NAME

ar – maintain portable archive or library

SYNOPSIS

/usr/bin/ar –d [**–Vv**] *archive file*. . .
/usr/bin/ar –m [**–abiVv**] [*posname*] *archive file*. . .
/usr/bin/ar –p [**–sVv**] *archive* [*file*. . .]
/usr/bin/ar –q [**–cVv**] *archive file*. . .
/usr/bin/ar –r [**–abciuVv**] [*posname*] *archive file*. . .
/usr/bin/ar –t [**–sVv**] *archive* [*file*. . .]
/usr/bin/ar –x [**–CsTVv**] *archive* [*file*. . .]

/usr/xpg4/bin/ar –d [**–Vv**] *archive file*. . .
/usr/xpg4/bin/ar –m [**–abiVv**] [*posname*] *archive file*. . .
/usr/xpg4/bin/ar –p [**–sVv**] *archive* [*file*. . .]
/usr/xpg4/bin/ar –q [**–cVv**] *archive file*. . .
/usr/xpg4/bin/ar –r [**–abciuVv**] [*posname*] *archive file*. . .
/usr/xpg4/bin/ar –t [**–sVv**] *archive* [*file*. . .]
/usr/xpg4/bin/ar –x [**–CsTVv**] *archive* [*file*. . .]

AVAILABILITY

/usr/bin/ar SUNWbtool

/usr/xpg4/bin/ar SUNWxcu4

DESCRIPTION

The **ar** command maintains groups of files combined into a single archive file. Its main use is to create and update library files. However, it can be used for any similar purpose. The magic string and the file headers used by **ar** consist of printable ASCII characters. If an archive is composed of printable files, the entire archive is printable.

When **ar** creates an archive, it creates headers in a format that is portable across all machines. The portable archive format and structure are described in detail in **ar**(4). The archive symbol table (described in **ar**(4)) is used by the link editor **ld** to effect multiple passes over libraries of object files in an efficient manner. An archive symbol table is only created and maintained by **ar** when there is at least one object file in the archive. The archive symbol table is in a specially named file that is always the first file in the archive. This file is never mentioned or accessible to the user. Whenever the **ar** command is used to create or update the contents of such an archive, the symbol table is rebuilt. The **s** option described below will force the symbol table to be rebuilt.

OPTIONS

The following options are supported:

–a Position new *file*s in *archive* after the file named by the *posname* operand.

–b Position new *file*s in *archive* before the file named by the *posname* operand.

–c Suppress the diagnostic message that is written to standard error by default when *archive* is created.

–C Prevent extracted files from replacing like-named files in the file system. This option is useful when **–T** is also used to prevent truncated file names from replacing files with the same prefix.

−d Delete one or more *file*s from *archive*.

−i Position new *file*s in *archive* before the file named by the *posname* operand (equivalent to −**b**).

−m Move *file*s. If −**a**, −**b**, or −**i** with the *posname* operand are specified, move *file*s to the new position; otherwise, move *file*s to the end of *archive*.

−p Print the contents of *file*s in *archive* to standard output. If no *file*s are specified, the contents of all files in *archive* will be written in the order of the archive.

−q Quickly append *file*s to the end of *archive*. Positioning options −**a**, −**b**, and −**i** are invalid. The command does not check whether the added *file*s are already in *archive*. This option is useful to avoid quadratic behavior when creating a large archive piece-by-piece.

−r Replace or add *file*s in *archive*. If *archive* does not exist, a new archive file will be created and a diagnostic message will be written to standard error (unless the −**c** option is specified). If no *file*s are specified and the *archive* exists, the results are undefined. Files that replace existing files will not change the order of the archive. If the −**u** option is used with the −**r**, option, then only those files with dates of modification later than the archive files are replaced. If the −**a**, −**b**, or −**i** option is used, then the *posname* argument must be present and specifies that new files are to be placed after (−**a**) or before (−**b** or −**i**) *posname*; otherwise the new *file*s are placed at the end.

−s Force the regeneration of the archive symbol table even if **ar** is not invoked with a option which will modify the archive contents. This command is useful to restore the archive symbol table after the **strip**(1) command has been used on the archive.

−t Print a table of contents of *archive*. The files specified by the *file* operands will be included in the written list. If no *file* operands are specified, all files in *archive* will be included in the order of the archive.

−T Allow file name truncation of extracted files whose archive names are longer than the file system can support. By default, extracting a file with a name that is too long is an error; a diagnostic message will be written and the file will not be extracted.

−u Update older files. When used with the −**r** option, files within *archive* will be replaced only if the corresponding *file* has a modification time that is at least as new as the modification time of the file within *archive*.

−V prints its version number on standard error.

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−v Give verbose output. When used with the option characters −**d**, −**r**, or −**x**, write a detailed file-by-file description of the archive creation and the constituent *file*s, and maintenance activity.

When used with −**p**, write the name of the file to the standard output before writing the file itself to the standard output.

When used with **−t**, include a long listing of information about the files within the archive.

When used with **−x**, print the filename preceding each extraction.

When writing to an archive, a message is written to the standard error.

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−v Same as **/usr/bin/ar** version, except when writing to an archive, no message is written to the standrad error.

−x Extract the files named by the *file* operands from *archive*. The contents of *archive* will not be changed. If no *file* operands are given, all files in *archive* will be extracted. If the file name of a file extracted from *archive* is longer than that supported in the directory to which it is being extracted, the results are undefined. The modification time of each *file* extracted will be set to the time *file* is extracted from *archive*.

OPERANDS

The following operands are supported:

archive A path name of the archive file.

file A path name. Only the last component will be used when comparing against the names of files in the archive. If two or more *file* operands have the same last path name component (**basename**(1)), the results are unspecified. The implementation's archive format will not truncate valid file names of files added to or replaced in the archive.

posname The name of a file in the archive file, used for relative positioning; see options **−m** and **−r**.

ENVIRONMENT

See **environ**(5) for descriptions of the following environment variables that affect the execution of **ar**: **LC_CTYPE**, **LC_MESSAGES**, and **NLSPATH**.

EXIT STATUS

The following exit values are returned:

0 Successful completion.

>0 An error occurred.

SEE ALSO

basename(1), **cc**(1B), **cpio**(1), **ld**(1), **lorder**(1), **strip**(1), **tar**(1), **a.out**(4), **ar**(4), **environ**(5)

NOTES

If the same file is mentioned twice in an argument list, it may be put in the archive twice.

By convention, archives are suffixed with the characters **.a**.