

Eagle3D MIDIBox User Pack

Eagle3D from Matthias Weißer <http://www.matwei.de/doku.php>

New parts tutorial from Félix Chénier

<http://felixchenier.homelinux.com/doku.php?id=pcb:eagle3dnewpart>

3dusrpac.dat

Just copy the code below to your 3dusrpac.dat and user.inc.

known packages (not assigned in the 3dpack.dat):

[illegible]

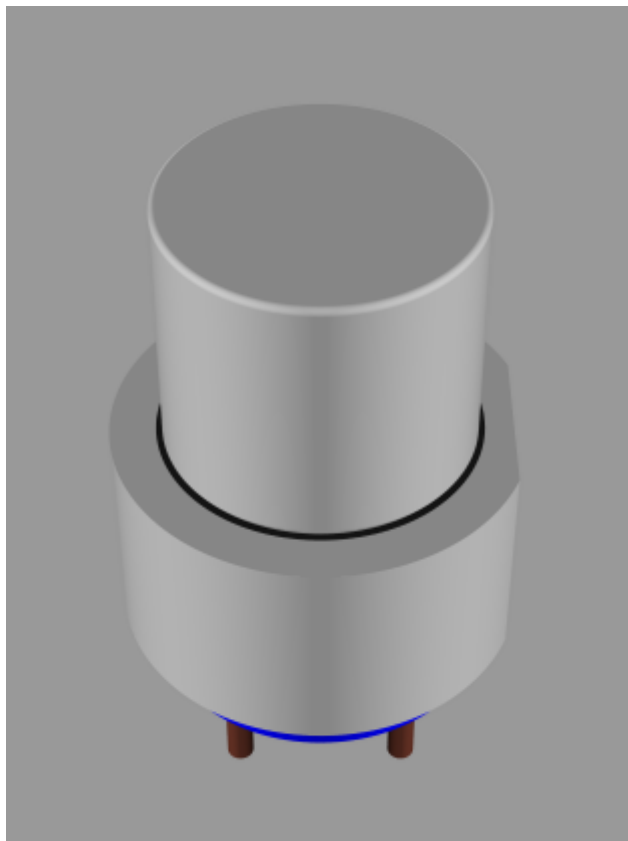
new packages:

[illegible]

D_RING(:

user.inc

DT6



```

/*****
*****
//DT6
//Created from Jack(forum.midibox.org) on 16-Jan-2006
//
*****
*****/
#macro USER_DT6()
union{
//DT6
    union{
        //button cover pushed
        difference {
            cylinder { <0, 0, 1.3>, <0, 0, 7.2>, 6.0 }
            union{
                box { <5.5, -6, 1.2>, <7, 6, 7.3> }
                difference {
                    cylinder { <0, 0, 0>, <0, 0, 5.6>, 5.1 }
                    box { <4.4, -5.2, -0.1>, <7, 5.2, 5.7> }
                }
            }
        }
    }
}
```

```

    }
  }
}

//button cover released
cylinder { <0, 0, 7.2>, <0, 0, 14.0>, 4.5 }
cylinder { <0, 0, 7.2>, <0, 0, 14.2>, 4.3 }
union{
    torus { 4.3, 0.2 }
    rotate <90, 0, 0>
    translate <0, 0, 14.0>
}

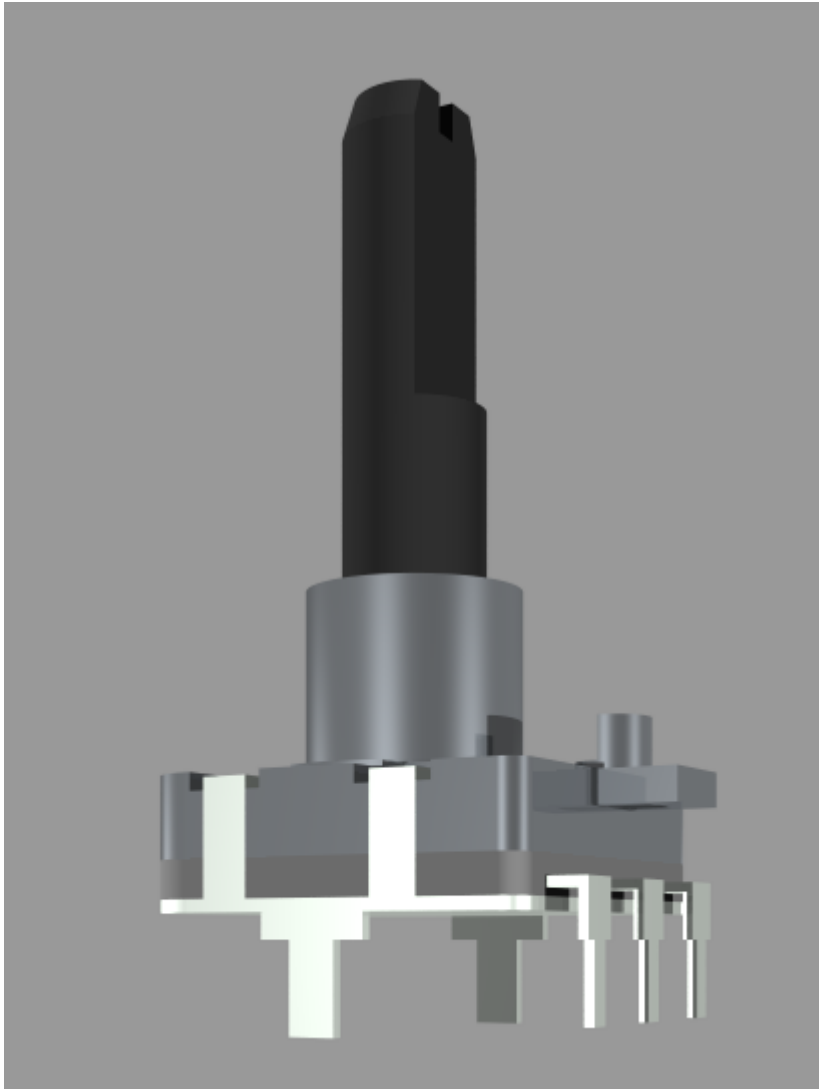
texture { pigment { color Grey } }
//translate <0, 0, -1.3> //clicked
}

//button body
difference {
    cylinder { <0, 0, 0>, <0, 0, 5.6>, 5.1 texture { pigment {
color Blue }}}
    box { <4.4, -5.2, -0.1>, <7, 5.2, 5.7> }
}

//pins
cylinder { <2.5, 2.5, -3.2>, <2.5, 2.5, 5.6>, 0.4 texture { pigment {
P_Copper1 }}}
cylinder { <2.5, -2.5, -3.2>, <2.5, -2.5, 5.6>, 0.4 texture { pigment {
P_Copper1 }}}
cylinder { <-2.5, 2.5, -3.2>, <-2.5, 2.5, 5.6>, 0.4 texture { pigment {
P_Copper1 }}}
cylinder { <-2.5, -2.5, -3.2>, <-2.5, -2.5, 5.6>, 0.4 texture { pigment {
P_Copper1 }}}
}
rotate<-90,180,0> //correction
#end

```

ALPS STEC16B03-04



```
/******  
*****  
//ALPS STEC16B03-04  
//Created from Jack(forum.midibox.org) on 16-Jan-2006  
//  
*****  
*****/  
#macro USER_STEC16()  
union{  
  
    #declare L1 = 26;  
    #declare LB = 7;  
    #declare l1 = 12;  
    #declare X1 = 16/2;  
    #declare Y1 = 8.3;  
    #declare Y2 = 9;  
    #declare M9 = 4.5;  
    #declare R6 = 3;  
    #declare h2 = 0.5;  
    #declare h3 = 1.5;  
    #declare h4 = 3.2;
```

```

#declare H = 6.5;
#declare H1 = 1;
#declare H2 = H1 + h2;
#declare H3 = H2 + h3;
#declare H4 = H3 + h4;

difference{
    union{
        difference{
            union{
                box { <-X1, -Y2, H3>, <X1, Y1, H4>
                box { <-X1, -Y2, H2>, <X1, Y1, H3>
                box { <-X1, -Y2, H1>, <X1, Y1, H2>

                cylinder { <0, 0, H4>, <0, 0, H>,
                box { <-2, -(Y2+3.5), H-0.35>, <2, -
                cylinder { <0, -Y2, H-0.35>, <0, -
                Y2, H+1.65>, 1.5 texture { T_Chrome_2B }}
            }
            union{
                box { <X1-2.5, Y1-2.5, 0>, <X1+0.1,
                box { <-(X1-2.5), Y1-2.5, 0>, <-
                (X1+0.1), Y1+0.1, H> }
                box { <X1-1, -(Y2-1), 0>, <X1+0.1, -
                box { <-(X1-1), -(Y2-1), 0>, <-
                (X1+0.1), -(Y2+0.1), H> }

                box { <3.1, -Y2, H>, <-3.1, -
                (Y2-1.6), H+2.1> texture { T_Chrome_2B }}
            }
        }
        union{
            cylinder { <X1-2.5, Y1-2.5, H3>, <X1-2.5,
            Y1-2.5, H4>, 2.5 texture { T_Chrome_2B }}
        }
    }
}

```

```

        cylinder { <X1-2.5, Y1-2.5, H2>, <X1-2.5,
Y1-2.5, H3>, 2.5 pigment { Gray60 }}
        cylinder { <X1-2.5, Y1-2.5, H1>, <X1-2.5,
Y1-2.5, H2>, 2.5 texture { T_Silver_5A }}

        cylinder { <-(X1-2.5), Y1-2.5, H3>, <-(
(X1-2.5), Y1-2.5, H4>, 2.5 texture { T_Chrome_2B }}
        cylinder { <-(X1-2.5), Y1-2.5, H2>, <-(
(X1-2.5), Y1-2.5, H3>, 2.5 pigment { Gray60 }}
        cylinder { <-(X1-2.5), Y1-2.5, H1>, <-(
(X1-2.5), Y1-2.5, H2>, 2.5 texture { T_Silver_5A }}

        cylinder { <X1-1, -(Y2-1), H3>, <X1-1, -(
(Y2-1), H4>, 1 texture { T_Chrome_2B }}
        cylinder { <X1-1, -(Y2-1), H2>, <X1-1, -(
(Y2-1), H3>, 1 pigment { Gray60 }}
        cylinder { <X1-1, -(Y2-1), H1>, <X1-1, -(
(Y2-1), H2>, 1 texture { T_Silver_5A }}

        cylinder { <-(X1-1), -(Y2-1), H3>, <-(X1-1),
-(Y2-1), H4>, 1 texture { T_Chrome_2B }}
        cylinder { <-(X1-1), -(Y2-1), H2>, <-(X1-1),
-(Y2-1), H3>, 1 pigment { Gray60 }}
        cylinder { <-(X1-1), -(Y2-1), H1>, <-(X1-1),
-(Y2-1), H2>, 1 texture { T_Silver_5A }}
    }
}
union{
    box { <X1-3.75, Y1-2.7, H+0.1>, <X1+0.1, Y1-6, 5.5>
texture { T_Chrome_2B }}
    box { <X1-0.5, Y1-3.35, H+0.1>, <X1+0.1, Y1-5.35,
-0.5>
        texture { T_Chrome_2B }}

    box { <-(X1-3.75), Y1-2.7, H+0.1>, <-(X1+0.1), Y1-6,
5.5> texture { T_Chrome_2B }}
    box { <-(X1-0.5), Y1-3.35, H+0.1>, <-(X1+0.1),
Y1-5.35, -0.5> texture { T_Chrome_2B }}

    box { <X1-3.75, -(Y2-3.7), H+0.1>, <X1+0.1, -(Y2-7),
5.5> texture { T_Chrome_2B }}
    box { <X1-0.5, -(Y2-4.35), H+0.1>, <X1+0.1, -(
(Y2-6.35), -0.5> texture { T_Chrome_2B }}

    box { <-(X1-3.75), -(Y2-3.7), H+0.1>, <-(X1+0.1), -(
(Y2-7), 5.5> texture { T_Chrome_2B }}
    box { <-(X1-0.5), -(Y2-4.35), H+0.1>, <-(X1+0.1), -(
(Y2-6.35), -0.5> texture { T_Chrome_2B }}
}
}
```

```

        difference{
            union{
                cylinder { <0, 0, H+LB>, <0, 0, (H+L1)-1.5>, R6
pigment { Gray20 }}
                cone { <0, 0, H+L1>, 2.5, <0, 0, (H+L1)-1.5>, 3
pigment { Gray20 }}
            }
            union{
                box { <-3.1, -1.5, H+(L1-12)><3.1, -(R6+0.1),
H+L1+0.1> pigment { Gray20 }}
                box { <-0.55, -3, H+(L1-1.5)><0.55, 3, H+L1+0.1>
pigment { Gray20 }}
            }
        }

        cylinder { <0, 0, H>, <0, 0, H+LB>, M9
texture { T_Chrome_2B }}
        box { <X1-0.5, Y1-3.35, H1>, <X1, Y1-5.35, 6>
texture { T_Silver_5A }}
        box { <X1-2.3, Y1-3.35, 5.5>, <X1, Y1-5.35, 6>
texture { T_Silver_5A }}

        box { <-(X1-0.5), Y1-3.35, H1>, <-(X1), Y1-5.35, 6>
texture { T_Silver_5A }}
        box { <-(X1-2.3), Y1-3.35, 5.5>, <-(X1), Y1-5.35, 6>
texture { T_Silver_5A }}

        box { <X1-0.5, -(Y2-4.35), H1>, <X1, -(Y2-6.35), 6>
texture { T_Silver_5A }}
        box { <X1-2.3, -(Y2-4.35), 5.5>, <X1, -(Y2-6.35), 6>
texture { T_Silver_5A }}

        box { <-(X1-0.5), -(Y2-4.35), H1>, <-(X1), -(Y2-6.35), 6>
texture { T_Silver_5A }}
        box { <-(X1-2.3), -(Y2-4.35), 5.5>, <-(X1), -(Y2-6.35), 6>
texture { T_Silver_5A }}

        //encoder pins
        box { <-0.5, -10.3, -3>, <0.5, -10.7, 0>
texture { T_Silver_5A }}
        box { <-5.5, -10.3, -3>, <-4.5, -10.7, 0>
texture { T_Silver_5A }}
        box { <5.5, -10.3, -3>, <4.5, -10.7, 0>
texture { T_Silver_5A }}

        box { <-1, -10.3, 0>, <1, -10.7, 2>
texture { T_Silver_5A }}
        box { <-6, -10.3, 0>, <-4, -10.7, 2>

```

```
texture { T_Silver_5A }}
    box { < 6, -10.3, 0>, < 4, -10.7, 2>
texture { T_Silver_5A }}
    box { < -1, 0, 1.8>, < 1, -10.7, 2.2>
texture { T_Silver_5A }}
    box { < -6, 0, 1.8>, < -4, -10.7, 2.2>
texture { T_Silver_5A }}
    box { < 6, 0, 1.8>, < 4, -10.7, 2.2>
texture { T_Silver_5A }}
    box { < 7.62-0.25, -2.3, 0>, < 7.62+0.25, 2.3, 1>
texture { T_Silver_5A }}
    box { < 7.62-0.25, -1, -3.5>, < 7.62+0.25, 1, 0>
texture { T_Silver_5A }}
    box { < -(7.62-0.25), -2.3, 0>, < -(7.62+0.25), 2.3, 1>
texture { T_Silver_5A }}
    box { < -(7.62-0.25), -1, -3.5>, < -(7.62+0.25), 1, 0>
texture { T_Silver_5A }}
}
rotate<-90,180,0>
#end
```

Nokia 3310 LCD

```
/******
*****
//Nokia 3310 LCD
//Created from Jack(forum.midibox.org) on 16-Jan-2006
//
*****
*****/
#macro USER_3310LCD()
union{
    //body
    box { <-19, -14.5, -0.7>, <19.5, 21, 0> pigment { Col_Glass_General
} }
    box { <-19, -14.5, -1.45>, <19.5, 21, -0.7> pigment {
Col_Glass_General } }
    box { <-19, -14.5, -1.7>, <19.5, 21, -1.45> pigment { Gray10 }
finish {ambient 1 diffuse 0 phong_size 250} }

    //screen
    #declare PIXEL =
    box {<-0.125, -0.2, -0.7>, <0.125, 0.2, -0.9>

    texture{pigment{Col_Glass_Bluish} finish {ambient 1 diffuse 0 phong
1}}}
```

```

#declare DistanceX = (119/332);
#declare DistanceY = (108/235);
#declare NrX = -14.875; // startX
#declare EndNrX = NrX + 83 * DistanceX; // endX
#while (NrX <= EndNrX) // <-loop X
  #declare NrY = -10.8; // start
  #declare EndNrY = NrY + 47 * DistanceY; // end
  #while (NrY <= EndNrY)//<- loop Z
    object{PIXEL translate<NrX,NrY,0>}
  #declare NrY = NrY+(108/235);// next NrZ
  #end // ----- end of loop Z
#declare NrX = NrX+(119/332); // next NrX
#end // ----- end of loop X ---
}
rotate<-90,180,0>
#end

```

LED RING TEST

```

/*****
*****
//LED_RING_TEST
//Jack from forum.midibox.org
//
*****
*****/
#macro USER_LED_RING()
union{
  #declare X = 0.1; //littlemore
  #declare H0 = 0; //Body startpoint
  #declare H1 = 1.5; //Body Height
  #declare H20 = H1+X; //Glas startpoint
  #declare H2 = H20+0.5; //Glas Height
  #declare H10 = H1-0.25; //Glas Height
  #declare DF = 0.9; //Diffuse
  #declare P1 = 0.5; //Phong
  #declare C1 = Grey; //Color (Grey)
  #declare R1 = 17.78; //R.0700 outer radius
  #declare R2 = 10.16; //R0.400 inner radius
  #declare R3 = 13.97; //R.550 center radius
  #declare LW = 0.75; //LED hole width / 2 (1,27)
  #declare LL = 2.00; //LED hole length /2 (2,54)

  #declare AS = 15; //angle steps
  #declare A0 = 0; //angle 0
  #declare A1 = 75; //start angle 1
  #declare A2 = A1+AS; //angle 2
  #declare A3 = A2+AS; //angle 3
  #declare A4 = A3+AS; //angle 4
  #declare A5 = A4+AS; //angle 5

```

```

#declare A6 = A5+AS;      //angle 6
#declare A7 = A6+AS;      //angle 7
#declare A8 = A7+AS;      //angle 8
#declare A9 = A8+AS;      //angle 9
#declare A10 = A9+AS;     //angle 10
#declare A11 = A10+AS;    //angle 11
#declare A12 = A11+AS;    //angle 12
#declare A13 = A12+AS;    //angle 13
#declare A14 = A13+AS;    //angle 14
#declare A15 = A14+AS;    //angle 15

difference{
  union{
    cylinder {<0,H0,0>,<0,H1,0>, R1 texture{pigment{color
Black}finish {diffuse DF phong P1}}}}
  }
  union{
    cylinder {<0,H0-X>,<0,H1+X>, R2}
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A0,0>} //1
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A1,0>} //2
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A2,0>} //3
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A3,0>} //4
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A4,0>} //5
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A5,0>} //6
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A6,0>} //7
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A7,0>} //8
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A8,0>} //9
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A9,0>} //10
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A10,0>} //11
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A11,0>} //12
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A12,0>} //13
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A13,0>} //14
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A14,0>} //15
    box {<-LW,H0-X,-LL>,<+LW,H1+X,LL> translate< 0,0,R3>
rotate<0,A15,0>} //16
  }
}

```

```

    }

}

/*      difference{
        cylinder {<0,H20,0>,<0,H2,0>, R1 texture{pigment{color C1 transmit
0.5} finish {diffuse DF phong P1}}}}
        cylinder {<0,H20-X,0>,<0,H2+X>, R2}
    }
*/

        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A0,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //1
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A1,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //2
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A2,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //3
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A3,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //4
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A4,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //5
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A5,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //6
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A6,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //7
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A7,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //8
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A8,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //9
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A9,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //10
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A10,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //11
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A11,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //12
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A12,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //13
        box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A13,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}} //14

```

```
box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A14,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}  
//15  
box {<-LW,H10,-LL>,<+LW,H1,LL> translate< 0,0,R3>
rotate<0,A15,0> texture{pigment{color C1 transmit 0.5} finish {diffuse DF
phong P1}}}  
//16  
}  
rotate<0,180,0>  
#end
```

POV-Ray tweaks

For better image quality, change the file “quickres.ini” in “<POV-RAY directory>/renderer”:

```
[1280x1024, AA 20x0.3]  
Width=1280  
Height=1024  
Antialias=on  
Antialias_Threshold=0.1  
Antialias_Depth=20
```

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Last update: **2009/02/16 21:27**

