SolarTracker



//TheDIYLife

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#include<Servo.h>

Servotracker;inteastLDRPinintwestLDRPin

*II*createservoob)ecttocontrolaservoO;//Assignanaloguepins

l;

inteastLDR=O;intwestLDR=O;interror=O;

//Createvariablesfortheeastandwestsensorvalues

intcalibration=204;//CalibrationoffsettoseterrortozerowhenbothsensorsreceiveanequalamountoflightinttrackerPos=90; //Createavariabletostoretheservoposition

voidsetUJ.>()

{

tracker.attach(ll);//attachestheservoonpin11totheservoObJeCt

voidloop()

{

eastLDR=calibration+analogRead(eastLDRPin); //ReadthevalueofeachoftheeastandwestsensorswestLDR=analogRead(westLDRPin);

if(eastLDR<350&&westLDR<350)//Checkifbothsensorsdetectverylittlelight,nighttime

{

urhile(trackerPos<=l60)//Hovethetrackerallthewaybacktofaceeastforsunrise

{

trackerPos++;tracker.write(trackerPos);delay(100);

error=eastLDR-westLDR; //Determine the difference between the two sensors.

if(error>l5)

{

//Iftheerrorispositiveandgreaterthan15thenmovethetrackerintheeastdirection

if(trackerPos<=l60)//Checkthatthetrackerisnotattheendofitslimitintheeastdirection

{

trackerPos++;

tracker.wnte(tx:ackerPos);//Hovethetrackertotheeast

elseif(error<-15)//Iftheerrorisnegativeandlessthan-15thenmovethetrackerinthewestdirectionif(trackerPos>20)//Checkthatthetrackerisnotattheendofitslimitinthewestdirection

{

t:i:ackerPos--;

tracker.wnte(trackerPos);//Hovethetrackertothewest

delay(lOO);