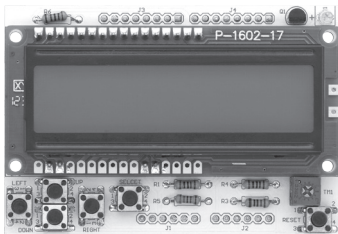




16×2 LCD Shield for Arduino

User's Guide
2760276



*Thank you for purchasing your 16×2 LCD Shield from **RadioShack**. Please read this user's guide before using your new shield.*

Note: This shield is shipped in protective anti-static packaging. To avoid high electrostatic potentials, a grounding strap or similar protective device should be used when handling the shield.

Package Contents

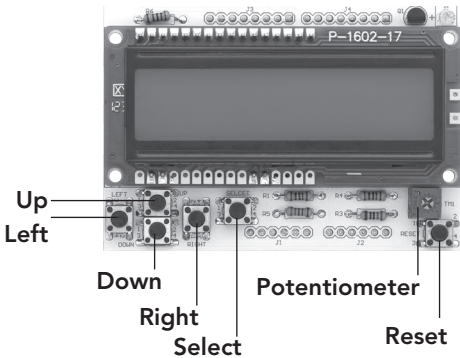
- 16×2 LCD Shield
- User's Guide

Features

- 16×2 LCD using HD44780-compatible display module (black characters on green background).
- Fully compatible with the Arduino "LiquidCrystal" library.
- Five buttons on one analog input (A0).
- Adjustable LCD backlight (via program).
- Adjustable contrast (via potentiometer).
- Recessed LCD, panel mount screw holes and button layout suitable for panel or cabinet mounting.
- Power supply smoothing capacitor.

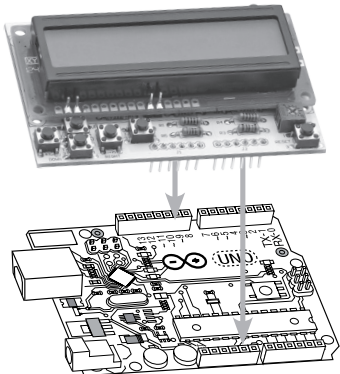
Power Requirements

The LCD Shield requires stable 5 V power supply. If you use only USB power, a voltage drop may occur. At approximately 4 V, the Arduino may keep running normally, but the display will show pale rectangles or nothing at all. In this situation, attach a 7–9 V DC power supply to the Arduino 2.1 mm DC jack .



Connect to the Board

1. Connect shield directly to your board. The shield only fits in one direction; connect J1 on the shield to the Power headers on the board.
2. Use a USB cable (not included) to connect the Arduino to your computer.



Programming the Shield

The LCD Shield interface uses the Arduino LiquidCrystal library. For library information, refer to your Arduino documentation.



Note: *When using Arduino programs, make sure to set the correct pins for the 16×2 LCD Shield within the program. Locate this pin definition:*

lcd(8, 9, 4, 5, 6, 7)

(RS, E, LCD-D4, LCD-D5, LCD-D6, LCD-D7)

RadioShack provides online support files and an example program for download.

1. For schematics and example programs, go to <http://Shack.net/LCD0276>.
2. At the end of the blog post, click **RadioShack LCD Shield Support Files** and save the folder to your computer. The example program is called **lcd_16x2example.ino**.

FCC Information

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Separate the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Limited Warranty

RadioShack warrants this product against defects in materials and workmanship under normal use by the original purchaser for **ninety (90) days** after the date of purchase from a **RadioShack**-owned store or an authorized **RadioShack** franchisee or dealer. **RADIOSHACK** MAKES NO OTHER EXPRESS WARRANTIES.

This warranty does not cover: (a) damage or failure caused by or attributable to abuse, misuse, failure to follow instructions, improper installation or maintenance, alteration, accident, Acts of God (such as floods or lightning), or excess voltage or current; (b) improper or incorrectly performed repairs by persons who are not a **RadioShack** Authorized Service Facility; (c) consumables such as fuses or batteries; (d) ordinary wear and tear or cosmetic damage; (e) transportation, shipping or insurance costs; (f) costs of product removal, installation, set-up service, adjustment or reinstallation; and (g) claims by persons other than the original purchaser.

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New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

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