

## NAME

Pod::Usage, pod2usage() - print a usage message from embedded pod documentation

## SYNOPSIS

```
use Pod::Usage

my $message_text = "This text precedes the usage message.";
my $exit_status  = 2;          ## The exit status to use
my $verbose_level = 0;        ## The verbose level to use
my $filehandle   = \*STDERR;  ## The filehandle to write to

pod2usage($message_text);

pod2usage($exit_status);

pod2usage( { -message => $message_text ,
             -exitval => $exit_status  ,
             -verbose => $verbose_level,
             -output  => $filehandle } );

pod2usage( -msg      => $message_text ,
           -exitval => $exit_status  ,
           -verbose => $verbose_level,
           -output  => $filehandle );

pod2usage( -verbose => 2,
           -noperldoc => 1 )
```

## ARGUMENTS

**pod2usage** should be given either a single argument, or a list of arguments corresponding to an associative array (a "hash"). When a single argument is given, it should correspond to exactly one of the following:

- A string containing the text of a message to print *before* printing the usage message
- A numeric value corresponding to the desired exit status
- A reference to a hash

If more than one argument is given then the entire argument list is assumed to be a hash. If a hash is supplied (either as a reference or as a list) it should contain one or more elements with the following keys:

-message

-msg

The text of a message to print immediately prior to printing the program's usage message.

-exitval

The desired exit status to pass to the **exit()** function. This should be an integer, or else the string "NOEXIT" to indicate that control should simply be returned without terminating the invoking process.

-verbose

The desired level of "verboseness" to use when printing the usage message. If the

corresponding value is 0, then only the "SYNOPSIS" section of the pod documentation is printed. If the corresponding value is 1, then the "SYNOPSIS" section, along with any section entitled "OPTIONS", "ARGUMENTS", or "OPTIONS AND ARGUMENTS" is printed. If the corresponding value is 2 or more then the entire manpage is printed.

The special verbosity level 99 requires to also specify the `-sections` parameter; then these sections are extracted (see *Pod::Select*) and printed.

#### `-sections`

A string representing a selection list for sections to be printed when `-verbose` is set to 99, e.g. "NAME | SYNOPSIS | DESCRIPTION | VERSION".

#### `-output`

A reference to a filehandle, or the pathname of a file to which the usage message should be written. The default is `\*STDERR` unless the exit value is less than 2 (in which case the default is `\*STDOUT`).

#### `-input`

A reference to a filehandle, or the pathname of a file from which the invoking script's pod documentation should be read. It defaults to the file indicated by `$0` (`$PROGRAM_NAME` for users of *English.pm*).

#### `-pathlist`

A list of directory paths. If the input file does not exist, then it will be searched for in the given directory list (in the order the directories appear in the list). It defaults to the list of directories implied by `$ENV{PATH}`. The list may be specified either by a reference to an array, or by a string of directory paths which use the same path separator as `$ENV{PATH}` on your system (e.g., `:` for Unix, `;` for MSWin32 and DOS).

#### `-noperldoc`

By default, `Pod::Usage` will call *perldoc* when `-verbose >= 2` is specified. This does not work well e.g. if the script was packed with *PAR*. The `-noperldoc` option suppresses the external call to *perldoc* and uses the simple text formatter (*Pod::Text*) to output the POD.

## DESCRIPTION

**pod2usage** will print a usage message for the invoking script (using its embedded pod documentation) and then exit the script with the desired exit status. The usage message printed may have any one of three levels of "verboseness": If the verbose level is 0, then only a synopsis is printed. If the verbose level is 1, then the synopsis is printed along with a description (if present) of the command line options and arguments. If the verbose level is 2, then the entire manual page is printed.

Unless they are explicitly specified, the default values for the exit status, verbose level, and output stream to use are determined as follows:

- If neither the exit status nor the verbose level is specified, then the default is to use an exit status of 2 with a verbose level of 0.
- If an exit status *is* specified but the verbose level is *not*, then the verbose level will default to 1 if the exit status is less than 2 and will default to 0 otherwise.
- If an exit status is *not* specified but verbose level *is* given, then the exit status will default to 2 if the verbose level is 0 and will default to 1 otherwise.
- If the exit status used is less than 2, then output is printed on `STDOUT`. Otherwise output is printed on `STDERR`.

Although the above may seem a bit confusing at first, it generally does "the right thing" in most situations. This determination of the default values to use is based upon the following typical Unix conventions:

- An exit status of 0 implies "success". For example, **diff(1)** exits with a status of 0 if the two files have the same contents.
- An exit status of 1 implies possibly abnormal, but non-defective, program termination. For example, **grep(1)** exits with a status of 1 if it did *not* find a matching line for the given regular expression.
- An exit status of 2 or more implies a fatal error. For example, **ls(1)** exits with a status of 2 if you specify an illegal (unknown) option on the command line.
- Usage messages issued as a result of bad command-line syntax should go to `STDERR`. However, usage messages issued due to an explicit request to print usage (like specifying **-help** on the command line) should go to `STDOUT`, just in case the user wants to pipe the output to a pager (such as **more(1)**).
- If program usage has been explicitly requested by the user, it is often desirable to exit with a status of 1 (as opposed to 0) after issuing the user-requested usage message. It is also desirable to give a more verbose description of program usage in this case.

**pod2usage** doesn't force the above conventions upon you, but it will use them by default if you don't expressly tell it to do otherwise. The ability of **pod2usage()** to accept a single number or a string makes it convenient to use as an innocent looking error message handling function:

```
use Pod::Usage;
use Getopt::Long;

## Parse options
GetOptions("help", "man", "flag1") || pod2usage(2);
pod2usage(1) if ($opt_help);
pod2usage(-verbose => 2) if ($opt_man);

## Check for too many filenames
pod2usage("$0: Too many files given.\n") if (@ARGV > 1);
```

Some user's however may feel that the above "economy of expression" is not particularly readable nor consistent and may instead choose to do something more like the following:

```
use Pod::Usage;
use Getopt::Long;

## Parse options
GetOptions("help", "man", "flag1") || pod2usage(-verbose => 0);
pod2usage(-verbose => 1) if ($opt_help);
pod2usage(-verbose => 2) if ($opt_man);

## Check for too many filenames
pod2usage(-verbose => 2, -message => "$0: Too many files given.\n")
    if (@ARGV > 1);
```

As with all things in Perl, *there's more than one way to do it*, and **pod2usage()** adheres to this philosophy. If you are interested in seeing a number of different ways to invoke **pod2usage** (although by no means exhaustive), please refer to *EXAMPLES*.

## EXAMPLES

Each of the following invocations of `pod2usage()` will print just the "SYNOPSIS" section to `STDERR` and will exit with a status of 2:

```
pod2usage();

pod2usage(2);

pod2usage(-verbose => 0);

pod2usage(-exitval => 2);

pod2usage({-exitval => 2, -output => \*STDERR});

pod2usage({-verbose => 0, -output => \*STDERR});

pod2usage(-exitval => 2, -verbose => 0);

pod2usage(-exitval => 2, -verbose => 0, -output => \*STDERR);
```

Each of the following invocations of `pod2usage()` will print a message of "Syntax error." (followed by a newline) to `STDERR`, immediately followed by just the "SYNOPSIS" section (also printed to `STDERR`) and will exit with a status of 2:

```
pod2usage("Syntax error.");

pod2usage(-message => "Syntax error.", -verbose => 0);

pod2usage(-msg => "Syntax error.", -exitval => 2);

pod2usage({-msg => "Syntax error.", -exitval => 2, -output =>
\*STDERR});

pod2usage({-msg => "Syntax error.", -verbose => 0, -output =>
\*STDERR});

pod2usage(-msg => "Syntax error.", -exitval => 2, -verbose => 0);

pod2usage(-message => "Syntax error.",
          -exitval => 2,
          -verbose => 0,
          -output => \*STDERR);
```

Each of the following invocations of `pod2usage()` will print the "SYNOPSIS" section and any "OPTIONS" and/or "ARGUMENTS" sections to `STDOUT` and will exit with a status of 1:

```
pod2usage(1);

pod2usage(-verbose => 1);

pod2usage(-exitval => 1);

pod2usage({-exitval => 1, -output => \*STDOUT});
```

```
pod2usage({-verbose => 1, -output => \*STDOUT});

pod2usage(-exitval => 1, -verbose => 1);

pod2usage(-exitval => 1, -verbose => 1, -output => \*STDOUT});
```

Each of the following invocations of `pod2usage()` will print the entire manual page to `STDOUT` and will exit with a status of 1:

```
pod2usage(-verbose => 2);

pod2usage({-verbose => 2, -output => \*STDOUT});

pod2usage(-exitval => 1, -verbose => 2);

pod2usage({-exitval => 1, -verbose => 2, -output => \*STDOUT});
```

## Recommended Use

Most scripts should print some type of usage message to `STDERR` when a command line syntax error is detected. They should also provide an option (usually `-h` or `-help`) to print a (possibly more verbose) usage message to `STDOUT`. Some scripts may even wish to go so far as to provide a means of printing their complete documentation to `STDOUT` (perhaps by allowing a `-man` option). The following complete example uses **Pod::Usage** in combination with **Getopt::Long** to do all of these things:

```
use Getopt::Long;
use Pod::Usage;

my $man = 0;
my $help = 0;
## Parse options and print usage if there is a syntax error,
## or if usage was explicitly requested.
GetOptions('help|?' => \$help, man => \$man) or pod2usage(2);
pod2usage(1) if $help;
pod2usage(-verbose => 2) if $man;

## If no arguments were given, then allow STDIN to be used only
## if it's not connected to a terminal (otherwise print usage)
pod2usage("$0: No files given.") if ((@ARGV == 0) && (-t STDIN));
__END__

=head1 NAME

sample - Using Getopt::Long and Pod::Usage

=head1 SYNOPSIS

sample [options] [file ...]

Options:
  -help          brief help message
  -man          full documentation
```

```
=head1 OPTIONS
```

```
=over 8
```

```
=item B<-help>
```

Print a brief help message and exits.

```
=item B<-man>
```

Prints the manual page and exits.

```
=back
```

```
=head1 DESCRIPTION
```

B<This program> will read the given input file(s) and do something useful with the contents thereof.

```
=cut
```

## CAVEATS

By default, **pod2usage()** will use \$0 as the path to the pod input file. Unfortunately, not all systems on which Perl runs will set \$0 properly (although if \$0 isn't found, **pod2usage()** will search \$ENV{PATH} or else the list specified by the `-pathlist` option). If this is the case for your system, you may need to explicitly specify the path to the pod docs for the invoking script using something similar to the following:

```
pod2usage(-exitval => 2, -input => "/path/to/your/pod/docs");
```

In the pathological case that a script is called via a relative path *and* the script itself changes the current working directory (see *"chdir" in perlfunc*) before calling `pod2usage`, Pod::Usage will fail even on robust platforms. Don't do that.

## AUTHOR

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Based on code for **Pod::Text::pod2text()** written by Tom Christiansen <tchrist@mox.perl.com>

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