**API Summary**

The table below is a summary of all the available API functions in the hd44780 library.

Additional information about the API functions and how to use them can be found in the examples.

| **Function** | **Description** |
| --- | --- |
| **LiquidCrystal API** | <https://www.arduino.cc/en/Reference/LiquidCrystal> |
| init(...) | **not supported** |
| begin(cols, rows) | initialize communication interface and LCD backlight is turned on if supported **hd44780 extension**: returns zero on success |
| clear() | clear the display and home the cursor **hd44780 extension**: returns zero on success |
| home() | home the cursor **hd44780 extension**: returns zero on success |
| setCursor(col, row) | set cursor position **hd44780 extension**: returns zero on success |
| write(data) | send data byte to the display returns 1 on success |
| write(\*str) | send C string to the display returns characters written |
| write(\*buffer, size) | send size bytes to the display returns characters written returns size on success |
| print(...) | print formatted data on the display (from Print class) returns characters output |
| println(...) | **not supported** (from Print class) |
| cursor() | turn on underline cursor **hd44780 extension**: returns zero on success |
| noCursor() | turn off/hide cursor **hd44780 extension**: returns zero on success |
| blink() | enable blinking at cursor position **hd44780 extension**: returns zero on success |
| noBlink() | disable blinking at cursor position **hd44780 extension**: returns zero on success |
| display() | enable pixels on display **hd44780 extension**: returns zero on success |
| noDisplay() | disable/hide pixels on display **hd44780 extension**: returns zero on success |
| scrollDisplayLeft() | shift display contents left **hd44780 extension**: returns zero on success |
| scrollDisplayRight() | shift display contents right **hd44780 extension**: returns zero on success |
| autoscroll() | enable left/right autoshifting for new characters **hd44780 extension**: returns zero on success |
| noAutoscroll() | disable left/right autoshifting **hd44780 extension**: returns zero on success |
| leftToRight() | write left to right, set autoshift to left **hd44780 extension**: returns zero on success |
| rightToLeft() | write right to left, set autoshift to right **hd44780 extension**: returns zero on success |
| createChar(charval, charmap[]) | create a custom character **hd44780 extension**: returns zero on success |
| setRowOffsets(row0) | set address for start of line **hd44780 extension**: returns zero on success |
| setRowOffsets(row0, row1) | set address for start of each line **hd44780 extension**: returns zero on success |
| setRowOffsets(row0, row1, row2, row3) | set address for start of each line **hd44780 extension**: returns zero on success |
| command(cmd) | send raw 8bit hd44780 command to LCD **hd44780 extension**: returns zero on success |
|  |  |
| **hd44780 extensions** Included in hd44780 but not part of LiquidCrytal or LCD 1.0 API |  |
| createChar(charval, charmap[]) | create a custom character (supports charmap in AVR PROGMEM) returns zero on success |
| backlight() | turn on backlight (max brightness) returns zero on success |
| noBacklight() | turn off backlight returns zero on success |
| lineWrap() | turn on automatic line wrapping (wraps lines but does not scroll display) returns zero on success |
| noLineWrap() | turn off automatic line wrapping returns zero on success |
| moveCursorLeft() | move cursor one space to right returns zero on success |
| moveCursorRight() | move cursor one space to left returns zero on success |
| read() | read data byte from LCD (requires r/w signal control) returns negative value on failure |
| setExecTimes(chUs, insUs) | configure clear/home and instruction/data times |
|  |  |
| **LCD API 1.0 Functions** | <http://playground.arduino.cc/Code/LCDAPI> |
| setBacklight(dimvalue) | set backlight brightness (0-255) **hd44780 extension**: returns zero on success |
| setContrast(contvalue) | set contrast (0-255) **hd44780 extension**: returns zero on success |
| on() | turn on LCD pixels and backlight **hd44780 extension**: returns zero on success |
| off() | turn off LCD pixels and backlight **hd44780 extension**: returns zero on success |
| status() | read hd44780 status byte (busy flag & address) (requires r/w signal control) returns negative value on failure |
|  |  |
| **Deprecated LCD API 1.0 Functions** These exist in hd44780 but are deprecated |  |
| cmdDelay(CmdDelay, CharDelay) | use setExecTimes() instead |
| cursor\_on() | use cursor() instead **hd44780 extension**: returns zero on success |
| cursor\_off() | use noCursor() instead **hd44780 extension**: returns zero on success |
| blink\_on() | use blink() instead **hd44780 extension**: returns zero on success |
| blink\_off() | use noBlink() instead **hd44780 extension**: returns zero on success |
| load\_custom\_character(char\_num, Rows[]) | use createChar() instead **hd44780 extension**: returns zero on success |
| **BROKEN LCD API 1.0 Functions** |  |
| setCursor(row, col) | row,col is backwards from Liquidcrystal; therefore cannot be supported |