

16x2 LCD Character Displays

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping

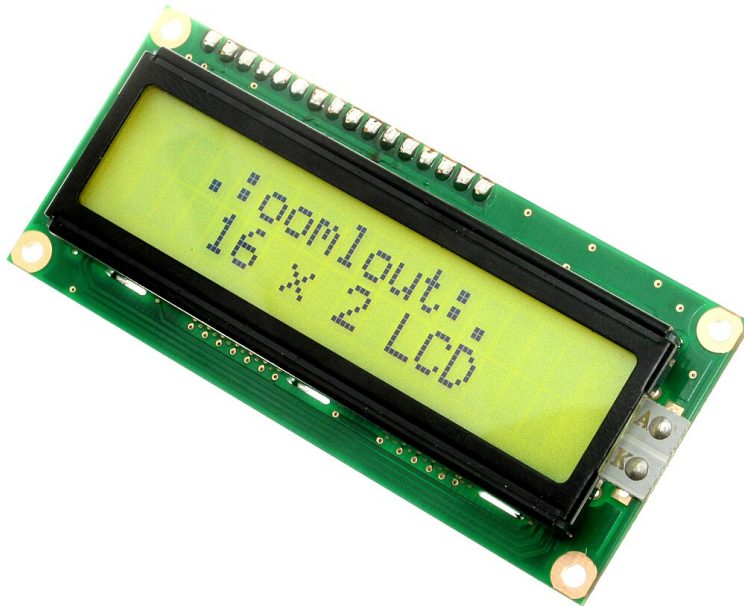


Photo: oomlout — CC BY-SA 2.0 — via Wikimedia Commons (16x2_Character_LCD_Display.jpg)

A 16x2 LCD character display shows two rows of sixteen characters and is the classic output device for Arduino and microcontroller projects, displaying readings, menus and messages. I2C adapter modules reduce the wiring to just four pins.

Key Features

- 16 characters x 2 rows
- HD44780-compatible controller
- Optional I2C backpack adapters
- Blue or green backlights
- Adjustable contrast via pot

Typical Uses in the Workshop

- Display sensor readings and status text
- Show menus and game scores
- Debug microcontroller programs visibly
- Build clock and meter displays

Safe Operation

1. Wire the display per the module type (4-bit or I2C)
2. Set the contrast so text is clear
3. Send text with the library commands
4. Clear before rewriting lines
5. Place the backlight enable correctly

SAFETY NOTES

- Keep the display away from water and solvents
- Handle the glass module edge with care
- Check polarity before powering
- Do not flex the board
- Store with pins protected

Maintenance & Consumables

- Check the solder joints and header pins
- Clean the screen with a soft dry cloth
- Retest the I2C address if the module fails
- Keep spares with connectors
- Store displays in foam trays

Specification & Buying Notes

Buy displays with I2C adapters pre-soldered - they save hours of wiring for students. A class pack plus a few spare I2C modules covers the inevitable address mix-ups. Test each before issue.