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

|3dusrpac.dat

```
DT6:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:USER_DT
6(:Taster Switch-MISC:Tactile Switch-MISC
STEC16:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:USER
_STEC16(:STEC16 Encoder:STEC16 Encoder
3310LCD:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:USE
R_3310LCD(:3310LCD Midibox:3310LCD Midibox
```

user.inc

|user.inc

```
/**********************************************************************
**********************************************************************
//DT6
//Jack from forum.midibox.org
//
**********************************************************************
*********************************************************************/
#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
//Jack from forum.midibox.org
//
**************************************************************************
**************************************************************************/
#macro USER_STEC16()
//ALPS STEC16B03-04
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> texture { T_Chrome_2B } }
                                        box { <-X1, -Y2, H2>, <X1, Y1,
H3> pigment { Gray60 }}
                                        box { <-X1, -Y2, H1>, <X1, Y1,
H2> texture { T_Silver_5A }}


                                        cylinder { <0, 0, H4>, <0, 0,
H>, 6.25 texture { T_Chrome_2B }}

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

                                        box { <X1-1, -(Y2-1), 0>,
<X1+0.1, -(Y2+0.1), H> }
                                        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
/*************************************************************************
*************************************************************************/
```

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