NAME

mda2ascii – convert EPICS MDA files to ASCII format

SYNOPSIS

mda2ascii [**–hmt1**] [**–x** *extension*] [**–d** *directory*] [**–o** *output*] [**–c** *commenter*] [**–s** *separator*] *mdafile* [*mdafile* [...]]

DESCRIPTION

mda2ascii is a utility for converting the binary MDA data files (created by **saveData** in **EPICS**) into ASCII output. It can handle arbitrary dimensional scans, and splits multi-dimensional scans into separate one-dimensional scans. One-dimensional scan values are put into column form, while the rest of the information to the scan are kept in a commented header.

In addition to options, **mda2ascii** expects the names of the MDA files to convert (*mdafile* ...). By default, it writes the output for each MDA file to a single file for a one-dimensional scan. For multi-dimensional scans it writes multiple files corresponding to each one-dimensional scan. The files are put into the current directory. The name of the written file(s) are determined from the input file name, where the extension is removed and replaced with "asc". For multiple files, the higher-dimensional indices are added in order to the base file name.

OPTIONS

-h   Shows the help screen.

-m   Merge the higher dimensional data into the first dimensional scan values. Each of the higher dimensional values takes the form of a column with that single value. If **-m** is used, the higher dimensional values are removed from the header.

-t   Trim off all the commented header lines, leaving only values.

-1   For a multi-dimensional scan, all the resulting one-dimensional scans are merged into a single output file. An overall header is added at the start of the file, and the scans are all separated by dividers.

-x *extension*
        Change the extension used for automatically naming files. The default is "asc".

-d *directory*
        Change the output directory when automatically naming files. The default is the current directory (or ".").

-o *output*
        Specify the output file, limiting the number of input MDA files to one. Either the entire file name and path can be specified, or simply the name's base. If using a base, an extension and directory will be appended to it, coming either from the **-x** and **-d** options or their defaults). Alternatively, if "**–**" is specified, the output will be redirected to the standard output (the screen).

-c *commenter*
        Change the string used at the beginning of a comment line. Normally, this is a single character, but it can be more. The default is "#".

-s *separator*
        Change the string used to separate the data values into columns. The default is " ".

EXAMPLES

To convert a directory full of MDA files, sending the output to the directory "asc_data", one would simply run

```
mda2ascii -d asc_data *.mda
```

Alternatively, you can go into the "asc_data" directory and run instead

```
mda2ascii ../*.mda
```

where all the ASCII files go into the current directory.

If your program needs "%" as the comment character and "," as data separators, you could convert the data this way, running

```
mda2ascii -s "," -c "%" *.mda
```

where the output goes into the original directory.

Suppose one wants all the resultant ASCII data from a multi-dimensional data file (say "data.mda") to come out in a multidimensional form, suitable for a matrix manipulating program. This can be accomplished using

```
mda2ascii -m1t -o data-matrix.dat data.mda
```

where the output is stored in a special file "data-matrix.dat". This file will have the complete multi-dimensional data set ready to be read. There is a caveat to this: **mda2ascii** does absolutely no checking to make sure that the parameters of the lower dimensional scans weren't altered while the top-most dimensional scan was running. In theory, the one-dimensional scans could have different numbers of detectors, different number of scan points, etc. which would make the data nonsensical. This is very unlikely, but it is theoretically possible.

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SEE ALSO
mda-dump(1), **mda-info**(1)