# Objects Covered Cheatsheet

## Part 9

| Object [] | What it does | Example Arguments (where applicable) |
|---|---|---|
| **[line]** | ESSENTIAL OBJECT! Generates linear ramps from its current value to a target value over a specified time in MS. Arguments are the initial number and the output grain (reporting time) in MS. Send values with a message like ($1 200). | [line 0. 10] |
| **[line~]** | ESSENTIAL OBJECT! Linear signal ramp generator. Like [line] but it works at sample rate. Argument is the initial value. Send values with a message like ($1 200). | [line~ 72.] |
| **[curve~]** | ESSENTIAL OBJECT! Like [line~] but it generates an exponential curve instead of a linear ramp. Arguments are the initial value and the curve parameter (floats -1 to 1). Send values with a message like ($1 200). | [curve~ 0. 1.] |
| **[snapshot~]** | ESSENTIAL OBJECT! Converts an audio signal values to numbers. The only argument is the reporting time in MS. A 1 turns it on, 0 turns it off. | [snapshot~ 10] |
| **[waveform~]** | Displays the contents of a named [buffer~]. Use (set NAME) to connect them. | |
| **[groove~] - advanced** | As before, it's a variable-rate looping sampler. Arguments are the name of the [buffer] it's using and the number of output channels. Take a look at the demo files this week to see how it can be used as a looper, a sampler, or a granulator. | [groove~ myBuffer 2] |
| **[gate] and [gate~]** | Passes input from the right inlet to one of the selected outlets. The argument is the number of outlets. The left inlet is used to control which outlet is selected, 0 is "all closed," while any other number opens that outlet starting at the left. | [gate 3] |
| **[ggate] - aka [gswitch2]** | Graphical version of a two outlet [gate]. Sending 0 to the left inlet sets it to the left outlet, 1 to the right, or you can (bang) or click the UI to toggle outlets. Can handle ANY type of data including audio and Jitter. | |
| **[function]** | Breakpoint function editor. Draw/store X/Y coordinates as floats. The output can be used as a [line~] controller by taking the output from the second from the left. Click to add a point, shift-click to remove one. Use (setdomain $1) to change the X scale and (setrange $1 $2) to change the Y scale. | |
| **[munger~]** | Requires the PeRColate external. Stereo granulator and pitch shifter. Allows you to easily control grain separation, variation, size, pitch and spread with the inlets. The only argument is the max time delay in MS. | [munger~ 2000] |
| **[amxd~]** | Hosts Max4Live devices inside MaxMSP (they share the same codebase, afterall…). Drag and drop an amxd device on to the object. Double click to open and interact with it, or you can use the "Show View in Patcher" option in the inspector to display the GUI in your patch. | [amxd~] |