

Table 1: Summary of *JR3* DSP Data Locations

| | 0x00 | 0x01 | 0x02 | 0x03 | 0x04 | 0x05 | 0x06 | 0x07 |
|------|-----------|-----------|-----------|-----------|------------|-----------|---------|------------|
| 0x00 | ch0time | ch0data | | | ch1time | ch1data | | |
| 0x08 | ch2time | ch2data | | | ch3time | ch3data | | |
| 0x38 | chEtime | chEdata | | | chFtime | chFdata | | |
| 0x40 | 'C' | 'o' | 'p' | 'y' | 'r' | 'i' | 'g' | 'h' |
| 0x48 | 't' | ' ' | 'J' | 'R' | '3' | ' ' | ' ' | 'l' |
| 0x50 | 'n' | 'c' | ' ' | '1' | '9' | '9' | '4' | 0 |
| 0x58 | | | | | | | | |
| 0x60 | shunt fx | shunt fy | shunt fz | shunt mx | shunt my | shunt mz | | |
| 0x68 | def fs fx | def fs fy | def fs fz | def fs mx | def fs my | def fs mz | | load env # |
| 0x70 | min fs fx | min fs fy | min fs fz | min fs mx | min fs my | min fs mz | | xForm # |
| 0x78 | max fs fx | max fs fy | max fs fz | max fs mx | max fs my | max fs mz | | peak addr |
| 0x80 | fs fx | fs fy | fs fz | fs mx | fs my | fs mz | fs v1 | fs v2 |
| 0x88 | ofs fx | ofs fy | ofs fz | ofs mx | ofs my | ofs mz | ofs # | vect axes |
| 0x90 | f0 fx | f0 fy | f0 fz | f0 mx | f0 my | f0 mz | f0 v1 | f0 v2 |
| 0x98 | f1 fx | f1 fy | f1 fz | f1 mx | f1 my | f1 mz | f1 v1 | f1 v2 |
| 0xa0 | f2 fx | f2 fy | f2 fz | f2 mx | f2 my | f2 mz | f2 v1 | f2 v2 |
| 0xa8 | f3 fx | f3 fy | f3 fz | f3 mx | f3 my | f3 mz | f3 v1 | f3 v2 |
| 0xb0 | f4 fx | f4 fy | f4 fz | f4 mx | f4 my | f4 mz | f4 v1 | f4 v2 |
| 0xb8 | f5 fx | f5 fy | f5 fz | f5 mx | f5 my | f5 mz | f5 v1 | f5 v2 |
| 0xc0 | f6 fx | f6 fy | f6 fz | f6 mx | f6 my | f6 mz | f6 v1 | f6 v2 |
| 0xc8 | rate fx | rate fy | rate fz | rate mx | rate my | rate mz | rate v1 | rate v2 |
| 0xd0 | min fx | min fy | min fz | min mx | min my | min mz | min v1 | min v2 |
| 0xd8 | max fx | max fy | max fz | max mx | max my | max mz | max v1 | max v2 |
| 0xe0 | near sat | sat | rate addr | rate div | rate count | comm 2 | comm 1 | comm 0 |
| 0xe8 | count 1 | count 2 | count 3 | count 4 | count 5 | count 6 | errors | count x |
| 0xf0 | warning | error | threshold | crc | rom ver # | ver no | ver day | ver year |
| 0xf8 | serial | model | cal day | cal year | units | bits | chans | thickness |

0x100-0x1ff - Load envelope table (threshold monitoring), 16 entries

0x200-0x2ff - Transform table (translations and rotations), 16 entries

Description of table entries, see text for full description and missing entries:

| | |
|---------------------------|---|
| ch0time, ch0data | time last data for channel 0 was received, last data received for raw channel 0 |
| shunt fx,... | shunt reading for fx channel |
| def fs fx,... | sensor default full scale |
| min fs fx,... | min full scale, at which the data will not have the lsb zero filled |
| max fs fx,... | max full scale, at which the data will not have the lsb truncated |
| fs fx,... | full scale value for fx, when fx = 16384 this is the equivalent engineering units |
| load env # | number of currently active load envelope |
| xForm # | number of the transform currently in use |
| peak addr | addr of the data used in finding the maxima and minima |
| ofs fx,... | current offset value for fx |
| ofs # | number of the offset currently in use |
| vect axes | bit map for the axes which are being used for calculating the vectors |
| f0 fx, f0 fy,... | decoupled, unfiltered data |
| f1 fx,... | fx from filter 1 |
| rate fx,... | rate calculation for fx |
| min fx, ..., max fx,... | minimum peak (valley) value for fx, maximum peak value for fx |
| near sat, sat | raw value which sets near sat bit in warning word, and sat bit in the error word |
| rate addr | address of data used for calculating the rate data |
| rate div | rate divisor, the number of samples between rate calculations |
| rate count | this counter counts up to rate div, and then the rates are calculated |
| comm2,... | command word 2, 1 and 0. Area used to send commands to JR3 DSP |
| count1,... | counter for filter #1, 1 count = 1 filter iteration |
| errors | a count of data reception errors |
| warning, error, threshold | warning word, error word, threshold monitoring word (load envelopes) |
| rom ver no | version no. of data stored in sensor EEPROM |
| ver no, ver day | software version # that the JR3 DSP is running, JR3 DSP software release date |
| serial, model | sensor serial number, and sensor model number |
| cal day | last calibration date of the sensor |
| units | engineering units of full scale, 0 is lbs, in-lbs and in*1000, 1 is Newtons, ... |
| bits | number of bits in sensor ADC |
| chans | bit map of channels the sensor is capable of sending |
| thickness | the thickness of the sensor |