

The Dremel 'Lightshow' Case Mod

Step by Step



You will need :

Dremel® 4000 with Dremel® Flexshaft 225
Dremel® Line and Circle Cutter 678 with Dremel® Multipurpose Cutting Bit 561
Dremel® Plunge Router attachment 335
Dremel® Sanding Band 444
Dremel® Aluminium Oxide Grinding Stone 952
Dremel® SpeedClic™ Metal Cutting Wheel SC456
Dremel® SpeedClic™ Plastic Cutting Wheel SC476
Dremel® SpeedClic™ Mandrel
Dremel® Engraving Cutters 107 and 9910

Dremel® Glue Gun 930
Dremel® Versatip™

Cold cathode coloured lighting rods
Purple aluminium screws, nuts and bolts
120mm and 80mm LED fans
80mm Atomic, Radiation, Danger High Voltage fan grills
3mm frosted clear acrylic panel
Thermostat and display units for fans
12 inch dual UV coloured cathodes
12 inch dual UV coloured cathodes sound sensitive
Fireflies LED molex light connectors
5 spread lazer LED blue
Arctic Silver 5 Compound 12g
Black marker pen
Masking tape
Screwdriver

Inserting fans

First, insert fans into the front and side casing of your computer case. Fans will increase the cooling capacity of your computer and the LED ones will light your case up too. Top it off with a sexy aluminium fan grill using the symbol for 'atomic', 'high voltage, danger!' or 'radiation' for a whole new look.



Step 1

Mask up the case with masking tape where you want to cut into, then hold the fan grill in position and mark the four points where you are going to screw the fan grill to the casing with a black marker pen. Then, find and mark the centre of the circle of the fan grill by drawing lines between the opposite corners of the four screws. You will need this mark to help you cut the circle in Step Two.



Step 2

Using the Dremel 4000 and the Multipurpose Cutting Bit 561, plunge cut a hole in the centre of the circle on the mark you have drawn in Step One. This is to locate the centre point for the Dremel Line and Circle Cutter 678. Open it to the desired width to reach the edge of the circle. Drill a hole at the edge of the circle using the Dremel Spiral

Cutting Bit 561 and you are now ready to cut the circle itself. Attach the Dremel Line and Circle Cutter to your Dremel 4000 Series and cut out the circle.



Step 3

When you've done this, carefully rub away the plastic shavings, remove any metal debris and sand to create a smooth edge using the Dremel sanding band 444.



Step 4

Place your 80mm LED fan behind the casing with the aluminium grill in front - and screw together with a through bolt. Connect and light up. Simple!

Tip : Glue the nuts on the back of the fan, so that when you are putting the bolt through, it's easier to line everything up.



Cut patterns in the metal side and top

Cut patterns into the metal sides and top of your computer case. Trace out some cool tribal designs of your own design or ones you've found on the internet, and mark them up on the metal case, cut them out and shine cold cathode lights through them in your choice of colour.



Step 5

Unscrew the side panel. Then, lay the side panel flat and mask up the area for your acrylic window onto it with masking tape and mark out the area that you wish to remove using a black marker pen.



Step 6

Using the Dremel 4000 with Flexshaft and SpeedClic metal cutting wheel SC456, trace/etch the outline around the edge of your design. Once you have a groove that you can work with, cut all the way through the metal to create the frame for your window.

TIP : If you try and cut all the way through straight away, it will skitter off and damage the metal of the case. Also, it is very important to use safety goggles to protect your eyes from metal dust.



Step 7

Use the Dremel Aluminium Oxide Grinding Stone 952 to smooth and get rid of any sharp edges.



Step 8

Take a panel of frosted clear 3mm acrylic, a few centimetres bigger than the area that you are cutting out, and affix to the rear of the panel using the Dremel Glue Gun 930. This will allow you to backlight your cut out shapes using cathode lighting rods.



Inserting clear acrylic window with metal cut out shapes

Cut an acrylic window into the side of your computer case so that you can see all of its inner workings. If you cut some cool metal cut out shapes you can stick them over the window and backlight them with cold cathode lighting rods for a real display!



Step 9

Unscrew the side panel. Then, lay the side panel flat and mask up the area for your acrylic window onto it with masking tape and mark out the area that you wish to remove using a black marker pen.



Step 10

Using the Dremel 4000 with Flexshaft and SpeedClic metal cutting wheel SC456, trace/etch the outline around the edge of your design. Once you have a groove that you can work with, cut all the way through the metal to create the frame for your window.



Step 11

Use the Dremel Aluminium Oxide Grinding Stone 952 to smooth and get rid of any sharp edges.



Step 12

Then, attach the Dremel Plunge Router attachment 335 to your 4000 Series and cut out a panel of acrylic for the window itself. This should be at least 1cm bigger than the area that you are cutting out to allow you to affix it to the rear of the panel by gluing around the circumference using the Dremel Glue Gun 930.



Step 13

Before you stick your acrylic panel into your case - personalise your window. Draw the initial letter of your name or gaming handle - or a simple design that you've found online

- on a piece of paper and stick onto the back of the acrylic window. Outline your design onto the front of the acrylic panel using the Dremel 4000 with the engraving cutter 107 and infill using the 9910.



Step 14

Cut out some metal shapes from the discarded panel you have removed, take off any rough edges from the metal using the Dremel 4000 and the Aluminium Oxide Grinding Stone 932, as before (hold the piece of metal with a heat resistant glove/metal pliers before you do this to hold it steady) and stick the cut-out shapes onto the surface of the acrylic using the Dremel Glue Gun 930.

TIP: To add further decorative detailing to the external edge of the metal panel surrounding the acrylic window, add some metal coloured bolts. Either drill a hole using your Dremel 4000 and the Dremel precision drill bit set 628 and fit them through if there is room on the underside of the casing you are working with – or, cut off the heads of the bolts using the SpeedClic metal cutting wheel SC456 and glue in place using the Dremel Glue Gun.



Inserting LED lights

Now comes the really exciting bit. Put on a light show inside your computer case. It'll make a dramatic difference to your case and wow anyone who sees it!

Step 15

Assemble all the LEDs that you have bought to include in your lighting display.



Step 16

Create a plan for where lights are to be fitted and the wiring is to be run. Create wiring looms for lights. For ease, we have used a pre-wired loom but will be soldering and gluing the contacts using the Dremel Versatip and Dremel Glue Gun so that they don't work themselves loose.

TIP: It is always worthwhile when you're working on your computer that you renew the thermal compounds using thermal transfer paste. We used Arctic Silver Thermal 5 Compound. Whilst you're doing this case mod, it's an ideal opportunity to do this. Do this every couple of years to help regulate your computer's temperature.



Step 17

Stick LEDs e.g. coloured cathodes, temperature and fan control display units for fans etc into your computer case housing, as required, using the Dremel Glue Gun. The size of the new glue gun will allow you to get into the tight corners of your computer case housing with ease.



Step 18

Fix your 80mm LED fans into either the internal metal housing or the external side casing with the aluminium grill in front. Screw together and connect up.

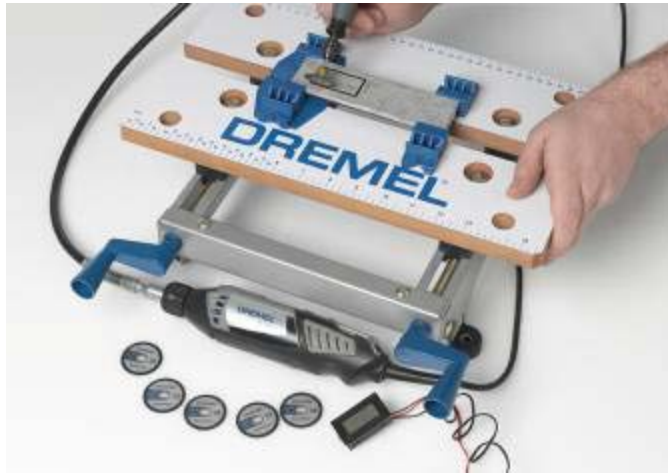


To light up plain plastic connectors (Molex) stylishly, we have used FireFly pre-made lit circuit boards. These simply fit in between the male and female connectors. To further decorate the front of your case, glue five spread lazer LEDs to illuminate the face of the case. Tidy the wiring with fluorescent tape or fluorescent spiral cabling and secure.

Step 19

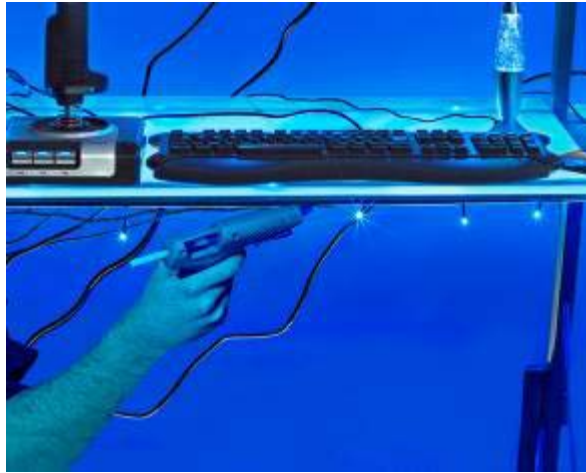
Cut plastic drive bays with Dremel 4000 and SpeedClic plastic cutting wheel SC476 to insert thermostats (if it's a really small space that you're working with, use old or worn cutting discs and this will give you a bit more flexibility). Should you need to thread any wires through the metal housing, use the Dremel metal cutting wheel to cut to size and drill through the housing using the Dremel Precision Drill Bits 628.

TIP : Do not leave your computer internals anywhere near the case when you start carving into the metalwork as metal dust gets everywhere and could ruin your motherboard!



Step 20

Create your own computer or gaming station (if that's what you're into) by either buying or making a glass topped desk. Cover the reverse side of the desk with sticky-back frosted plastic transfer to hide your wiring underneath the desk. Under-light it at the rear and front of the desk by gluing on a string of coloured LED Christmas tree lights using the Dremel Glue Gun 930.



FINALLY...

Set up your desk area with all of your kit and reveal your finished case modelling project!



Congratulations!