

HiWord Obtain most-significant 16 bits of 32-bit operand

#include <ToolUtils.h>

Toolbox Utilities

<u>short</u>	HiWord (<i>theLong</i>);	
<u>long</u>	<i>theLong</i> ;	32-bit source operand
	returns	high-order 16 bits of <i>theLong</i>

HiWord returns the high-order 16-bit word of a 32-bit long value.

theLong is any 32-bit value. It is treated as an unsigned.

Returns: a 16-bit integer; the high word of *theLong* ; i.e., the same value as $((\text{unsigned long})theLong \ \& \ 0xFFFF0000) \gg 16$).

Notes: This function is equivalent to the faster, but less self-documenting:

```
short  theInt;
long   theLong;

theInt = (theLong >> 16 ) & 0xFFFF;
```

If you use this function often, you may wish to create a fast macro; e.g.:

```
#define HiWord(x) ( (unsigned long)x>>16 )
```

LoWord and **HiWord** are handy in manipulating the 32-bit Fixed data type. The high word is the integer portion and the low word is the fractional part.