

# HSHB-Logo

Unser HSHB-Logo als 3D-Objekt!



Das Logo wurde mit openSCAD designed.

## 1. Variablen definieren

```
gap = 0.0;
xsize = 3.5;
ysize = xsize;
zsize = 3.5;
magnetHeight = 2.0;
magnetDiam = 4.0;
```

## 2. Ein Pixel definieren

```
module 3dPixel(xpos, ypos)
{
    translate(v=[xpos*(gap+xsize),ypos*(gap+ysize),0])
    cube(size=[xsize, ysize, zsize]);
}
```

## 3. Ein Loch für einen Schlüsselring

```
module RingHole(xpos, ypos)
{
    difference(){
        3dPixel(xpos, ypos);
    }
    translate(v=[xpos*(gap+xsize)+0.5*xsize,ypos*(gap+ysize)+0.5*ysize,0.5*zsize])
    cylinder(h=1.1*zsize, r=0.4*xsize, $fn=20, center=true);
}
```

## 4. Stege, um diagonal angrenzende Pixel zu verbinden

```
module PixelSteg(x1, y1, x2, y2, rot=45)
```

```
{
translate(v=[(x1+x2)/2*(gap+xsize)+0.5*xsize,(y1+y2)/2*(gap+ysize)+0.5*ysize
,ysize/5/2])
    rotate([0,0,rot])
    cube(size=[abs(x1-x2)*xsize, ysize, zsize/5],center=true);
}
```

## 5. Ein Loch für einen Magneten

```
module MagnetHole(xpos, ypos)
{
translate(v=[xpos*(gap+xsize)+0.5*xsize,ypos*(gap+ysize)+0.5*ysize,magnetHeight/2])
    cylinder(h=magnetHeight, r=magnetDiam/2, $fn=20, center=true);
}
```

## 6. Das Logo aus einzelnen Pixeln zusammenstellen

```
module hshbLogo()
{
    union()
    {
        3dPixel(3,0);
        3dPixel(4,0);
        3dPixel(12,0);
        3dPixel(4,1);
        3dPixel(13,1);
        3dPixel(5,2);
        3dPixel(13,2);
        3dPixel(5,3);
        3dPixel(6,3);
        3dPixel(13,3);
        3dPixel(15,3);
        for(i = [5:9])
        {
            3dPixel(i,4);
        }
        3dPixel(12,4);
        3dPixel(13,4);
        3dPixel(14,4);
        3dPixel(1,5);
        3dPixel(2,5);
        for(i = [5:14])
        {
            3dPixel(i,5);
        }
        for(i = [1:13])
        {
            3dPixel(i,6);
        }
    }
}
```

```
}
for(i = [2:4])
{
    3dPixel(i,7);
}
for(i = [6:12])
{
    3dPixel(i,7);
}
3dPixel(2,8);
3dPixel(3,8);
3dPixel(7,8);
3dPixel(10,8);
3dPixel(2,9);
3dPixel(7,9);
3dPixel(10,9);
for(i = [5:11])
{
    3dPixel(i,10);
}
for(i = [4:10])
{
    3dPixel(i,11);
}
3dPixel(12,11);
3dPixel(7,12);
3dPixel(9,12);
3dPixel(10,12);
for(i = [6:11])
{
    3dPixel(i,13);
}
3dPixel(5,14);
3dPixel(8,14);
3dPixel(12,14);
3dPixel(7,15);
3dPixel(9,15);
for(i = [6:7])
{
    3dPixel(i,16);
}
for(i = [9:11])
{
    3dPixel(i,16);
}
3dPixel(8,16);
3dPixel(8,15);
//RingHole(8,15);
3dPixel(5,17);
3dPixel(6,17);
3dPixel(9,17);
```

```
        3dPixel(10,17);
        3dPixel(6,18);
    }
    PixelSteg(4,1,5,2);
    PixelSteg(12,0,13,1);
    PixelSteg(14,3,15,4);
    PixelSteg(11,10,12,11);
    PixelSteg(11,13,12,14);
    PixelSteg(6,13,5,14);
}
```

7. Und zum Schluss endlich alles zusammenfügen und rendern

```
//Logo mit Loch für Magnet
difference()
{
    hshbLogo();
    MagnetHole(8,6);
}
```

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