



## Serial Enabled 16x2 LCD - White on Black 5V

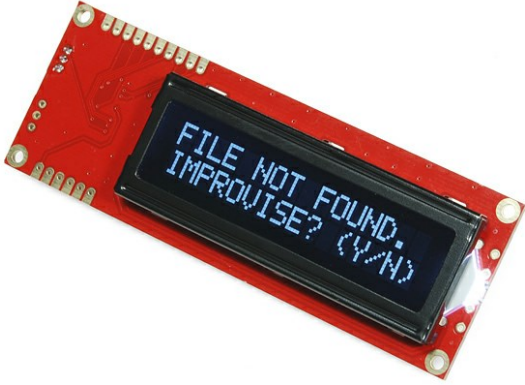
LCD-09395 ROHS ✓ 3D

★★★★☆ 9

DESCRIPTION

FEATURES

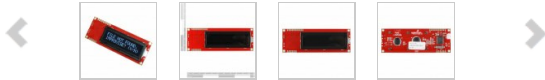
DOCUMENTS



This is the latest evolution of our serial LCD. Included on a single board is a 16x2 LCD and an embedded circuit based around a PIC 16F88. The on-board PIC takes a TTL serial input and prints the characters it receives onto the LCD. The installed firmware also allows for a number of special commands so you can clear the screen, adjust the backlight brightness, turn the display on/off, and more.

Communication with SerLCD requires 5V TTL serial at a default baud rate of 9600bps (8-N-1). You can adjust the baud to any standard rate between 2400 and 38400bps. The power (VDD), ground (GND) and RX pins are all broken out to both a 0.1" pitch header as well as a 3-pin JST connector.

SerLCD has the ability to dim the backlight to conserve power if needed. There is also a potentiometer on the back of the display to adjust the contrast.



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3D Download: [Sketchup](#), [STL](#), [IGES](#), [Blender](#), [Solidworks](#)

## Serial Enabled 16x2 LCD - White on Black 5V Product Help and Resources

SUPPORT TIPS

SKILLS NEEDED

### Issues Displaying Characters

last updated about 9 months ago

There was a case where the serial enabled LCD was functioning initially but eventually would only display the first ten characters on each line. Most likely a certain sequence of characters was sent that modified the character width and lines. The user was able to remedy the issue by sending a command character and the associated command as listed in the datasheet:

I got the new LCD and it worked great for a day but then had the same issue, except it was cut off even more than the first. I had already installed it in my project that I am presenting on Monday so I just had to figure it out. The evidence pointed to the firmware on the PIC 16F88 so I did some digging (good thing it's open source!) and finally found a special command for changing the LCD width:

```
else if(letter == 4){
    LCD_Width = 16;
    onboard_eewrite(LCD_Width, 1);
}
```

so I was able to fix it with this Arduino code:

```
LCD.write(0x7C); // special command byte => 0d124 or 0x7C
LCD.write(0x04); //command to set LCD width to 16 incase it gets messed up
delay(50); //don't send another command right after or it will freeze the PIC
```

There is also a link in the Quickstart Guide with Arduino example code written by a tech support representative here => [[https://github.com/bboyho/SerLCD/blob/master/Arduino/SerLCD\\_Arduino\\_Example\\_v3/SerLCD\\_Arduino\\_Example\\_v3.ino#L113](https://github.com/bboyho/SerLCD/blob/master/Arduino/SerLCD_Arduino_Example_v3/SerLCD_Arduino_Example_v3.ino#L113)].

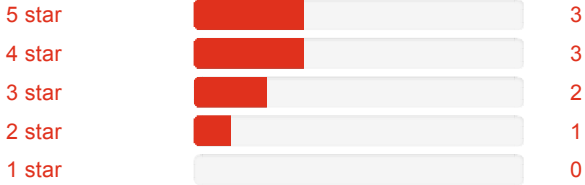
COMMENTS 80

REVIEWS ★★★★★ 9

## Customer Reviews

★★★★☆ 3.9 out of 5

Based on 9 ratings:



Currently viewing all customer reviews.

### ★★★★★ Works as advertised to see what is going on with your project

about 3 years ago by [Member #356017](#) 

I've been doing a lot of tweaking with my Ardo project by using the serial output when I'm away from a computer. I was using the 7 segment display but eventually the info I got too complex to display in just digits and this device works really well to show alphanumeric info. Highly recommend.

### ★★★★☆ Not for high temperature use

about 3 years ago by [Dan23](#) 

Overall I was pleased with this device, although ultimately it did not work for my application.

My application involves continuous operation at 60 degrees Celsius. At this temperature, the display liquid crystals do not become fully black, thus making the display unreadable. It would be useful for Sparkfun to post the datasheet for the LCD panel.

-Dan

0 of 1 found this helpful:

### ★★★★★ Works fine

about 3 years ago by [Member #672606](#) 

But I had some trouble getting the backlight to dim down. That was the first place in my code I sent anything to the display. After that it worked OK. Tried online tech chat. After a few questions he asked if I was sure I was sending the right commands. I said "I think so." Then I checked. I didn't turn on UART TX interrupts soon enough. Very embarrassing. BTW some of the docs are for the Serial backpack, but here that is built-in, not a separate board.

### ★★★★★ Easy to use serial 16x2 LCD display

about 3 years ago by [Member #503577](#) 

I used the SoftwareSerial.h library with my ProMicro circuitry, and was great to see what was going on in the program! Easy to use and get to working, and uses up only a few I/O pins, leaving the others for my experimental instrument's uses.

However, one of my types of projects needs to have a faster ADC for audio involvement - if possible - and now wondering how to get SoftwareSerial to work on the TeensyLC.

### ★★★☆☆ Worked for awhile

about 2 years ago by [Member #156863](#) 

This LCD worked great for about 2 months of continuous operation. The lcd was used for a machine I

designed to operate in a humid climate. I had placed it in a water tight box with an arduino (red board). It died completely after 2 months. The red board still works great.

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★★★★☆ Good so far

about 2 years ago by [Member #791295](#) ✓ verified purchaser

Greetings,

I purchased this to run directly from a Raspberry Pi via USB as the IO is being used by another device. So far it works as advertised, but there are a few caveats:

1. It is nearly impossible to get the backlight down to a level that you cannot see it but still read the text. I would call it "bluish-white on on dark blue" rather than "white on black".
2. The web site info is very clear about not connecting the serial line directly to an RS-232 port due to voltage variances, but it would have been nice to state that this works fine with 5v TTL serial to USB adapters. For the record, they work fine, but this caused me considerable consternation.
3. I wanted to use the connector on the board, but didn't have the plug and wanted to use jumper wires on the plug's pins. Unfortunately, 3 jumper wires don't fit into the connector. I would say do away with the connector, give us an extra set of pins, or better yet charge us an extra buck and include a plug! I was able to solder wires directly in the end, so I got it to work.

Thank you for the opportunity to comment. All in all this is a good product that I would purchase again when needed.

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0 of 1 found this helpful:

★★★★☆ Works fine but took so long to get to me that I couldn't use it.

about 10 months ago by [XtracycleTony](#) ✓ verified purchaser

I was assisting my daughter with her science fair project and was planning on using this screen. I added it so I could get the "free shipping" offer and didn't pay attention when I checked out. When I checked later I was surprised to see the free shipping for spending over 75 bucks would take 9 days to get to me in WI from CO. Oh well, I've learned my lesson and won't make that mistake again. I lived in Boulder and once drove back home to Milwaukee and back to CO (Loveland) in a weekend so I guess I expected faster shipping.

I'll find another project to use it on some day.

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★★★★☆ Works, trial and error

about 6 months ago by [Member #863140](#) ✓ verified purchaser

The display worked after I was able to overcome the documentation errors.

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★★★★☆ Not Ready For Prime Time

about 2 months ago by [Member #841961](#) ✓ verified purchaser

This thing worked fine for a couple of weeks. Then it bricked. Nothing I tried would get it to work again. I should have read the reviews on the similar 4 line unit. A few email exchanges with Tech Support went nowhere. The tech finally suggested that it would probably work if I used 5V TX logic instead of the 3.3 on the Teensy. That didn't work when I set it up on a Uno. The unit was always powered with 5V but the splash screen got bricked first. That should have been a clue that 3.3V logic wasn't the problem. Tech support issued a credit anyway. I don't think they're real proud of this thing.





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