Count of previous

Records

Motorola S-record format ready reckoner

Data Records

Termination Records

Header

Record

'8'

'S'

All Bytes (except for the first byte and the two line termination characters) are ASCII Codes of Hexadecimal Digits i.e. they can take on the following values: '0', '1', '2', '3', '4', '5', '6', '7', '8', '9', 'A', 'B', 'C', 'D', 'E', 'F' 0x30 0x31 0x32 0x33 0x34 0x35 0x36 0x37 0x38 0x39 0x41 0x42 0x43 0x44 0x45 0x46 These characters when paired and interpreted as a hexadecimal value, display the count of remaining character pairs in the record. Values range from 0x03 (represented as '0' '3') to 0xFF (represented as 'F' 'F') Carriage Return Record Type: Line Feed '0' or '1' or '2' or '3' or '5' or 17' or 18' or 19' 'S' '\r' '\n' (0x0A) (0x53) Checksum address data type count or 6 or 8 Bytes These characters when paired and interpreted as a hexadecimal value display the least These characters grouped and interpreted as a hexadecimal significant byte of the ones complement of the value, display the address at which the data field is to be These characters when paired and interpreted as sum of the byte values represented by the pairs loaded into memory. The length of the field depends on the hexadecimal values represent the memory loadable data or descriptive information. number of bytes necessary to hold the address. A 2-byte of characters making up the count, the address, address uses 4 characters, a 3-byte address uses 6 and the data fields characters, and a 4-byte address uses 8 characters. Data Possible MOT File Contents 16-bit Address S0 record S0 record S0 record Header: Data S1... S2... S3... 24-bit Address S2... S3... S1... Data: Data S2... S1... S3... numerous numerous numerous 32-bit Address S1 records S2 records S3 records '3' Record count (optional): S5 record S5 record S5 record 16-bit Address S9 record S8 record S7 record Termination: '0' '4' 3 byte 4 byte 2 byte 24-bit Address Addresses Addresses Addresses '5' '0' 32-bit Address Data Field Structure: Count 'S' '0' 'O' Data 'S' '0' '0' '5' 20 bytes: Module Name Record

2 hytes: Version

0-36 bytes: Text Comment