



# user.inc

## DT6

[DT6.png](#)

```
/*
*****
//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

[Encoder.png](#)

```

/*****
*****
//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{

```

```
texture { T_Chrome_2B } }
pigment { Gray60 }}
texture { T_Silver_5A }}

6.25 texture { T_Chrome_2B }}
Y2, H-1.65> texture { T_Chrome_2B }}
Y2, H+1.65>, 1.5 texture { T_Chrome_2B }}
}

union{
Y1+0.1, H> }
(X1+0.1), Y1+0.1, H> }
(Y2+0.1), H> }
(X1+0.1), -(Y2+0.1), H> }

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, -
}
}
}

union{
box { <X1-2.5, Y1-2.5, 0>, <X1+0.1,
box { <-(X1-2.5), Y1-2.5, 0>, <-
box { <X1-1, -(Y2-1), 0>, <X1+0.1, -
box { <-(X1-1), -(Y2-1), 0>, <-

box { <3.1, -Y2, H>, <-3.1, -
(Y2-1.6), H+2.1> texture { T_Chrome_2B }}
}
}

union{
Y1-2.5, H4>, 2.5 texture { T_Chrome_2B }}
Y1-2.5, H3>, 2.5 pigment { Gray60 }}
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
```

## LEDRING 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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