

Use of the PIC serial board in your individual and group projects.

The PIC serial board supports several capabilities which you may find useful in creating robust and effective projects. Its capabilities include:

- 3 analog values which consist of single turn pots with a scale of 0-255.
- 13 keys that can be used to simulate binary inputs.
- 8 led's that can be used to demonstrate binary outputs
- A 32 character LCD display for textual output.

To use each of these functions, the following list of Operations is provided.

getAnalogValues (int i)

Returns the value of each of the 3 analog values on the PIC board.

Return type is 'char'

Args:

'int' i (having a range of 0-2)

The format of the 3 analog values is a number on the range 0 – 255.

getKeypadValues (int i)

Returns the value of the Keypad character.

Return type is 'char'

Args:

'int' i (having a range of 0-1)

The format of the characters is as follows:

Character[0]

Bit 0	Bit 1	Bit 2	Bit 3	Bit 4	Bit 5	Bit 6	Bit 7
n/a	Key 1	Key 2	Key 3	Enter	Key 4	Key 5	Key 6

Character[1]

Bit 0	Bit 1	Bit 2	Bit 3	Bit 4	Bit 5	Bit 6	Bit 7
n/a	Key 7	Key 8	Key 9	unused	Key .	Key 0	CHS

getKeypadStatus (int i)

Returns and clears the change of state status of the Keypad character.

Return type is 'char'

Args:

'int' i (having a range of 0-1)

The format of the characters is the same as that of **getKeypadValues**:

setDisplayChar (int I, char p_Display)

Allows the user to set each element of the 32 character Display on the PIC board.

Return type is 'void'

Args:

'int' i1 → the index of the display character to set. 0-31

'char' p_Display → the character in ASCII* that is displayed.

The display character set is described in: [PICserialDisplayCharacters.pdf](#)

setLeds (char p_leds)

Allows the user to set the 8 led's on the PIC board.

Return type is 'void'

Args:

'char' p_leds → the 8 element led display, each bit is treated as one of the 8 led's.