

## Sexagesimal Displays in QS-Pro Mimic Controls

CADAR QS-Pro's mimic control does not currently display data in anything other than standard decimal format, ie. *nnn.ddd*, but angle and time values are usually expressed in the sexagesimal format of degrees (or hours), minutes, and seconds. You can contrive a sexagesimal display using three mimic controls and a little expression trickery as follows...

Let's say the quantity to be displayed is in a QS-Pro feature, eg. *Angle*, which may have a reading expression something like  $Angle = \text{ASIN}(Length / Width)$ . We will create three new expressions, in the same set as *Angle*, for degrees, minutes and seconds, and will then attach a mimic control to each. In the text below substitute your feature name for *Angle*.

1. In design mode, open the Batch Plan dialog, go to the Expressions tab, and find the feature *Angle* - or whatever your feature is called.
2. From the end of the line  $Angle = \dots$  hit ENTER to create a new line below.
3. Type in:  $Degrees = \text{FLOOR}(Angle)$  then hit ENTER.
4. In the next line type:  
 $Minutes = \text{FLOOR}((Angle - Degrees) * 60)$  and hit ENTER.
5. In the next line type:  
 $Seconds = \text{FLOOR}(((Angle - Degrees) - Minutes / 60) * 3600)$  .

These new lines have created three intermediate variables in QS-Pro called Degrees, Minutes and Seconds. We've finished in the Batch Plan dialog now so you can close it.

6. In the Batch View find the scene showing the feature *Angle*, and add a new mimic control and size it to comfortably show 4 digits.
7. Right click the control and select Properties.
8. In the Mimic tab, set Digits Left to 3, Digits Right to 0, and then click OK
9. Right click the mimic again and choose Attach.
10. Clear the Features Only check box, choose Degrees from the list of data sources, and then click OK. If you check the Set Caption check box QS-Pro will add the caption "Degrees" to the mimic – but you may have to re-size it to fit in 4 digits.
11. Add two more mimics to the scene, size them to show a little more than 2 digits, and position them side by side, at the right of the Degrees mimic.
12. Repeat steps 7-10 with the center mimic control but set Digits Left to 2 and attach it to Minutes.
13. Repeat 7-10 again with the right most control, set Digits Left to 2 and attach it to Seconds.
14. Change to Data Entry mode and you should see something like this...

By turning off captions, borders, bevels, and margins in the mimic controls and superimposing them on top of a label control you can make the three mimics look like one. If you place the label in the view after the mimics it will cover them up – use the Send Back' layout button to send it behind the mimic controls.

