

Sample Initialization Code for Each Character Module

16x1 Character Modules:

Following the steps below will produce the message "16X1 LCD MODULE" on your display:

- Set RS = 0, R/W = 0; then send hex codes 38, 38, 06, 0E, 01, 80.
(Note that "80" is the home position of the DD RAM)
- Set RS = 1, R/W = 0; then send hex codes 31, 36, 58, 31, 20, 20, 4C, 43.
- Set RS = 0, R/W = 0; then send hex code C0 to start from the ninth character.
- Set RS = 1, R/W = 0; then send hex codes 44, 20, 4D, 4F, 44, 55, 4C, 45.

Note: The 16x1 character module is initialized as a two line display, because of the absence of a LCD driver. You must address the ninth character with "C0" as you would the first position of the second line in a two line display.

40x4 Character Modules:

Following the steps below will produce the message

"ONE", "TWO", "THREE", "FOUR" on each line of your display:

- Set RS = 0, R/W = 0; then send hex codes 38, 38, 06, 0E, 01, 80 by toggling E1 & E2.
- Set RS = 1, R/W = 0; then send hex codes 4F, 4E, 45 by toggling E1.
- Set RS = 0, R/W = 0; then send hex code C0 by toggling E1.
- Set RS = 1, R/W = 0; then send hex codes 54, 57, 4F by toggling E1.
- Set RS = 1, R/W = 0; then send hex codes 45, 48, 52, 45, 45 by toggling E2.
- Set RS = 0, R/W = 0; then send hex code C0 by toggling E2.
- Set RS = 1, R/W = 0; then send hex codes 46, 4F, 55, 52 by toggling E2.

Note that the 40x4 character module has two controllers: E1 for lines 1 & 2, and E2 for lines 3 & 4. Initialization must be done for both E1 and E2.

All Other Character Modules:

Following the steps below will produce the message

"THIS IS MY LCD MODULE" on your display:

- Set RS = 0, R/W = 0; then send hex codes 38, 38, 06, 0E, 01, 80.
(Note that "80" is the home position of the DD RAM)
- Set RS = 1, R/W = 0; then send hex codes 54, 48, 49, 53, 20, 49, 53, 20, 4D, 59.
- Set RS = 0, R/W = 0; then send hex code C0 to start from the beginning of the second line.
- Set RS = 1, R/W = 0; then send hex codes 4C, 43, 44, 20, 4D, 4F, 44, 55, 4C, 45.