

**NAME**

LC100.cpp –

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Chip Overclock <mailto:coverclock@diag.com>

<http://www.diag.com/navigation/downloads/Amigo.html>

**SYNOPSIS**

```
#include 'LC100.h'  
#include <Arduino.h>  
#include <Print.h>  
#include <stdint.h>  
#include <string.h>
```

**Detailed Description**

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Definition in file **LC100.cpp**.

**Author**

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## NAME

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## SYNOPSIS

```
#include <Arduino.h>
#include <Print.h>
#include <stdint.h>
```

### Classes

struct **com::diag::amigo::Display**

*This pure (abstract) class defines the interface that the **LC100** software expects to be implemented by any display that it uses.*

class **com::diag::amigo::LC100Base**

*This is the common base (super) class for the **LC100** software that does all of the heavy lifting for any **LC100** template instantiation regardless of the display dimensions.*

class **com::diag::amigo::LC100<\_COLS\_, \_ROWS\_>**

*This is the derived (sub) class for the **LC100** software that contains the actual data structures whose sizes depend on the actual size of the display.*

## Detailed Description

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Definition in file **LC100.h**.

## Author

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**NAME**

Mock –

This is a mock display that merely traces itself on the serial output and implements the movement keys used by the visual editor (vi).

**SYNOPSIS**

Inherits **com::diag::amigo::Display**.

**Public Types**

enum **Read**

**Public Member Functions**

**Mock** ()

virtual ~**Mock** ()

virtual void **begin** (byte cols, byte rows)

virtual void **home** ()

virtual void **clear** ()

virtual void **setCursor** (byte col, byte row)

virtual size\_t **write** (uint8\_t ch)

virtual **Read read** ()

**Detailed Description**

This is a mock display that merely traces itself on the serial output and implements the movement keys used by the visual editor (vi).

Definition at line 26 of file TinyTerminal.ino.

**Member Function Documentation**

**virtual void Mock::begin (byte cols, byte rows)** [inline, virtual]

Initialize. This needs to be done only once.

**Parameters:**

*cols* is the number of columns in this display.

*rows* is the number of rows in this display.

Implements **com::diag::amigo::Display**.

Definition at line 47 of file TinyTerminal.ino.

**virtual Read Mock::read ()** [inline, virtual]

Read the joystick. The returned value will be an enumerated value indicating movement left, down, up, or right, a select indication, or no input.

**Returns:**

an enumerated value.

Implements **com::diag::amigo::Display**.

Definition at line 106 of file TinyTerminal.ino.

**virtual void Mock::setCursor (byte col, byte row)** [inline, virtual]

Place the cursor at the specified position. **Parameters:**

*col* is the zero-based column number.

*row* is the zero-based row number.

Implements **com::diag::amigo::Display**.

Definition at line 73 of file TinyTerminal.ino.

**virtual size\_t Mock::write (uint8\_t ch)** [inline, virtual]

Write a character to the display. The signed value that is returned will typically be one, but can be zero if the specified character was somehow invalid, or negative if an error writing the character occurred.

**Parameters:**

*ch* is the character that is written to the display.

**Returns:**

the number of characters written.

Implements **com::diag::amigo::Display**.

Definition at line 87 of file TinyTerminal.ino.

**Author**

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**NAME**

README.h –

This is the README for this project.

**SYNOPSIS****Detailed Description**

This is the README for this project.

Definition in file **README.h**.

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**NAME**

TinyTerminal.ino –

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**SYNOPSIS**

```
#include <LiquidCrystal.h>
```

```
#include 'LC100.h'
```

**Classes**

```
class Mock
```

*This is a mock display that merely traces itself on the serial output and implements the movement keys used by the visual editor (vi).*

**Defines**

```
#define DEBUG (0)
```

**Functions**

```
static void test ()
```

```
void setup ()
```

```
void loop ()
```

**Variables**

```
static Mock display
```

```
static const byte COLS = 16
```

```
static const byte ROWS = 2
```

```
static com::diag::amigo::LC100< COLS, ROWS > lc100 (display, false, true, 1000/8)
```

**Detailed Description**

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Definition in file **TinyTerminal.ino**.

**Define Documentation**

```
#define DEBUG (0)
```

If **DEBUG** is defined, TinyTerminal replaces the interface to the actual LCD hardware with a mock object that implements the same interface. The mock object just traces itself on the serial output.

Definition at line 18 of file TinyTerminal.ino.

**Function Documentation**

```
void loop ()
```

Loop is executed continuously by the Arduino run-time software, which also does some other housekeeping each iteration, like polling the serial port for activity. The timing of the execution of this function is asynchronous. This function checks for input on the serial port and if it exists passes all of the buffered input characters to the LC100 software. It also checks for input from the LC100 software from the joystick and if it exists passes it to the serial port.

Definition at line 475 of file TinyTerminal.ino.

References lc100.

**void setup ()**

Setup is executed once by the Arduino run-time software. This function initializes the serial port, the LC100 software (which in turn initializes the underlying display hardware), and runs a unit test which may or may not do anything.

Definition at line 460 of file TinyTerminal.ino.

References lc100, and test().

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**NAME**

com::diag::amigo::Display –

This pure (abstract) class defines the interface that the **LC100** software expects to be implemented by any display that it uses.

**SYNOPSIS**

```
#include <LC100.h>
```

Inherited by **Mock**.

**Public Types**

enum **Read**

**Public Member Functions**

virtual void **begin** (byte cols, byte rows)=0

virtual void **home** ()=0

virtual void **clear** ()=0

virtual void **setCursor** (byte col, byte row)=0

virtual size\_t **write** (uint8\_t ch)=0

virtual **Read** **read** ()=0

**Detailed Description**

This pure (abstract) class defines the interface that the **LC100** software expects to be implemented by any display that it uses.

Definition at line 24 of file LC100.h.

**Member Function Documentation**

**virtual void com::diag::amigo::Display::begin (byte cols, byte rows)** [pure virtual]

Initialize. This needs to be done only once.

**Parameters:**

*cols* is the number of columns in this display.

*rows* is the number of rows in this display.

Implemented in **Mock**.

Referenced by com::diag::amigo::LC100Base::begin().

**virtual Read com::diag::amigo::Display::read ()** [pure virtual]

Read the joystick. The returned value will be an enumerated value indicating movement left, down, up, or right, a select indication, or no input.

**Returns:**

an enumerated value.

Implemented in **Mock**.

Referenced by com::diag::amigo::LC100Base::read().

**virtual void com::diag::amigo::Display::setCursor (byte col, byte row)** [pure virtual]

Place the cursor at the specified position. The column and row coordinates are taken modulo of the actual display dimensions.

**Parameters:**

*col* is the zero-based column number.

*row* is the zero-based row number.

Implemented in **Mock**.

Referenced by com::diag::amigo::LC100Base::down(), com::diag::amigo::LC100Base::setCursor(), and com::diag::amigo::LC100Base::up().



**virtual size\_t com::diag::amigo::Display::write (uint8\_t ch) [pure virtual]**

Write a character to the display. The signed value that is returned will typically be one, but can be zero if the specified character was somehow invalid, or negative if an error writing the character occurred.

**Parameters:**

*ch* is the character that is written to the display.

**Returns:**

the number of characters written.

Implemented in **Mock**.

Referenced by com::diag::amigo::LC100Base::down(), com::diag::amigo::LC100Base::emit(), and com::diag::amigo::LC100Base::up().

**Author**

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**NAME**

com::diag::amigo::LC100 –

This is the derived (sub) class for the **LC100** software that contains the actual data structures whose sizes depend on the actual size of the display.

**SYNOPSIS**

```
#include <LC100.h>
```

Inherits **com::diag::amigo::LC100Base**.

**Public Types**

enum **Ascii**

**Public Member Functions**

**LC100** (**Display** &**display**, boolean sample=false, boolean debug=false, int ms=0)

virtual ~**LC100** ()

void **begin** ()

void **setCursor** (byte col, byte row)

void **home** ()

void **down** ()

void **up** ()

void **erase** (byte colFrom, byte rowFrom, byte colTo, byte rowTo)

void **clear** ()

int **read** (char \*buffer)

size\_t **write** (uint8\_t ch)

**Public Attributes**

const byte **COLS**

const byte **ROWS**

**Protected Types**

enum **Constant**

enum **State**

enum **Action**

**Protected Member Functions**

byte **index** (byte col, byte row)

byte **index** (byte row)

size\_t **emit** (uint8\_t ch)

size\_t **frame** (uint8\_t ch)

byte **one** (byte value)

**Detailed Description**

**template<byte \_COLS\_, byte \_ROWS\_> class com::diag::amigo::LC100< \_COLS\_, \_ROWS\_ >**

This is the derived (sub) class for the **LC100** software that contains the actual data structures whose sizes depend on the actual size of the display.

It is templated so that the display dimensions can be passed as arguments at compile time.

Definition at line 368 of file LC100.h.

**Member Enumeration Documentation**

**enum com::diag::amigo::LC100Base::Action** [protected, inherited]

Actions which the push down automaton may execute. CONSUMED is the default action. All of the enumerated values are printable, making it easy to trace the PDA as it executes.

Definition at line 124 of file LC100.h.

**enum com::diag::amigo::LC100Base::State** [protected, inherited]

States in which the push down automaton may be. DATA is the start state. There is no end state. All of the enumerated values are printable, making it easy to trace the PDA as it executes.

Definition at line 109 of file LC100.h.

## Constructor & Destructor Documentation

**template<byte \_COLS\_, byte \_ROWS\_> com::diag::amigo::LC100<\_COLS\_, \_ROWS\_>::LC100**  
(Display & display, boolean sample = false, boolean debug = false, int ms = 0) [inline]

Ctor. **Parameters:**

*display* refers to the object that implements the **Display** interface.

*sample* if true causes the joystick value to be returned continuously as long as a button is pressed; if false, the joystick value is returned intermittently when the button is released.

*debug* enables debug output if debugging was compiled in.

*ms* is the number of milliseconds to delay between each individual update of the display, which can make debugging a lot easier.

Definition at line 390 of file LC100.h.

## Member Function Documentation

**void com::diag::amigo::LC100Base::begin ()** [inherited]

Initialize this object. This only needs to be called once.

Definition at line 724 of file LC100.cpp.

References com::diag::amigo::Display::begin(), com::diag::amigo::LC100Base::clear(), com::diag::amigo::LC100Base::COLS, and com::diag::amigo::LC100Base::ROWS.

**void com::diag::amigo::LC100Base::down ()** [inherited]

Scroll the scroll area down, leaving the cursor placed at a blank line at the top of the scroll area. By default, the scroll area is the entire display.

Definition at line 176 of file LC100.cpp.

References com::diag::amigo::Display::clear(), com::diag::amigo::LC100Base::index(), com::diag::amigo::LC100Base::ROWS, com::diag::amigo::LC100Base::setCursor(), com::diag::amigo::Display::setCursor(), and com::diag::amigo::Display::write().

Referenced by com::diag::amigo::LC100Base::write().

**size\_t com::diag::amigo::LC100Base::emit (uint8\_t ch)** [protected, inherited]

Emit a character, which both displays it on the actual display and stores it appropriately in the frame buffer. The returned value is the number of characters processed, which is nominally one but may be zero if the character is somehow invalid or negative if an error occurred.

**Parameters:**

*ch* is the character to be emitted.

**Returns:**

the number of characters emitted.

Definition at line 69 of file LC100.cpp.

References com::diag::amigo::LC100Base::COLS, com::diag::amigo::LC100Base::index(), com::diag::amigo::LC100Base::ROWS, and com::diag::amigo::Display::write().

Referenced by com::diag::amigo::LC100Base::erase(), com::diag::amigo::LC100Base::frame(), and com::diag::amigo::LC100Base::write().

**void com::diag::amigo::LC100Base::erase (byte colFrom, byte rowFrom, byte colTo, byte rowTo)**  
[inherited]

Erase a square bordered by the specified upper left and lower right corners inclusive. Erasing is done by writing blanks into the display left to right, top to bottom. The cursor is placed back in its original position.

**Parameters:**

*colFrom* is the zero-based column of the upper left corner of the erased square.  
*rowFrom* is the zero-based row of the upper left corner of the erased square.  
*colTo* is the zero-based column of the lower right corner of the erased square.  
*rowTo* is the zero-based row of the lower right corner of the erased square.

Definition at line 109 of file LC100.cpp.

References com::diag::amigo::LC100Base::COLS, com::diag::amigo::LC100Base::emit(), com::diag::amigo::LC100Base::index(), com::diag::amigo::LC100Base::ROWS, and com::diag::amigo::LC100Base::setCursor().

Referenced by com::diag::amigo::LC100Base::frame(), and com::diag::amigo::LC100Base::write().

**size\_t com::diag::amigo::LC100Base::frame (uint8\_t ch)** [protected, inherited]

Frame a character appropriately by dealing with line wrapping (if enabled) and screen scrolling (ditto).

**Parameters:**

*ch* is the character to be framed.

**Returns:**

the number of characters framed.

Definition at line 144 of file LC100.cpp.

References com::diag::amigo::LC100Base::COLS, com::diag::amigo::LC100Base::emit(), com::diag::amigo::LC100Base::erase(), com::diag::amigo::LC100Base::index(), com::diag::amigo::LC100Base::ROWS, com::diag::amigo::LC100Base::setCursor(), and com::diag::amigo::LC100Base::up().

Referenced by com::diag::amigo::LC100Base::write().

**byte com::diag::amigo::LC100Base::index (byte row)** [protected, inherited]

Convert a zero-based row value into an array index. **Parameters:**

*row* is the zero-based row value.

**Returns:**

an array index.

Definition at line 35 of file LC100.cpp.

References com::diag::amigo::LC100Base::ROWS.

**byte com::diag::amigo::LC100Base::index (byte col, byte row)** [protected, inherited]

Convert a zero-based column and row coordinate into a frame buffer index. **Parameters:**

*col* is the zero-based column value.

*row* is the zero-based row value.

**Returns:**

a frame buffer index.

Definition at line 39 of file LC100.cpp.

References com::diag::amigo::LC100Base::COLS.

Referenced by com::diag::amigo::LC100Base::down(), com::diag::amigo::LC100Base::emit(), com::diag::amigo::LC100Base::erase(), com::diag::amigo::LC100Base::frame(), com::diag::amigo::LC100Base::up(), and com::diag::amigo::LC100Base::write().

**byte com::diag::amigo::LC100Base::one (byte value)** [protected, inherited]

Convert a one-based column or row value into a zero-based column or row value. **Parameters:**

*value* is the one-based value.

**Returns:**

the zero-based value.

Definition at line 43 of file LC100.cpp.

Referenced by com::diag::amigo::LC100Base::write().

**int com::diag::amigo::LC100Base::read (char \* buffer) [inherited]**

Read the current joy stick stimulus into a buffer of at least four bytes in length. If the joy stick is indicating movement, the buffer will contain a VT100 (ANSI) arrow escape sequence indicating the direction of movement. The buffer will be nul-terminated, allowing it to be written directly to the serial port. Return the number of bytes placed into the buffer, zero indicating that there is no joy stick stimulus at this time.

**Parameters:**

*buffer* points to a buffer of at least four bytes in length.

**Returns:**

the number of bytes placed in the buffer.

Definition at line 667 of file LC100.cpp.

References com::diag::amigo::Display::read().

**void com::diag::amigo::LC100Base::setCursor (byte col, byte row) [inherited]**

Place the cursor at the specified position. The column and row coordinates are taken modulo of the actual display dimensions.

**Parameters:**

*col* is the zero-based column number.

*row* is the zero-based row number.

Definition at line 51 of file LC100.cpp.

References com::diag::amigo::LC100Base::COLS, com::diag::amigo::LC100Base::ROWS, and com::diag::amigo::Display::setCursor().

Referenced by com::diag::amigo::LC100Base::clear(), com::diag::amigo::LC100Base::down(), com::diag::amigo::LC100Base::erase(), com::diag::amigo::LC100Base::frame(), com::diag::amigo::LC100Base::up(), and com::diag::amigo::LC100Base::write().

**void com::diag::amigo::LC100Base::up () [inherited]**

Scroll the scroll area up, leaving the cursor placed at a blank line at the bottom of the scroll area. By default, the scroll area is the entire display.

Definition at line 197 of file LC100.cpp.

References com::diag::amigo::Display::clear(), com::diag::amigo::LC100Base::index(), com::diag::amigo::LC100Base::ROWS, com::diag::amigo::LC100Base::setCursor(), com::diag::amigo::Display::setCursor(), and com::diag::amigo::Display::write().

Referenced by com::diag::amigo::LC100Base::frame(), and com::diag::amigo::LC100Base::write().

**size\_t com::diag::amigo::LC100Base::write (uint8\_t ch) [inherited]**

Write the current character to the display. This character may be part of a VT100 (ANSI) escape sequence, in which case it is not actually written to the display, but will be executed once the complete escape sequence is captured.

**Parameters:**

*ch* is the character to be written to the display.

**Returns:**

the number of characters processed, which could be zero if the character is somehow invalid in the context of the current escape sequence, or negative is an error occurred.

Definition at line 246 of file LC100.cpp.

References com::diag::amigo::LC100Base::clear(), com::diag::amigo::LC100Base::COLS, com::diag::amigo::LC100Base::down(), com::diag::amigo::LC100Base::emit(), com::diag::amigo::LC100Base::erase(), com::diag::amigo::LC100Base::frame(), com::diag::amigo::Display::home(), com::diag::amigo::LC100Base::index(), com::diag::amigo::LC100Base::one(), com::diag::amigo::LC100Base::ROWS, com::diag::amigo::LC100Base::setCursor(), and com::diag::amigo::LC100Base::up().

**Author**

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**NAME**

com::diag::amigo::LC100Base –

This is the common base (super) class for the **LC100** software that does all of the heavy lifting for any **LC100** template instantiation regardless of the display dimensions.

**SYNOPSIS**

```
#include <LC100.h>
```

Inherited by **com::diag::amigo::LC100<\_COLS\_,\_ROWS\_>**.

**Public Types**

enum **Ascii**

**Public Member Functions**

**LC100Base** (**Display &display**, byte cols, byte rows, byte \*lineLengthArray, uint8\_t \*frameBufferArray, boolean \*tabSettingsArray, boolean sample=false, boolean debug=false, int ms=0)

virtual **~LC100Base** ()

void **begin** ()

void **setCursor** (byte col, byte row)

void **home** ()

void **down** ()

void **up** ()

void **erase** (byte colFrom, byte rowFrom, byte colTo, byte rowTo)

void **clear** ()

int **read** (char \*buffer)

size\_t **write** (uint8\_t ch)

**Public Attributes**

const byte **COLS**

const byte **ROWS**

**Protected Types**

enum **Constant**

enum **State**

enum **Action**

**Protected Member Functions**

byte **index** (byte col, byte row)

byte **index** (byte row)

size\_t **emit** (uint8\_t ch)

size\_t **frame** (uint8\_t ch)

byte **one** (byte value)

**Detailed Description**

This is the common base (super) class for the **LC100** software that does all of the heavy lifting for any **LC100** template instantiation regardless of the display dimensions.

It derives from (extends) the Arduino Print class so that any of the usual Print methods can be used by an application. This class is not intended to be used by itself, although there is no reason why you couldn't do so.

Definition at line 91 of file LC100.h.

**Member Enumeration Documentation**

enum **com::diag::amigo::LC100Base::Action** [protected]

Actions which the push down automaton may execute. CONSUMED is the default action. All of the enumerated values are printable, making it easy to trace the PDA as it executes.

Definition at line 124 of file LC100.h.

**enum com::diag::amigo::LC100Base::State** [protected]

States in which the push down automaton may be. DATA is the start state. There is no end state. All of the enumerated values are printable, making it easy to trace the PDA as it executes.

Definition at line 109 of file LC100.h.

## Constructor & Destructor Documentation

**com::diag::amigo::LC100Base::LC100Base (Display & display, byte cols, byte rows, byte \* lineLengthArray, uint8\_t \* frameBufferArray, boolean \* tabSettingsArray, boolean sample = false, boolean debug = false, int ms = 0)** [inline]

Ctor. **Parameters:**

*display* refers to the object that implements the **Display** interface.

*cols* is the number of columns in the display.

*rows* is the number of rows in the display.

*lineLengthArray* points to an array of dimension [rows] which will be used to store the length in bytes of the displayed line in each row of the display.

*frameBufferArray* points to an array of dimensions [rows][cols] that is used as a frame buffer to support scrolling.

*tabSettingsArray* points to an array of dimension [cols] that is used to keep track of the tab settings for the display.

*sample* if true causes the joystick value to be returned continuously as long as a button is pressed; if false, the joystick value is returned intermittently when the button is released.

*debug* enables debug output if debugging was compiled in.

*ms* is the number of milliseconds to delay between each individual update of the display, which can make debugging a lot easier.

Definition at line 162 of file LC100.h.

## Member Function Documentation

**void com::diag::amigo::LC100Base::begin ()**

Initialize this object. This only needs to be called once.

Definition at line 724 of file LC100.cpp.

References com::diag::amigo::Display::begin(), clear(), COLS, and ROWS.

**void com::diag::amigo::LC100Base::down ()**

Scroll the scroll area down, leaving the cursor placed at a blank line at the top of the scroll area. By default, the scroll area is the entire display.

Definition at line 176 of file LC100.cpp.

References com::diag::amigo::Display::clear(), index(), ROWS, setCursor(), com::diag::amigo::Display::setCursor(), and com::diag::amigo::Display::write().

Referenced by write().

**size\_t com::diag::amigo::LC100Base::emit (uint8\_t ch)** [protected]

Emit a character, which both displays it on the actual display and stores it appropriately in the frame buffer. The returned value is the number of characters processed, which is nominally one but may be zero if the character is somehow invalid or negative if an error occurred.

**Parameters:**

*ch* is the character to be emitted.

**Returns:**

the number of characters emitted.

Definition at line 69 of file LC100.cpp.

References COLS, index(), ROWS, and com::diag::amigo::Display::write().

Referenced by erase(), frame(), and write().



**void com::diag::amigo::LC100Base::erase (byte colFrom, byte rowFrom, byte colTo, byte rowTo)**

Erase a square bordered by the specified upper left and lower right corners inclusive. Erasing is done by writing blanks into the display left to right, top to bottom. The cursor is placed back in its original position.

**Parameters:**

*colFrom* is the zero-based column of the upper left corner of the erased square.

*rowFrom* is the zero-based row of the upper left corner of the erased square.

*colTo* is the zero-based column of the lower right corner of the erased square.

*rowTo* is the zero-based row of the lower right corner of the erased square.

Definition at line 109 of file LC100.cpp.

References COLS, emit(), index(), ROWS, and setCursor().

Referenced by frame(), and write().

**size\_t com::diag::amigo::LC100Base::frame (uint8\_t ch) [protected]**

Frame a character appropriately by dealing with line wrapping (if enabled) and screen scrolling (ditto).

**Parameters:**

*ch* is the character to be framed.

**Returns:**

the number of characters framed.

Definition at line 144 of file LC100.cpp.

References COLS, emit(), erase(), index(), ROWS, setCursor(), and up().

Referenced by write().

**byte com::diag::amigo::LC100Base::index (byte row) [protected]**

Convert a zero-based row value into an array index. **Parameters:**

*row* is the zero-based row value.

**Returns:**

an array index.

Definition at line 35 of file LC100.cpp.

References ROWS.

**byte com::diag::amigo::LC100Base::index (byte col, byte row) [protected]**

Convert a zero-based column and row coordinate into a frame buffer index. **Parameters:**

*col* is the zero-based column value.

*row* is the zero-based row value.

**Returns:**

a frame buffer index.

Definition at line 39 of file LC100.cpp.

References COLS.

Referenced by down(), emit(), erase(), frame(), up(), and write().

**byte com::diag::amigo::LC100Base::one (byte value) [protected]**

Convert a one-based column or row value into a zero-based column or row value. **Parameters:**

*value* is the one-based value.

**Returns:**

the zero-based value.

Definition at line 43 of file LC100.cpp.

Referenced by write().

**int com::diag::amigo::LC100Base::read (char \* buffer)**

Read the current joy stick stimulus into a buffer of at least four bytes in length. If the joy stick is indicating movement, the buffer will contain a VT100 (ANSI) arrow escape sequence indicating the direction of movement. The buffer will be nul-terminated, allowing it to be written directly to the serial port. Return the number of bytes placed into the buffer, zero indicating that there is no joy stick stimulus at this time.

**Parameters:**

*buffer* points to a buffer of at least four bytes in length.

**Returns:**

the number of bytes placed in the buffer.

Definition at line 667 of file LC100.cpp.

References com::diag::amigo::Display::read().

**void com::diag::amigo::LC100Base::setCursor (byte col, byte row)**

Place the cursor at the specified position. The column and row coordinates are taken modulo of the actual display dimensions.

**Parameters:**

*col* is the zero-based column number.

*row* is the zero-based row number.

Definition at line 51 of file LC100.cpp.

References COLS, ROWS, and com::diag::amigo::Display::setCursor().

Referenced by clear(), down(), erase(), frame(), up(), and write().

**void com::diag::amigo::LC100Base::up ()**

Scroll the scroll area up, leaving the cursor placed at a blank line at the bottom of the scroll area. By default, the scroll area is the entire display.

Definition at line 197 of file LC100.cpp.

References com::diag::amigo::Display::clear(), index(), ROWS, setCursor(), com::diag::amigo::Display::setCursor(), and com::diag::amigo::Display::write().

Referenced by frame(), and write().

**size\_t com::diag::amigo::LC100Base::write (uint8\_t ch)**

Write the current character to the display. This character may be part of a VT100 (ANSI) escape sequence, in which case it is not actually written to the display, but will be executed once the complete escape sequence is captured.

**Parameters:**

*ch* is the character to be written to the display.

**Returns:**

the number of characters processed, which could be zero if the character is somehow invalid in the context of the current escape sequence, or negative is an error occurred.

Definition at line 246 of file LC100.cpp.

References clear(), COLS, down(), emit(), erase(), frame(), com::diag::amigo::Display::home(), index(), one(), ROWS, setCursor(), and up().

**Author**

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