

## Cell Flags

The flag next to each cell is a byte, represented in hex format. The hex value will indicate which bits are set in the byte. The first bit is the least significant bit.

| Bit | Meaning                          |
|-----|----------------------------------|
| 0   | Cell is shunting current         |
| 1-2 | Something wrong with cell module |
| 3   | Transmission problem             |
| 4   | Cell successfully polled         |
| 5   | Bad temperature measurement      |
| 6-8 | Unused                           |

In normal operation, users will see 0x10 (cell polled, not shunting), and 0x11 (cell polled, shunting).

## Master Flags

The flags at the bottom of each spew iteration are as follows:

The flags following "C:" don't mean anything

The flags following "F:" are in the form XXXX->YYYY, and represent the current 16 bit hex status word and the new 16 bit hex status word. In other words current->new. The constants OV1/OV2/UV1/UV2/UV3/UT/OT1/OT2 are as indicated in the manual.

| Bit   | Meaning                                |
|-------|--|
| 0     | A cell voltage is greater than OV1     |
| 1     | A cell voltage is greater than OV2     |
| 2-3   | Unused                                 |
| 4     | A cell voltage is lower than UV1       |
| 5     | A cell voltage is lower than UV2       |
| 6     | A cell voltage is lower than UV3       |
| 7     | Unused                                 |
| 8     | A cell temperature is lower than UT    |
| 9     | A cell temperature is greater than OT1 |
| 10    | A cell temperature is greater than OT2 |
| 11    | Unused                                 |
| 12-15 | Various errors                         |

The flags following "E:" are of the form XX->YY->YY

These bytes represent enabled relays. XX represents the currently enabled relays. The second and third bytes (YY) are the same and represent the relays about to be enabled.

| Bit | Meaning                 |
|-----|-------------------------|
| 0   | Discharge relay enabled |
| 2   | Charge relay enabled    |
| 4   | Field relay enabled     |

We mostly use this information for debugging purposes, and we usually don't think it's necessary to pass this on to general consumers, which is why it is not in our manual.