Alarm

Timeset.ino

```
#include <Arduino_FreeRTOS.h>
#include "Timealert.h"
int hour;
int minute;
int second;
boolean Run;
Timealert Times(0, 1, 0);//set alarm
void setup() {
 Serial.begin(9600);
 while (!Serial) {
  ;
 }
 hour =  0; // set start hour
 minute = 0; // set start minute
 second = 0; // set start second

 xTaskCreate(
   TaskRuntime
   ,  (const portCHAR *) "AnalogRead"
   ,  128  // Stack size
   ,  NULL
   ,  2 // Priority
   ,  NULL );

 xTaskCreate(
   Taskalert
   ,  (const portCHAR *) "stepmotor"
   ,  128  // Stack size
   ,  NULL
   ,  1 // Priority
   ,  NULL );
}

void loop()
{

}

void TaskRuntime(void *pvParameters)  // This is a task.
{
 (void) pvParameters;
 for (;;)
 {
   second++;
  if (second>59){
    second=0;
    minute++;
    }
  else if (minute>59){
    minute=0;
    hour++;
  }
  else if (hour>24){
    hour=0;
  }
  Times.showtime(hour, minute, second);
  vTaskDelay(1000 / portTICK_PERIOD_MS);
 }
}

void Taskalert(void *pvParameters)  // This is a task.
{
 (void) pvParameters;
 for (;;)
 {
  if (hour==Times.getHour()&& minute==Times.getMinute()){
    Times.alert();
   }
  vTaskDelay(500 / portTICK_PERIOD_MS);
 }
}
```

Timealert.cpp

```
#include "Arduino.h"
#include "Timealert.h"

Timealert::Timealert(int Hour, int Minute, int Second){
  Serial.print("SetHour =");
  Serial.println(Hour);
  Serial.print("SetMinute =");
  Serial.println(Minute);
  Serial.print("SetSecond =");
  Serial.println(Second);
  H = Hour;
  M = Minute;
  S = Second;
}
void Timealert::showtime(int hour, int minute, int second){
  Serial.print("H:");
  if(hour < 10){
    Serial.print("0");}
  Serial.print(hour);
  Serial.print(" M:");
  if(minute < 10){
    Serial.print("0");}
  Serial.print(minute);
  Serial.print(" S:");
  if(second < 10){
    Serial.print("0");}
  Serial.println(second);
}
void Timealert::alert(){
  Serial.println("alert alert alert alert");
}

int Timealert::getHour(){
 return H;
}
int Timealert::getMinute(){
 return M;
}
int Timealert::getSecond(){
 return S;
}
```

Timealert.h

```
#include "Arduino.h"
class Timealert
{
 public:
  Timealert(int Hour, int Minute, int Second);
  void showtime(int hour, int minute, int second);
  void alert();
  int getHour();
  int getMinute();
  int getSecond();
 private:
  int H;
  int M;
  int S;
};
```