

HOW IS YOUR WATER?

Define piscinatemp()=

Prgm

© Servo (motor) and temperature sensor connections

Send "CONNECT SERVO 1 TO OUT 3"

Send "CONNECT VERNIER 1 TO IN1 AS TEMPERATURE"

Send "READ VERNIER 1"

Get t

© Set point for water temperature

Disp "Actual temperature = ",t

Request "New temperature? ",tn

Request "Tolerance?",tol

tmax=tn+tol

tmin=tn-tol

Disp "tmax, tmin",tmax,tmin

© If water is too high open cold water tank

While t>tmax

 position=-9

 Send "SET SERVO 1 TO eval(position)"

 Wait 0.5

 Send "SET SOUND 220, 0.3"

 position=8

 Send "SET SERVO 1 TO eval(position)"

 Wait 2

 Send "READ VERNIER 1"

 Get t

 Disp "Actual temperature = ",t: Disp "set point",tmin,tmax

EndWhile

© If water is too low open hot water tank

While t<tmin

 position=8

 Send "SET SERVO 1 TO eval(position)"

 Wait 0.5

 Send "SET SOUND 440, .3"

 position=-9

 Send "SET SERVO 1 TO eval(position)"

 Wait 2

 Send "READ VERNIER 1"

 Get t

 Disp "Actual temperature= ",t,"set point",tmin,tmax

EndWhile

EndPrgm