

```

/* facial graphic use interface controller setup
create controller who's default translates are set to 0 0 0
create a null that you want the clamps to be connected to and name it, this is the second argument */

proc facialGuiControllerSetup (string $controllerName, string $outPutLocatorName)
{

// multiplyDivide node upper left
string $upLeft = `shadingNode -asUtility multiplyDivide -n ($controllerName + "UpLeft")`;

// set attributes of multiply divide node and connect controller upper left
setAttr ($upLeft + ".input2X") 1;
setAttr ($upLeft + ".input2Y") 1;
connectAttr -f ($controllerName + ".translateX") ($upLeft + ".input1X");
connectAttr -f ($controllerName + ".translateY") ($upLeft + ".input1Y");

// additionNode upper left
string $upLeftAdd = `shadingNode -asUtility plusMinusAverage -n ($controllerName + "UpLeftAdd")`;
connectAttr -f ($upLeft + ".outputX") ($upLeftAdd + ".input1D[0]");
connectAttr -f ($upLeft + ".outputY") ($upLeftAdd + ".input1D[1]");

// upper left clamp
string $upLeftClamp = `shadingNode -asUtility clamp -n ($controllerName + "UpLeftClamp")`;
setAttr ($upLeftClamp + ".maxR") 1;

// connect Upper Left addition to clamp
connectAttr -f ($upLeftAdd + ".output1D") ($upLeftClamp + ".inputR");

// multiplyDivide node upper right
string $upRight = `shadingNode -asUtility multiplyDivide -n ($controllerName + "UpRight")`;

// set attributes of multiply divide node and connect controller upper right
setAttr ($upRight + ".input2X") -1;
setAttr ($upRight + ".input2Y") 1;
connectAttr -f ($controllerName + ".translateX") ($upRight + ".input1X");
connectAttr -f ($controllerName + ".translateY") ($upRight + ".input1Y");

// additionNode upper right
string $upRightAdd = `shadingNode -asUtility plusMinusAverage -n ($controllerName + "UpRightAdd")`;
connectAttr -f ($upRight + ".outputX") ($upRightAdd + ".input1D[0]");
connectAttr -f ($upRight + ".outputY") ($upRightAdd + ".input1D[1]");

// upper right clamp
string $upRightClamp = `shadingNode -asUtility clamp -n ($controllerName + "UpRightClamp")`;
setAttr ($upRightClamp + ".maxR") 1;

// connect Upper right addition to clamp
connectAttr -f ($upRightAdd + ".output1D") ($upRightClamp + ".inputR");

// multiplyDivide node lower right
string $lowRight = `shadingNode -asUtility multiplyDivide -n ($controllerName + "LowRight")`;

// set attributes of multiply divide node and connect controller lower right
setAttr ($lowRight + ".input2X") -1;
setAttr ($lowRight + ".input2Y") -1;
connectAttr -f ($controllerName + ".translateX") ($lowRight + ".input1X");
connectAttr -f ($controllerName + ".translateY") ($lowRight + ".input1Y");

// additionNode lower right
string $lowRightAdd = `shadingNode -asUtility plusMinusAverage -n ($controllerName + "LowRightAdd")`;
connectAttr -f ($lowRight + ".outputX") ($lowRightAdd + ".input1D[0]");
connectAttr -f ($lowRight + ".outputY") ($lowRightAdd + ".input1D[1]");

// lower right clamp
string $lowRightClamp = `shadingNode -asUtility clamp -n ($controllerName + "LowRightClamp")`;
setAttr ($lowRightClamp + ".maxR") 1;

// connect lower right addition to clamp
connectAttr -f ($lowRightAdd + ".output1D") ($lowRightClamp + ".inputR");

// multiplyDivide node lower left
string $lowLeft = `shadingNode -asUtility multiplyDivide -n ($controllerName + "LowLeft")`;

// set attributes of multiply divide node and connect controller upper left
setAttr ($lowLeft + ".input2X") 1;
setAttr ($lowLeft + ".input2Y") -1;
connectAttr -f ($controllerName + ".translateX") ($lowLeft + ".input1X");
connectAttr -f ($controllerName + ".translateY") ($lowLeft + ".input1Y");

// additionNode lower left
string $lowLeftAdd = `shadingNode -asUtility plusMinusAverage -n ($controllerName + "LowLeftAdd")`;
connectAttr -f ($lowLeft + ".outputX") ($lowLeftAdd + ".input1D[0]");
connectAttr -f ($lowLeft + ".outputY") ($lowLeftAdd + ".input1D[1]");

// lower left clamp
string $lowLeftClamp = `shadingNode -asUtility clamp -n ($controllerName + "LowLeftClamp")`;
setAttr ($lowLeftClamp + ".maxR") 1;

// connect lower Left addition to clamp
connectAttr -f ($lowLeftAdd + ".output1D") ($lowLeftClamp + ".inputR");

// adding attributes to locator for facial GUI
addAttr -ln ($upLeft) -k true -defaultValue 0 $outPutLocatorName;
addAttr -ln ($lowLeft) -k true -defaultValue 0 $outPutLocatorName;
addAttr -ln ($upRight) -k true -defaultValue 0 $outPutLocatorName;
addAttr -ln ($lowRight) -k true -defaultValue 0 $outPutLocatorName;

```

```
// connect attributes of clamp to GUI locator
connectAttr -f ($supLeftClamp + ".outputR") ($outPutLocatorName + "." + $supLeft);
connectAttr -f ($supRightClamp + ".outputR") ($outPutLocatorName + "." + $supRight);
connectAttr -f ($lowLeftClamp + ".outputR") ($outPutLocatorName + "." + $lowLeft);
connectAttr -f ($lowRightClamp + ".outputR") ($outPutLocatorName + "." + $lowRight);
```

```
}
```