

Flock Motion Control Animator

Flock provides multi-object flocking control. This document explains the parameters contained in the Flock settings dialog box. The file named "cones flock.mdl is a self-study example for the use of this animator.

"Leader Name:" data field/check box and "Group Leader" pull-down menu

The data field at the top with the word [Lead] is for your convenience in finding the lead object in your data base ("Group Leader" pull-down menu just below). With this check box "on", only items in your data base with the word "Lead" in the name will appear in the "Group Leader" pull-down menu. If your desired leader has a different name (say "Cone 1"), simply type "Cone 1" into the data field and turn on the check box; the "Cone 1" item will show in the "Group Leader" menu.

The item that you choose from the "Group Leader" menu should be the object that you want to lead the flock.

"Formation - Stay In Initial Orientation" and "Missile - Try to catch the Leader" radio buttons

Turn "on" the radio button next to the option that you want to enable. If you choose "Formation", the flock item(s) will never overtake the Group Leader. If you choose "Missile", the flock item(s) may overtake the Group Leader, depending on the other settings you make in this dialog box.

"Speed Units:" pull-down menu

Choose the Speed Units appropriate to the scale (inches, feet, meters, kilometers, miles) of your model, to ease the fine-tuning that you make to the data fields below.

"Maximum Turning Rate" data field and Banking check box

Enter a number in this field to determine how quickly the flock items can navigate corners.

Turn "on" the check box to make the flock items "rotate" on the axis of the path as the items turn corners. Tighter corners will produce more rotation.

"Maximum Speed" data field

Enter a number in this field to determine the highest rate of speed that the flock items can reach.

"Maximum Deceleration" data field

Enter a number in this field to determine how quickly the flock items can slow down when the internal algorithm dictates that the items should reduce speed.

"Maximum Acceleration" data field

Enter a number in this field to determine how quickly the flock items can increase the speed when the internal algorithm dictates it.

"Deviation From Perfect Flight" options

"Side Slippage" data field

Enter a number in this field to determine the severity of arbitrary movement the flock items will make "sideways" from following the Group Leader perfectly.

"Vertical Bounce" data field

Enter a number in this field to determine the severity of arbitrary movement the flock items will make "up and down" from following the Group Leader perfectly.

"Lazy (10) Crazy (1) data field

Enter a number in this field to determine how often the arbitrary movement will occur as the flock items follow the Group Leader.

"Modeled Orientation" radio buttons

Turn "on" one of the radio buttons to make that side of the flock items, as viewed from the Top, the "front" (leading) edge.