

Format of .EXE file header:

Offset	Size	Description
00h	2 BYTES	.EXE signature, either "MZ" or "ZM" (5A4Dh or 4D5Ah) (see also #01593)
02h	WORD	number of bytes in last 512-byte page of executable
04h	WORD	total number of 512-byte pages in executable (includes any partial last page)
06h	WORD	number of relocation entries
08h	WORD	header size in paragraphs
0Ah	WORD	minimum paragraphs of memory required to allocate in addition to executable's size
0Ch	WORD	maximum paragraphs to allocate in addition to executable's size
0Eh	WORD	initial SS relative to start of executable
10h	WORD	initial SP
12h	WORD	checksum (one's complement of sum of all words in executable)
14h	DWORD	initial CS:IP relative to start of executable
18h	WORD	offset within header of relocation table 40h or greater for new-format (NE,LE,LX,W3,PE,etc.) executable
1Ah	WORD	overlay number (normally 0000h = main program)
---new executable---		
1Ch	4 BYTES	???
20h	WORD	behavior bits
22h	26 BYTES	reserved for additional behavior info
3Ch	DWORD	offset of new executable (NE,LE,etc) header within disk file, or 00000000h if plain MZ executable
---Borland TLINK---		
1Ch	2 BYTES	??? (apparently always 01h 00h)
1Eh	BYTE	signature FBh
1Fh	BYTE	TLINK version (major in high nybble, minor in low nybble)
20h	2 BYTES	??? (v2.0 apparently always 72h 6Ah, v3.0+ seems always 6Ah 72h)
---ARJ self-extracting archive---		
1Ch	4 BYTES	signature "RJSX" (older versions, new signature is "aRJsfx" in the first 1000 bytes of the file)
---LZEXE 0.90 compressed executable---		
1Ch	4 BYTES	signature "LZ09"
---LZEXE 0.91 compressed executable---		
1Ch	4 BYTES	signature "LZ91"
---PKLITE compressed executable---		
1Ch	BYTE	minor version number
1Dh	BYTE	bits 0-3: major version bit 4: extra compression bit 5: huge (multi-segment) file
1Eh	6 BYTES	signature "PKLITE" (followed by copyright message)
---LHarc 1.x self-extracting archive---		
1Ch	4 BYTES	unused???
20h	3 BYTES	jump to start of extraction code
23h	2 BYTES	???
25h	12 BYTES	signature "LHarc's SFX "
---LHA 2.x self-extracting archive---		
1Ch	8 BYTES	???
24h	10 BYTES	signature "LHa's SFX " (v2.10) or "LHA's SFX " (v2.13)
---TopSpeed C 3.0 CRUNCH compressed file---		
1Ch	DWORD	018A0001h
20h	WORD	1565h
---PKARCK 3.5 self-extracting archive---		
1Ch	DWORD	00020001h
20h	WORD	0700h
---BSA (Soviet archiver) self-extracting archive---		
1Ch	WORD	000Fh
1Eh	BYTE	A7h
---LARC self-extracting archive---		
1Ch	4 BYTES	???
20h	11 BYTES	"SFX by LARC "
---LH self-extracting archive---		

```

1Ch  8 BYTES  ???
24h  8 BYTES  "LH's SFX "
---RAR self-extracting archive---
1Ch  4 BYTES  signature "RSFX"
---other linkers---
1Ch   var     optional information
---
```

```

N    N DWORDs relocation items
                each is the segment:offset from start of load image at which
                to add the actual load segment to the indicated WORD
```

Notes: if the word at offset 02h is 4, it should be treated as 00h, since pre-1.10 versions of the MS linker set it that way
 if both minimum and maximum allocation (offset 0Ah/0Ch) are zero, the program is loaded as high in memory as possible (DOS only checks the maximum allocation, however)
 the maximum allocation is set to FFFFh by default
 additional data may be contained in the file beyond the end of the load image described by the .EXE header; this data may be overlays, the actual executable for newer-format executables, or debugging information (see [#01600](#), [#01624](#))
 relocations entries need not be in any particular order, although they are typically stored in order from beginning to end of the load image

SeeAlso: [#01596](#)