### MIOS DIN/DOUT Pin Numbers

Sometimes the pin numbers of special DINs or DOUTs can be specified in the main.asm or setup_*.asm file of a MIOS application.

Examples:

```
#define DEFAULT_MIDI_RX_LED 0x40        ; DOUT SR#9, pin D0
#define DEFAULT_MIDI_TX_LED 0x41        ; DOUT SR#9, pin D1
```

or

```
#define DEFAULT_DIN_MENU_EXEC         7       ; menu exec button assigned to
DIN pin #7
#define DEFAULT_DIN_MENU_SNAPSHOT     6       ; menu snapshot button
assigned to DIN pin #4
#define DEFAULT_DIN_MENU_RIGHT        5       ; NOT USED - overlayed by
datawheel
#define DEFAULT_DIN_MENU_LEFT         4       ; NOT USED - overlayed by
datawheel
```

or

```
       ;;         SR  Pin  Mode
        ENC_ENTRY  5,  0,  MIOS_ENC_MODE_NON_DETENTED   ; V-Pot 1
        ENC_ENTRY  5,  2,  MIOS_ENC_MODE_NON_DETENTED   ; V-Pot 2
        ENC_ENTRY  5,  4,  MIOS_ENC_MODE_NON_DETENTED   ; V-Pot 3
        ENC_ENTRY  5,  6,  MIOS_ENC_MODE_NON_DETENTED   ; V-Pot 4
```

The following table should give you a quick overview over the numbers. Please bear in mind that we are sometimes counting from 0, and sometimes from 1.

Means: sometimes the first pin or shiftregister has number 0, sometimes it has number 1 - thats always an issue, because programmer mostly prefer to count from 0, users want to count from 1 - it's a bit of a mess! Forgive me! 

In the meantime I've tried to make the setup more consistent. Shiftregisters are always counted from 1, and pins are always counted from 0

Ok, here the table:

| Shift Register | SR number | Pin Name | Pin Number | Hex number |
|---|---|---|---|---|
| first | 1 | D0 | 0 | 0x00 |
| first | 1 | D1 | 1 | 0x01 |
| first | 1 | D2 | 2 | 0x02 |
| first | 1 | D3 | 3 | 0x03 |
| first | 1 | D4 | 4 | 0x04 |
| first | 1 | D5 | 5 | 0x05 |
| first | 1 | D6 | 6 | 0x06 |

| Shift Register | SR number | Pin Name | Pin Number | Hex number |
|---|---|---|---|---|
| first | 1 | D7 | 7 | 0x07 |
| second | 2 | D0 | 8 | 0x08 |
| second | 2 | D1 | 9 | 0x09 |
| second | 2 | D2 | 10 | 0x0a |
| second | 2 | D3 | 11 | 0x0b |
| second | 2 | D4 | 12 | 0x0c |
| second | 2 | D5 | 13 | 0x0d |
| second | 2 | D6 | 14 | 0x0e |
| second | 2 | D7 | 15 | 0x0f |
| third | 3 | D0 | 16 | 0x10 |
| third | 3 | D1 | 17 | 0x11 |
| third | 3 | D2 | 18 | 0x12 |
| third | 3 | D3 | 19 | 0x13 |
| third | 3 | D4 | 20 | 0x14 |
| third | 3 | D5 | 21 | 0x15 |
| third | 3 | D6 | 22 | 0x16 |
| third | 3 | D7 | 23 | 0x17 |
| fourth | 4 | D0 | 24 | 0x18 |
| fourth | 4 | D1 | 25 | 0x19 |
| fourth | 4 | D2 | 26 | 0x1a |
| fourth | 4 | D3 | 27 | 0x1b |
| fourth | 4 | D4 | 28 | 0x1c |
| fourth | 4 | D5 | 29 | 0x1d |
| fourth | 4 | D6 | 30 | 0x1e |
| fourth | 4 | D7 | 31 | 0x1f |
| fifth | 5 | D0 | 32 | 0x20 |
| fifth | 5 | D1 | 33 | 0x21 |
| fifth | 5 | D2 | 34 | 0x22 |
| fifth | 5 | D3 | 35 | 0x23 |
| fifth | 5 | D4 | 36 | 0x24 |
| fifth | 5 | D5 | 37 | 0x25 |
| fifth | 5 | D6 | 38 | 0x26 |
| fifth | 5 | D7 | 39 | 0x27 |
| sixth | 6 | D0 | 40 | 0x28 |
| sixth | 6 | D1 | 41 | 0x29 |
| sixth | 6 | D2 | 42 | 0x2a |
| sixth | 6 | D3 | 43 | 0x2b |
| sixth | 6 | D4 | 44 | 0x2c |
| sixth | 6 | D5 | 45 | 0x2d |
| sixth | 6 | D6 | 46 | 0x2e |
| sixth | 6 | D7 | 47 | 0x2f |
| seventh | 7 | D0 | 48 | 0x30 |
| seventh | 7 | D1 | 49 | 0x31 |
| seventh | 7 | D2 | 50 | 0x32 |

| Shift Register | SR number | Pin Name | Pin Number | Hex number |
|---|---|---|---|---|
| seventh | 7 | D3 | 51 | 0x33 |
| seventh | 7 | D4 | 52 | 0x34 |
| seventh | 7 | D5 | 53 | 0x35 |
| seventh | 7 | D6 | 54 | 0x36 |
| seventh | 7 | D7 | 55 | 0x37 |
| eighth | 8 | D0 | 56 | 0x38 |
| eighth | 8 | D1 | 57 | 0x39 |
| eighth | 8 | D2 | 58 | 0x3a |
| eighth | 8 | D3 | 59 | 0x3b |
| eighth | 8 | D4 | 60 | 0x3c |
| eighth | 8 | D5 | 61 | 0x3d |
| eighth | 8 | D6 | 62 | 0x3e |
| eighth | 8 | D7 | 63 | 0x3f |
| ninth | 9 | D0 | 64 | 0x40 |
| ninth | 9 | D1 | 65 | 0x41 |
| ninth | 9 | D2 | 66 | 0x42 |
| ninth | 9 | D3 | 67 | 0x43 |
| ninth | 9 | D4 | 68 | 0x44 |
| ninth | 9 | D5 | 69 | 0x45 |
| ninth | 9 | D6 | 70 | 0x46 |
| ninth | 9 | D7 | 71 | 0x47 |
| tenth | 10 | D0 | 72 | 0x48 |
| tenth | 10 | D1 | 73 | 0x49 |
| tenth | 10 | D2 | 74 | 0x4a |
| tenth | 10 | D3 | 75 | 0x4b |
| tenth | 10 | D4 | 76 | 0x4c |
| tenth | 10 | D5 | 77 | 0x4d |
| tenth | 10 | D6 | 78 | 0x4e |
| tenth | 10 | D7 | 79 | 0x4f |
| eleventh | 11 | D0 | 80 | 0x50 |
| eleventh | 11 | D1 | 81 | 0x51 |
| eleventh | 11 | D2 | 82 | 0x52 |
| eleventh | 11 | D3 | 83 | 0x53 |
| eleventh | 11 | D4 | 84 | 0x54 |
| eleventh | 11 | D5 | 85 | 0x55 |
| eleventh | 11 | D6 | 86 | 0x56 |
| eleventh | 11 | D7 | 87 | 0x57 |
| twelfth | 12 | D0 | 88 | 0x58 |
| twelfth | 12 | D1 | 89 | 0x59 |
| twelfth | 12 | D2 | 90 | 0x5a |
| twelfth | 12 | D3 | 91 | 0x5b |
| twelfth | 12 | D4 | 92 | 0x5c |
| twelfth | 12 | D5 | 93 | 0x5d |
| twelfth | 12 | D6 | 94 | 0x5e |

| Shift Register | SR number | Pin Name | Pin Number | Hex number |
|---|---|---|---|---|
| twelfth | 12 | D7 | 95 | 0x5f |
| thirteenth | 13 | D0 | 96 | 0x60 |
| thirteenth | 13 | D1 | 97 | 0x61 |
| thirteenth | 13 | D2 | 98 | 0x62 |
| thirteenth | 13 | D3 | 99 | 0x63 |
| thirteenth | 13 | D4 | 100 | 0x64 |
| thirteenth | 13 | D5 | 101 | 0x65 |
| thirteenth | 13 | D6 | 102 | 0x66 |
| thirteenth | 13 | D7 | 103 | 0x67 |
| fourteenth | 14 | D0 | 104 | 0x68 |
| fourteenth | 14 | D1 | 105 | 0x69 |
| fourteenth | 14 | D2 | 106 | 0x6a |
| fourteenth | 14 | D3 | 107 | 0x6b |
| fourteenth | 14 | D4 | 108 | 0x6c |
| fourteenth | 14 | D5 | 109 | 0x6d |
| fourteenth | 14 | D6 | 110 | 0x6e |
| fourteenth | 14 | D7 | 111 | 0x6f |
| fifteenth | 15 | D0 | 112 | 0x70 |
| fifteenth | 15 | D1 | 113 | 0x71 |
| fifteenth | 15 | D2 | 114 | 0x72 |
| fifteenth | 15 | D3 | 115 | 0x73 |
| fifteenth | 15 | D4 | 116 | 0x74 |
| fifteenth | 15 | D5 | 117 | 0x75 |
| fifteenth | 15 | D6 | 118 | 0x76 |
| fifteenth | 15 | D7 | 119 | 0x77 |
| sixteenth | 16 | D0 | 120 | 0x78 |
| sixteenth | 16 | D1 | 121 | 0x79 |
| sixteenth | 16 | D2 | 122 | 0x7a |
| sixteenth | 16 | D3 | 123 | 0x7b |
| sixteenth | 16 | D4 | 124 | 0x7c |
| sixteenth | 16 | D5 | 125 | 0x7d |
| sixteenth | 16 | D6 | 126 | 0x7e |
| sixteenth | 16 | D7 | 127 | 0x7f |

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Last update: **2008/11/23 15:02**