

GoldSTEM_Lesson_23_LCD_Clock_Calendar

tm 4-02-2016

For this experiment uses the same setup as Lesson 21.



Load the Code

GoldSTEM_Lesson_23_LCD_Clock_Calendar

```
//GoldSTEM_Lesson_23_LCD_Clock_Calendar tm 04-02-2016
```

```
#include <Wire.h>  
#include "ds3231.h"  
#include <LiquidCrystal.h>
```

```
LiquidCrystal lcd(7,8,9,10,11,12);
```

```
#define BUFF_MAX 128
```

```
uint8_t time[8];
```

```
char recv[BUFF_MAX];
unsigned int recv_size = 0;
unsigned long prev, interval = 1000;

void setup()
{
  Serial.begin(9600);
  Wire.begin();
  DS3231_init(DS3231_INTCN);
  memset(recv, 0, BUFF_MAX);

  lcd.begin(16, 2);

}

void loop()
{
  char in;
  char tempF[6];
  float temperature;
  char buff[BUFF_MAX];
  unsigned long now = millis();
  struct ts t;

  // LCD Display
  if ((now - prev > interval) && (Serial.available() <= 0)) {
    DS3231_get(&t); //Get time

    lcd.clear();
    lcd.setCursor(0,0);
```

```
lcd.print("Time: ");
lcd.print(t.hour);
lcd.print(":");
if(t.min<10)
{
  lcd.print("0");
}
lcd.print(t.min);
lcd.print(":");
if(t.sec<10)
{
  lcd.print("0");
}
lcd.print(t.sec);
```

```
lcd.setCursor(0,1);
```

```
lcd.print(t.mon);
if(t.mday<10)
{
  lcd.print(" ");
}
lcd.print(t.mday);
lcd.print(" ");
lcd.print(t.year);
```

```
prev = now;
```

```
}
```

```
} Questions
```

Can you add the word Date in front of the Date on the LCD?

Can you add – between Month-Day-Year?

End of Lesson