For DIBs loaded in memory, the color table can also consist of 16 bit entries, that constitute indexes to the currently realized palette[[8]](http://en.wikipedia.org/wiki/BMP_file_format#cite_note-BITMAPINFO-8) (an additional level of indirection), instead of explicit RGB color definitions. In all cases, the pixel array must begin at a memory address that is a multiple of 4 bytes.

**Bitmap file header**[[edit](http://en.wikipedia.org/w/index.php?title=BMP_file_format&action=edit&section=4)]

This block of bytes is at the start of the file and is used to identify the file. A typical application reads this block first to ensure that the file is actually a BMP file and that it is not damaged. The first two bytes of the BMP file format are the character 'B' then the character 'M' in 1-byte [ASCII](http://en.wikipedia.org/wiki/ASCII) encoding. All of the integer values are stored in[little-endian](http://en.wikipedia.org/wiki/Little-endian) format (i.e. least-significant byte first).

|  |  |  |
| --- | --- | --- |
| **Offset#** | **Size** | **Purpose** |
| 0 | 2 bytes | the [header field](http://en.wikipedia.org/wiki/Magic_number_(programming)) used to identify the BMP & DIB file is 0x42 0x4D in [hexadecimal](http://en.wikipedia.org/wiki/Hexadecimal), same as BM in ASCII. The following entries are possible:   * **BM** – Windows 3.1x, 95, NT, ... etc. * **BA** – OS/2 struct Bitmap Array * **CI** – OS/2 struct Color Icon * **CP** – OS/2 const Color Pointer * **IC** – OS/2 struct Icon * **PT** – OS/2 Pointer |
| 2 | 4 bytes | the size of the BMP file in bytes |
| 6 | 2 bytes | reserved; actual value depends on the application that creates the image |
| 8 | 2 bytes | reserved; actual value depends on the application that creates the image |
| 10 | 4 bytes | the offset, i.e. starting address, of the byte where the bitmap image data (pixel array) can be found. |

The size value occupies 4 bytes by default. However, with the use of the 4 reserved bytes, this value can occupy 8 bytes (64 bits) while still conforming to the BMPfile header format.