, apply the rim with **mod.Cartoon**. To texture the letters we now expose the white portion of them, and apply the second saved background to the image: install **mod.QuickMask**, *Generate* a mask from white again, install **ldr.4Bit&Mask** and load the mentioned image. *Display*. We have a blue background and brown letters. To exchange blue and brown, we just *Swap* them using **mod..Histogram**. Okay. Now the last thing to apply: merge the headline with the rest of the image. Install **mod.QuickMask** again, set brown as transparent and then finally apply Pic #4 with the loader still in memory.

And thus we’re finished.

**mod.TileClip** – This modifier fills the canvas with the contents of the current clip (no matter what size it is). To influence the result you have three parameters, the first of which offers three options: *Edge* (the upper left corner of the clip snaps to the center of the image), *Center* (the center of the clip snaps to the center of the image), and *Border* (the upper left corner of the clip snaps to the upper left corner of the image). *Mirror x* and *Mirror y* determine whether the clip gets mirrored horizontally and/or vertically every other time.

**mod.Flip&Mirror** – You can mirror the contents of a clip vertically (*Flip*) or horizontally (*Mirror*) with this modifier. With *UpsideDown* you turn it by 180 degrees. Whether you effect a clip or the entire image can be determined with “*Select Area*” (options: *Full* or *Clip*). When you process a whole image, the location of an eventual clip gets moved as well, so that it is still at the same location in relation to the contents of the image.

### Command history

*For step #1:*

```
Load Replace “pattern.4bt”
(Screenmode:) Hires
Display
```

Inst: ClipWorks – Execute  
 Clip: Wid 2, Hgt 1, Row 4, Col 38  
 Accept  
 Inst: TileClip – Execute  
 Snap to: Border  
 Accept  
 (Screenmode:) Multi  
 Exec Area: Full  
 Display  
 Inst: ClipWorks – Execute  
 Clip: Wid 20  
 ClrClp  
 (Select:) white  
 Inside  
 Leave  
 Cancel  
 Display  
 Inst: .Histogram – Execute  
 Swap wht, bwn  
 Exit  
 (Save: 4BitGoDot)  
 Save “background1.4bt”  
  
 Inst: Flip&Mirror – Execute  
 Select Area: Full  
 UpsideDown  
 Save “background2.4bt”  
  
*For step #2:*  
 Load Replace “glasses.4bt”  
 Inst: QuickMask – Execute  
 (Select:) white  
 Generate  
 Leave  
 Inst: DrawMask – Execute  
 Brushsize: 4  
 Draw Mask  
 (...Edit...STOP)  
 Leave  
 Load: 4Bit&Mask  
 Load  
 Get 4Bit “background1.4bt”  
 Leave  
 Save “intermediate.4bt”  
  
*For step #3:*  
 Load: 4bitGoDot  
 Load Replace “example.4bt”

Inst: Scroll – Execute  
 Set Amount: 44  
 Direction: up  
 Execute  
 Execute  
 Leave  
 Inst: .Histogram – Execute  
 Swap blk, blu  
 Exit  
 Inst: Cartoon – Execute  
 Inst: QuickMask – Execute  
 (Select:) white  
 Generate  
 Leave  
 Load: 4Bit&Mask  
 Load  
 Get 4Bit “background2.4bt”  
 Leave  
 (Display)  
 Inst: .Histogram – Execute  
 Swap blu, bwn  
 Exit  
 Inst: QuickMask – Execute  
 (Select:) brown  
 Generate  
 Leave  
 Load  
 Get 4Bit “intermediate.4bt”  
 Leave  
 Display

The little GoDot logo in the upper right corner was applied like discussed in H2G #2 in the August 2003 issue of the UCUGA Digest (second example). All images we worked with here, and some more to experiment with are for download at my site ([www.godot64.de/download/workshops](http://www.godot64.de/download/workshops)).



Have fun using GoDot!