

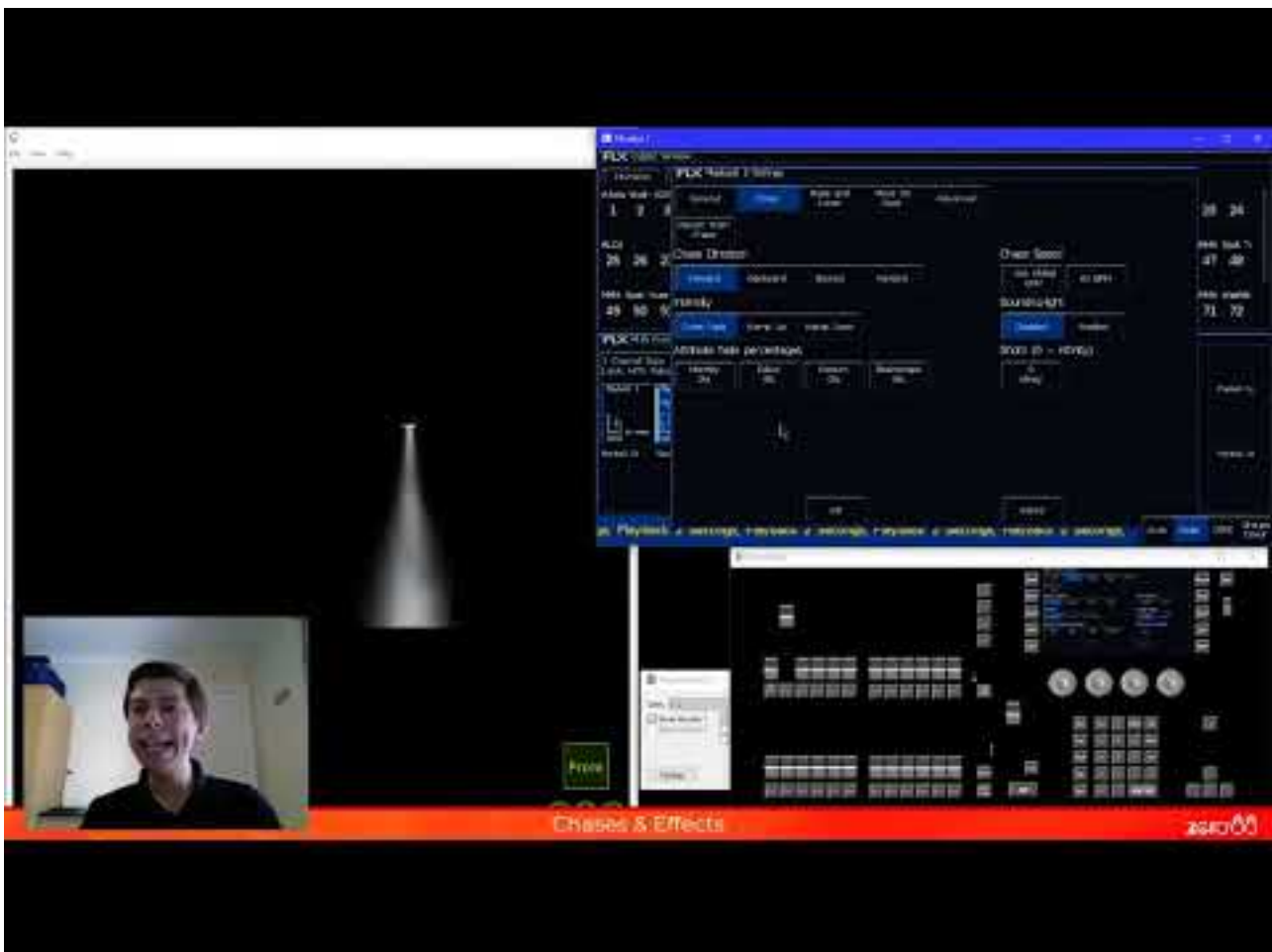
Effects can be viewed as an extra attribute, however unlike the other attributes, Effects do not directly control parameters of the selected fixtures. Instead, effects are used to manipulate parameters to create effects such as "Circle", "Ballyhoo" and "Rainbow". This is achieved by applying various mathematical functions (sine, cosine, ramp etc) to the outputs of different fixture parameters and adjusting the size, speed and offset values.

Using this, a wide range of movement and other effects can be generated quickly and easily. Effects can affect any parameter, from any attribute, and can also control multiple parameters from multiple attributes.

**Click the subjects below to find out more...**

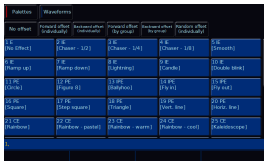
- [Auto Effects](#)
- [Effect Parameters](#)
- [Programming Effect Palettes](#)
- [Waveforms](#)

**Take a look at the online session below, which includes information on Effects...**



<https://youtu.be/0URtmQ1zkkU>

# Auto Effects



ZerOS can generate 45 automatic effects, by clicking the “Automatically create effect palettes” button. Each palette displays the effect number, content flags and a name.

Content flags indicate which attributes are programmed in the effect palette, and are displayed top left of the palette tile:

- I = Intensity
- C = Colour
- B = Beam
- S = Shape
- P = Position
- E = Effects

When applying auto effects, base values of parameters will be automatically changed to allow the effect to work correctly. For example, applying a “rainbow” effect will change the base values of the Red, Green and Blue parameters to 50%. Choosing “No Effect” will not return the base values back to their previous values.

The following effect palettes will be created, upon pressing "Automatically Create Effect Palettes":

- Effect 1 is "No Effect". Tapping this removes any effects from your selected fixtures.
- Effects 2 - 10 are intensity effects. These will be available to all fixtures with intensity, including standard dimmer channels.
- Effects 11 - 20 are movement effects, for your moving lights.
- Effects 21 - 40 are colour effects for fixtures with colour mixing, such as LEDs.
- Effects 41 - 45 are Beam & Shape effects, including Iris, Zoom and Focus effects.

## Automatic Intensity Effect Palettes

Chaser – 1/2 (includes offset)



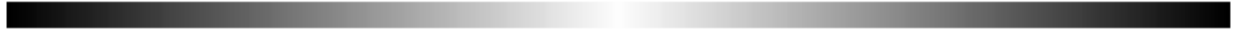
Chaser - 1/4 (includes offset)



Chaser - 1/8 (includes offset)



Smooth (includes offset)



Ramp up (includes random offset)



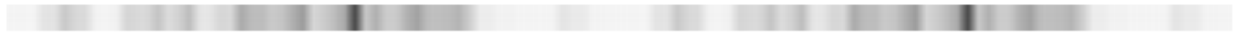
Ramp down (includes random offset)



Lightning



Candle (includes random offset)



Double blink



### Automatic Position Effect Palettes

- Circle (includes offset)
- Figure 8 (includes random offset)
- Ballyhoo (includes random offset)
- Fly In (includes random offset)
- Fly Out (includes random offset)
- Square (includes offset)
- Step Square (includes offset)
- Triangle (includes offset)
- Vert. Line (includes offset)
- Horiz. Line (includes offset)

### Automatic Colour Effect Palettes

The automatic colour effects will be available for fixtures with RGB or CMY parameters.

If an automatic colour effect is applied to a fixture with additive colour mixing, the RGB parameters will be used, and all other additive colour parameters that may be present will be taken to 0%.

Rainbow (includes offset)



Rainbow – pastel



Rainbow – warm (includes random offset)



Rainbow – cool (includes random offset)



Kolidoscope (includes random offset)



Sparkle – red (includes random offset)



Sparkle – green (includes random offset)



Sparkle – blue (includes random offset)



Sparkle – yellow (includes random offset)



Sparkle – magenta (includes random offset)



Fade – red/white (includes offset)



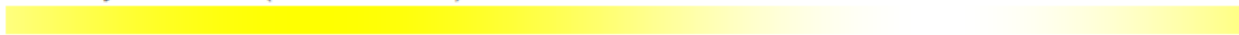
Fade – green/white (includes offset)



Fade – blue/white (includes offset)



Fade – yellow/white (includes offset)



Fade – blue/orange (includes offset)



Emergency – blue



Emergency – red/blue



Warning



Fire



Fireworks



## **Automatic Beam/Shape Effect Palettes**

- Iris Fade (includes random offset)
- Iris Step (includes random offset)
- Zoom Fade (includes random offset)
- Zoom Step (includes random offset)
- Focus Fade (includes random offset)

# Effect Parameters



When you apply an effect, the effect parameters are assigned to the encoder wheels. Effect parameters are Speed, Size, Offset and Rotation. Auto palettes include predefined Speed, Size, Offset and Rotation values, which after applying the effect, can then be adjusted.

## Speed

Controls the speed of the effect. Is a value from -100 to +100. A speed of 0 stops the effect from running, and a negative speed reverses the direction of the effect.

## Size

Adjusts how visible the effect is.

- For intensity effects, reducing the size raises the base intensity, and reduces the peak intensity.
- For colour effects, reducing the size reduces the saturation of the effect.
- For movement effects, reducing the size restricts the area your movers can move in.
- For beam effects, reducing the size results in less affect to the beam.

## Offset

Offsets can be applied to fixtures, so that they will lag behind other fixtures. This gives you a "chasing" effect, rather than all of your fixtures staying synchronised with one another.

If you select a group of fixtures, and adjust the offset encoder, you give all of the selected fixtures, the same offset value - the offset value displayed on the encoder. As all fixtures are offset by the same amount, no fixtures lag behind the other, and are therefore in sync. Offsets therefore need to be fanned across your fixtures. This can be done by holding Shift, and dialling the Offset encoder wheel. Different fan options are available. For example using a Fan V offset on an intensity effect, will allow your fixtures to chase in or out from centre stage. [See the attribute settings section for more information.](#)

As well as fanning offsets manually, along the top of the Effects window, are six quick offsets. These are as follows:

- **No offset**: - pressing this gives all selected fixtures an offset of 0 - your fixtures are therefore in sync.
- **Forward offset (individually)**: - your fixtures are evenly offset in the order of selection, from no offset.
- **Backward offset (individually)**: - your fixtures are evenly offset in the order of selection, from full offset.
- **Forward offset (by group)**: - if you have selected your fixtures using multiple groups, each group is evenly offset in the order of selection, from no offset.
- **Backward offset (by group)**: - if you have selected your fixtures using multiple groups, each group is evenly offset in the order of selection, from full offset.
- **Random offset (by group)**: - each tap of Random offset, creates a new random offset order across your fixtures.

## FANNING ACROSS MULTICELL FIXTURES

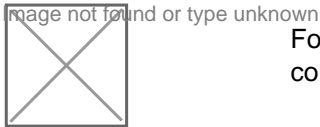
On multicell fixtures, effect offsets can be fanned in two ways. Firstly, effects can be fanned across a multicell fixture, just like a standard fixture. This means that every light output of the multicell fixture is the same. Alternatively, effects

can be fanned across the individual cells of a multicell fixture.

The way your fixtures will be fanned, will be dependent on whether they were selected as whole fixtures, or individual cells. When using the channel faders, fixtures will be selected as whole fixtures, unless your fixture is a linear multicell fixture, such as an LED batten, in which case the fixture will be selected as cells.

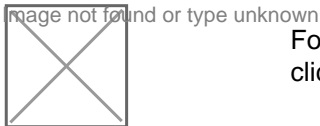
[Click here for information on selecting fixtures using syntax commands for more information.](#)

[Click here for information on selecting fixtures using the channel faders for more information.](#)



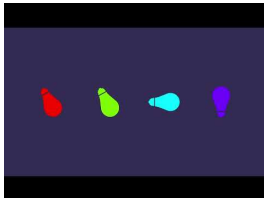
For more information on controlling multicell fixtures on FLX S consoles, click here.

<https://youtu.be/7Onn1GSW-FY?si=z4jOru88SsjHhiw1>



For more information on controlling multicell fixtures on FLX consoles, click here.

<https://youtu.be/5s0hB-i3Ekw?si=kbAcsqs-mojrGWG8>



Take a look at this quick video for explanation of Effect Offsets.

<https://youtu.be/qBzQG1djnBw>

## Rotation

Only available for movement effects. This is a value in degrees, and allows you to "rotate" the position effect. For example a 90 degree rotation to a Vertical Line effect, gives a horizontal line effect.

## Overlaying Effects

It is possible to apply various different types of effects at once. For example, apply an intensity, colour, position and beam effect to the same fixture. When you do this, your encoders will still display "Speed", "Size", "Offset" and "Rotation" (if you have applied a movement effect). These are global parameters, and will control all effects currently running on the selected fixtures.

However if you tap the Effect button, your encoders will page, and you will then see "Ex Speed", "Ex Size", "Ex Offset" and "Ex Rotation" (if you have applied a movement effect), where x is the effect palette number. You can therefore

page through each individual effect which is running, and adjust each effect palette in turn running on the fixtures. To remove an individual effect, page through to the effect you wish to remove on the encoders, and then dial its "Ex Size" parameter to 0.



# Programming Effect Palettes

After applying auto effects, and adjusting the effect parameters, you can record your own custom effect palette, in the same way you record other palettes. FLX can store 240 effect palettes, FLX S48 can store 96 effect palettes, and FLX S24 can store 48 effect palettes.

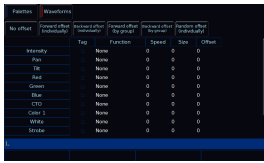
Therefore configure your effect parameters including offset options, tap Record, and choose an empty effect palette to store to marked with an asterisk.

If you are recording multiple auto effects into a single effect palette, upon recalling your custom effect palette, you will no longer be able to adjust the parameters of each individual effect palette. You will instead simply have the Speed, Size, Offset and Rotation parameters to adjust your effect.

When you store an effect palette, by default you only store the Speed, Size, Offset and Rotation controls of that effect. Therefore if you have applied an effect, but also adjusted intensity, colour, beam, shape and position, by default these attributes will not get stored in the effect palette too. If you wish to store all attributes into an effect palette, hold **Shift** and tap **Record** , and then choose an empty palette to store to.

[See the Palettes chapter for more information, including naming, updating, deleting and recalling palettes](#)

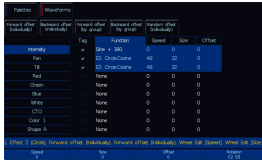
# Waveforms



On FLX consoles, a Waveforms tab is available from the top of the Effects window. In here, all parameters of the currently selected fixture(s) will be listed down the left hand side of the table and the effect parameters are listed across the top of the table. This allows you to apply an effect, and then adjust it, for each parameter of the fixture.

Firstly, find the parameter you would like to apply an effect to, and then double tap on the Function field. This will give you a drop down of all of the available waveforms that can be applied to that parameter. Function determines the mathematical function that is applied to the output value of the fixture parameter. Graphs of the available functions are shown below:





After applying a function, there will be no change on stage, as you then need to give the function speed and size. The Effect encoders will allow you to adjust the Speed, Size, Offset (and Rotation if a function is applied to Pan or Tilt), of all your fixture's parameters. Alternatively, you can tap onto the field in the Waveforms window you require, and type in the exact value required for that specific parameter of the fixture, and press Enter to confirm.

Speed determines the speed of the effect and also the “direction” of movement effects, where -100 is fast anticlockwise, 0 is stop, and +100 is fast clockwise. Size defines the magnitude of the effect (0 – 100). Offset determines the fixture’s offset into the effect. Rotation cannot be performed on a per parameter basis and can only be applied to the Pan and Tilt parameters together. Therefore, the Rotation parameter can be adjusted via the control wheel, but is not displayed in the Waveforms window.

Once you have manually created your effect, it can then be recorded into your own custom effect palette. If you have applied functions or adjusted the Speed, Size and Offset for parameters you don't wish to include in your effect palette, tap the Tag box for that parameter to untick it, to ensure it won't get stored into your palette.

You can then press the **Record** button which will display the Effect Palettes on the display, and select an empty palette.

[See the Palettes chapter for more information](#)