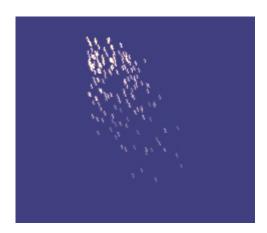
# **Creating Electrical Sparks**

This very short tutorial will show you how to make electrical sparks with a spawner and a couple of FX.

The end result will look like this:



## Setting up the configuration

```
[Sparks]
Spawner = SparksSpawner
LifeTime = 1.0
[SparksSpawner]
Object = SparkObject
WaveSize
            = 10
WaveDelay
            = 0.05
ActiveObject = 40
Rotation = -25 \sim -15; give a slight variance in the angle of each particle
spark
UseRotation = true
[SparkObject]
Graphic = SparkGraphic
LifeTime = 1.0
Speed = (-50, -50, 0) \sim (50, 50, 0); when first created, have each spark
shoot
                                    ; in random directions
FXList = SparkFallAwayFX # SparkFadeAwayFX; use both FX so the sparks blow
away
                                           : and burn out
[SparkGraphic]
Texture = spark.png
BlendMode = add
Pivot = center
```

```
[SparkFallAwayFX] ; The simulated gravity on each spark
            = SparkFallAwayFXSlot
KeepInCache = true
Loop
            = false
[SparkFallAwayFXSlot]; this movement FX will pull the sparks down and right
                      ; like gravity and wind.
Type
              = speed
Curve
              = smooth
StartTime
              = 0.0
              = 1.0
EndTime
StartValue
              = (0,0,0)
              = (150, 250, 0) \sim (140, 300, 0)
EndValue
Period
             = false; make the values relative so they move away from the
Absolute
                      ; parent spawner, and not a fixed location on the
screen
[SparkFadeAwayFX] ; Have the sparks burn out to nothing
           = SparkFadeAwayFXSlot
KeepInCache = true
            = false
Loop
[SparkFadeAwayFXSlot]
Type
             = alpha
Curve
              = linear
StartTime
              = 0.0
EndTime
             = 1.0
StartValue
              = 1.0
EndValue
              = 0.0
              = 1.0
Period
              = true ; ensure absolute values for the alpha from 0.0 - 1.0
Absolute
```

See the comments in the config above to see what part each FX plays on the particles.

## A spark graphic

Any small object will do, even a dot. But you can try this little object if you wish:

#### **Setting up Input**

Just a quick mouse click handler to create a "Sparks" object on the screen. That will make the demo more fun to play with.

In your Init() method, add a handler for input so we can read the mouse to create sparks:

```
orxEvent_AddHandler(orxEVENT_TYPE_INPUT, InputEventHandler);
```

Our event handler method with look like this:

```
orxSTATUS orxFASTCALL InputEventHandler(const orxEVENT *_pstEvent)
{
    if(orxInput_HasBeenActivated("Click"))
    {
        orxVECTOR mousePosition;
        orxMouse_GetPosition(&mousePosition);
        orxRender_GetWorldPosition(&mousePosition, orxNULL, &mousePosition);

        orxOBJECT *sparks = orxObject_CreateFromConfig("Sparks");
        if (sparks)
        {
            orxVECTOR sparksPosition;
            orxObject_GetPosition(sparks, &sparksPosition);

            sparksPosition.fX = mousePosition.fX;
            sparksPosition.fY = mousePosition.fY;

            orxObject_SetPosition(sparks, &sparksPosition);
        }
    }
    return orxSTATUS_SUCCESS;
}
```

Need to define "Click" as our mouse button in the config:

#### **Finished**

All done. Click away and cause lots of electrical shorts.

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