KnobBehavior 1.0

By Matthew Peterson

matthew@pinoko.berkeley.edu

Introduction

This is a drag-and-drop behavior for building knobs, dials and other rotating controls. The behavior is: Upon Mouse Down, the sprite will rotate around its center so that the top of the sprite points towards the mouse. The rotation angle is continuously updated until Mouse Up. There is one custom event made to be called from outside scripts:

UpdateKnob -- Set the SpriteVar KnobAngle, then execute this event, if you want to set the knob to a value.

To use this behavior, simply place this behavior on the sprite of your choice. The QScript code that deals with the value of the knob should be contained in the sprite itself. This way it has access to the SpriteVars. SpriteVars are used so that multiple knobs can exist at the same time.

Purpose

Use this for rotational controls, such as audio volume

Quick Reference

• **UpdateKnob**: Updates the the knob's angle and center position:
    [Input variables]
    1) KnobAngle --The angle from -180 to 180
    2) KnobCenterX --The x location of the knob
    3) KnobCenterY --The y location of the knob.

    Use this custom event to position the knob through script instead of through the mouse. The KnobStarAngle behavior (See Accessories) uses this event.

Accessories:

KnobBounds. Add this behavior to the same sprite. It puts upper and lower bounds on the angle that the knob can be rotated to by the mouse (you can still set the knob to any value through the UpDateKnob event.

KnobStartAngle. Add this behavior to the same sprite to make the knob start out at some angle.

Reserved Variable Names for this Behavior:

SpriteVariables: KnobIsTurning, KnobAngle, KnobCenterX, KnobCenterY

Note: Internal variables all start with "MP_" and thus should not overlap with other variables.

Technical Notes:

This behavior has its own ArcTan function, which it uses to calculate the angle that points to the mouse location.

Revision History:

2-19-2000 Version 1.0 first written.