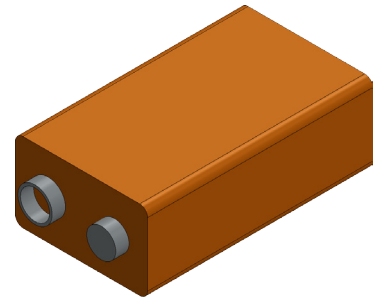




E-Car Battery 9 Volt



A. Battery.

Step 1. Click File Menu > New, click **Part** and OK.

Step 2. Click **Right Plane**  in the Feature Manager and click **Sketch**  from the Content toolbar, **Fig. 1**.

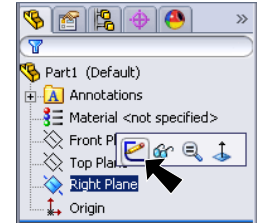


Fig. 1

Step 3. Click **Rectangle**  (S) on the Sketch toolbar.

Step 4. Draw a rectangle starting at the Origin , **Fig. 2**.

Step 5. Click **Smart Dimension**  (S) on the Sketch toolbar.

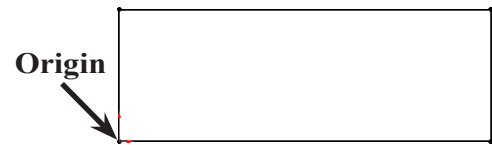


Fig. 2

Step 6. Set the dimensions as shown in **Fig. 3**.

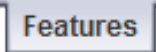
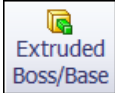
Step 7. Click **Features**  on the Command Manager toolbar.



Fig. 3

Step 8. Click **Extruded Boss/Base**  on the Features toolbar.

Step 9. In the Property Manager set:
under Direction 1, **Fig. 4**
End Condition **Mid Plane**

Depth  **D1 1**
click OK , **Fig. 5**.

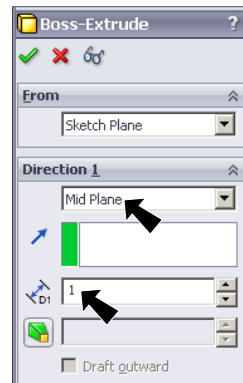


Fig. 4

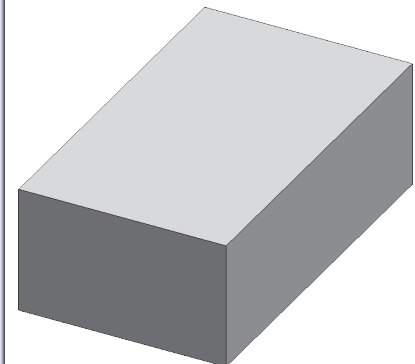


Fig. 5

B. Save as "BATTERY 9 VOLT".

Step 1. Click File Menu > Save As.

Step 2. Key-in **BATTERY 9 VOLT** for file-name and press ENTER.

C. Fillets.

Step 1. Click **Fillet**  on the Features toolbar.

Step 2. In the Fillet Property Manager set:

Radius  **.06**, Fig. 6

click the **4 edges**, Fig. 7

click **OK** , Fig. 8.

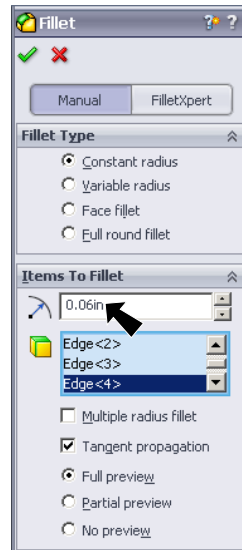


Fig. 6

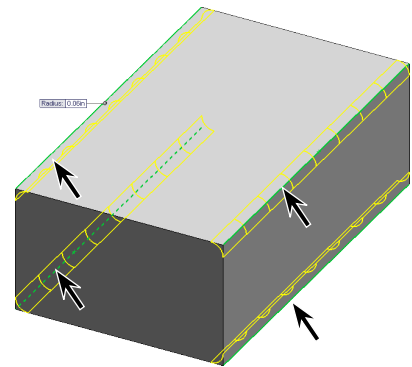


Fig. 7

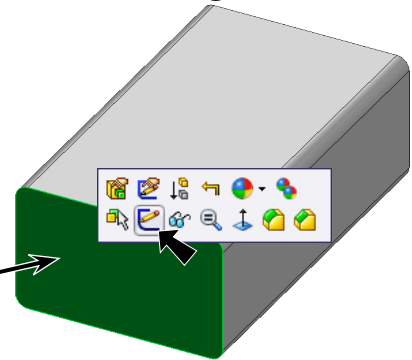


Fig. 8

D. Terminals.

Step 1. Click the **front face** of the battery and click **Sketch**  on the Content toolbar, Fig. 8.

Step 2. Click **Normal To**  on the Views toolbar (**Ctrl-8**).

Step 3. Click **Circle**  (S) on the Sketch toolbar.

Step 4. Draw two circles for the battery terminals, Fig. 9.

Step 5. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 6. Dimension as shown in Fig. 10.

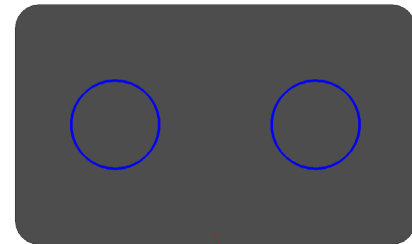


Fig. 9

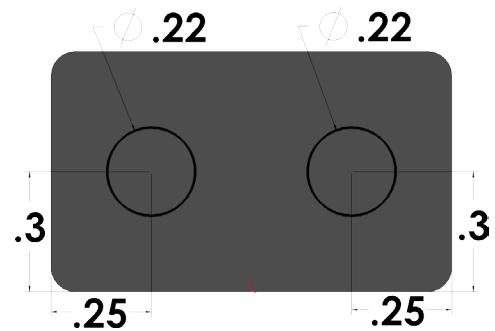


Fig. 10

E. Offset Entities.

Step 1. Click **Offset Entities**  on the Sketch toolbar.

Step 2. In the Offset Entities Property Manager set:

Distance  **D1** **.02** **Fig. 11**

click **left circle** in sketch, **Fig. 12**

The yellow offset should be outside the original green circle, **Fig. 12**. If it is not, check **Reverse**.

Click **OK**  when done.

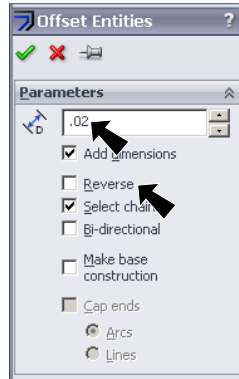


Fig. 11

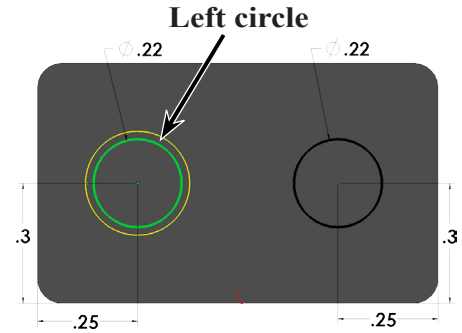
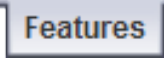



Fig. 12

F. Extrude Terminals .

Step 1. Click **Features**  on the Command Manager toolbar.

Step 2. Click **Extruded Boss/Base**  on the Features toolbar.

Step 3. Click **Isometric**  on the Standard Views toolbar. (**Ctrl-7**)

Step 4. In the Property Manager set:

Depth  **D1** **.1**

click **OK** , **Fig. 13** and **Fig. 14**.

Step 5. Save. Use **Ctrl-S**.

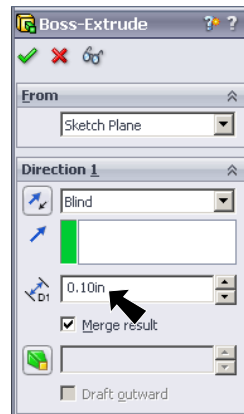


Fig. 13

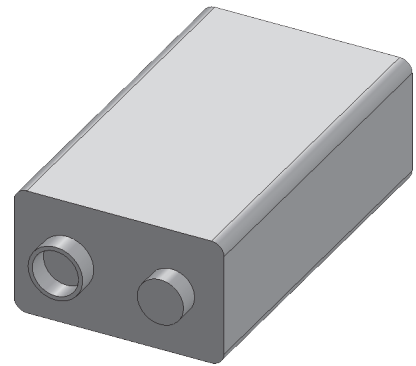




Fig. 14

G. Battery and Terminals Appearance.

Step 1. Click the **top face** of the battery to select the part, click **Appearance Callout**  on the Content toolbar and click **BATTERY...** , Fig. 15.

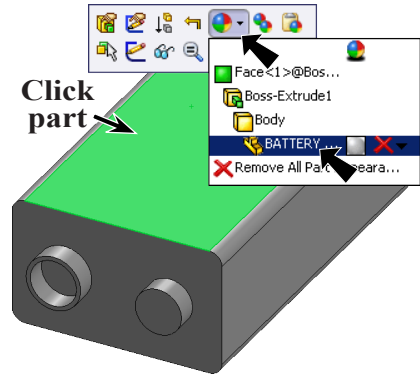


Fig. 15

Step 2. In the Appearances Task pane, expand **Plastic**, click **High Gloss** and in the lower pane select **white high gloss plastic**, Fig. 16.

Step 3. Back over in the Appearances Property Manager, under Color: click **Orange** swatch, Fig. 17 and Fig. 18

click **Keep Visible**  and **OK** , Fig. 17.

The Push Pin  on allows selection of other material for terminals.

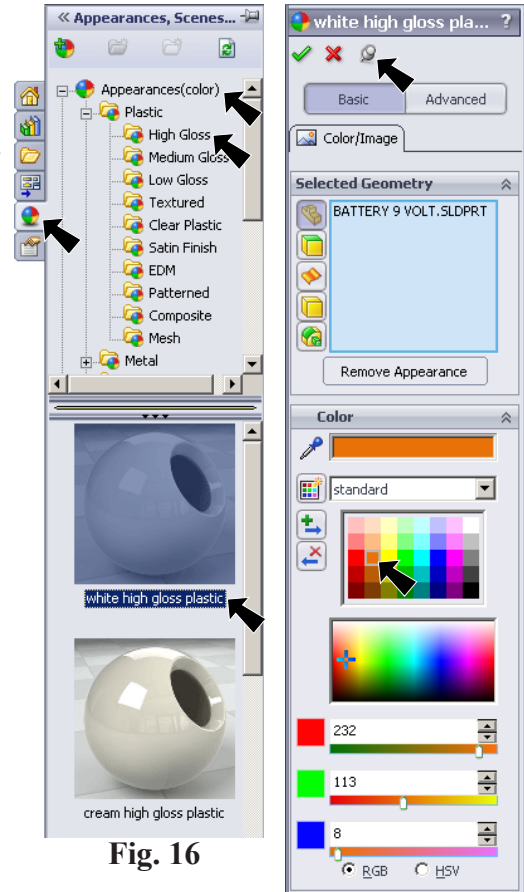


Fig. 16

Fig. 17

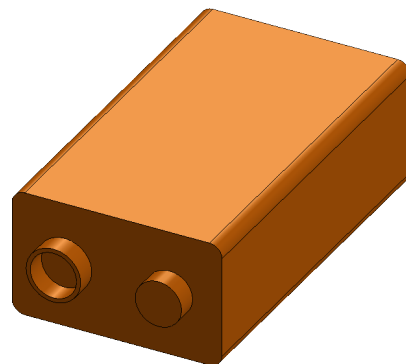




Fig. 18

Step 4. Over at the Task pane, click the Appearances Task tab , expand **Metal** and click **Chrome** and in the lower pane select **chromium plate**, Fig. 19

Step 5. In the Appearances Property Manager, under Selected Geometry click **Select Features** , Fig. 21
click **one of the terminals**, Fig. 20

click OK  and click Cancel .

Step 6. Save. Use **Ctrl-S**.

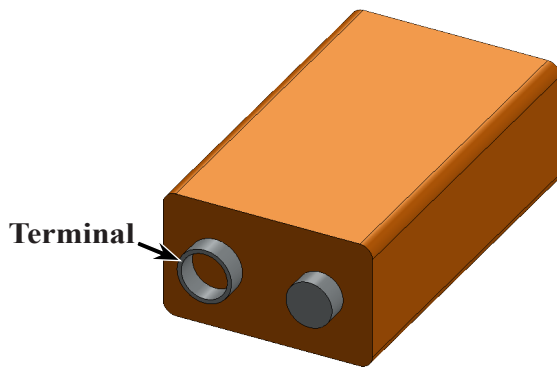


Fig. 20

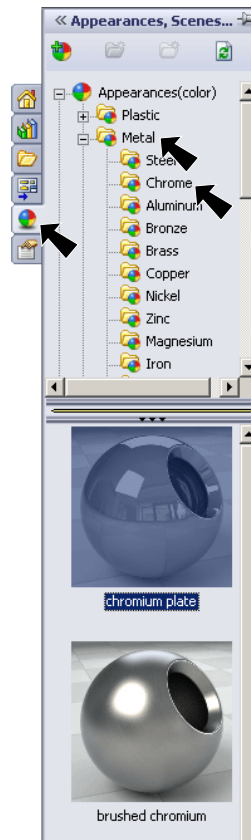


Fig. 19

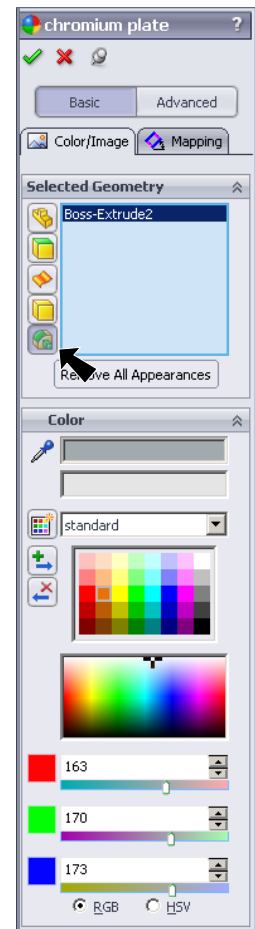


Fig. 21