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# **eyeD3 Documentation**

***Release 0.9.4***

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CHAPTER  
**ONE**

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**STATUS**



## ABOUT

`eyeD3` is a Python tool for working with audio files, specifically MP3 files containing ID3 metadata (i.e. song info).

It provides a command-line tool (`eyeD3`) and a Python library (`import eyed3`) that can be used to write your own applications or plugins that are callable from the command-line tool.

For example, to set some song information in an mp3 file called `song.mp3`:

```
$ eyeD3 -a Integrity -A "Humanity Is The Devil" -t "Hollow" -n 2 song.mp3
```

With this command we've set the artist (`-a/--artist`), album (`-A/--album`), title (`-t/--title`), and track number (`-n/--track-num`) properties in the ID3 tag of the file. This is the standard interface that `eyeD3` has always had in the past, therefore it is also the default plugin when no other is specified.

The results of this command can be seen by running the `eyeD3` with no options.

```
$ eyeD3 song.mp3
song.mp3      [ 3.06 MB ]
-----
ID3 v2.4:
title: Hollow
artist: Integrity
album: Humanity Is The Devil
album artist: None
track: 2
-----
```

The same can be accomplished using Python.

```
import eyed3

audiofile = eyed3.load("song.mp3")
audiofile.tag.artist = "Token Entry"
audiofile.tag.album = "Free For All Comp LP"
audiofile.tag.album_artist = "Various Artists"
audiofile.tag.title = "The Edge"
audiofile.tag.track_num = 3

audiofile.tag.save()
```

`eyeD3` is written and maintained by [Travis Shirk](#) and is licensed under version 3 of the [GPL](#).





## FEATURES

- Python package (*import eyed3*) for writing applications and plugins.
- *eyeD3* : Command-line tool driver script that supports plugins.
- Easy ID3 editing/viewing of audio metadata from the command-line.
- Plugins for: Tag to string formatting (display), album fixing (fixup), cover art downloading (art), collection stats (stats), and json/yaml/jabber/nfo output formats, and more included.
- Support for ID3 versions 1.x, 2.2 (read-only), 2.3, and 2.4.
- Support for the MP3 audio format exposing details such as play time, bit rate, sampling frequency, etc.
- Abstract design allowing future support for different audio formats and metadata containers.



## GET STARTED

Python  $\geq$  3.6 is required.

For [installation instructions](http://eyeD3.nicfit.net/) or more complete documentation see <http://eyeD3.nicfit.net/>

Please post feedback and/or defects on the [issue tracker](#), or [mailing list](#).

### 4.1 Installation

Stable releases of eyeD3 are best installed via `pip` or `easy_install`; or you may download TGZ or ZIP source archives from a couple of official locations. Detailed instructions and links may be found on the [Installation](#) page.

Otherwise, if you want to live on the edge, you can pull down the source code from the Git repository at [GitHub](#). The [Installation](#) page has details for how to access the source code.

#### 4.1.1 Installation

##### Easy Installation

##### Install using ‘pip’

`pip` is a tool for installing Python packages from [Python Package Index](#) and is a replacement for `easy_install`. It will install the package using the first ‘python’ in your path so it is especially useful when used along with `virtualenv`, otherwise root access may be required.

```
$ pip install eyeD3
# Optional: To install the ultra powerful Display plugin (-P display)
$ pip install eyeD3[display-plugin]
```

Note that on Windows, you also need to install the `libmagic` binaries.

```
$ pip install python-magic-bin
```

## Dependencies

eyeD3 0.9.4 has been tested with Python 2.7, >=3.3 (see the 0.7.x series for Python 2.6 support).

The primary interface for building and installing is `Setuptools`. For example, `python setup.py install`.

## Development Dependencies

If you are interested in doing development work on eyeD3 (or even just running the test suite), you may also need to install some additional packages:

```
$ pip install -r requirements/test.txt $ pip install -r requirements/dev.txt
```

## Download Source Archive

Source packages are available from the [release archive](#) in tar.gz and zip formats. After un-archiving the distribution file you can install in the common manner:

```
$ tar xzf eyeD3-X.Y.Z.tar.gz
$ cd eyeD3-X.Y.Z
# This may require root access
$ python setup.py install
```

Or you can run from the archive directory directly:

```
$ tar xzf eyeD3-X.Y.Z.tar.gz
$ cd eyeD3-X.Y.Z
$ python setup.py build
$ export PYTHONPATH=`pwd`/build/lib
$ export PATH=${PATH}:`pwd`/bin
```

## Checking Out the Source Code

```
$ git clone https://github.com/nicfit/eyeD3.git
```

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**Note:** When submitting patches please base them on the ‘master’ branch.

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## 4.2 Documentation

### 4.2.1 ‘eyeD3’ Command Line Tool

The eyeD3 command line interface is based on plugins. The main driver knows how to traverse file systems and load audio files for hand-off to the plugin to do something interesting. With no plugin selected a simplified usage is:

```
$ eyeD3 --help
usage: eyeD3 [-h] [--version] [--exclude PATTERN]
             [--plugins] [--plugin NAME]
             [PATH [PATH ...]]
```

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```
positional arguments:
  PATH                Files or directory paths

optional arguments:
  -h, --help          show this help message and exit
  --version           Display version information and exit
  --exclude PATTERN  A regular expression for path exclusion. May be
                    specified multiple times.
  --plugins           List all available plugins
  --plugin NAME      Specify which plugin to use.
```

The PATH argument(s) along with optional usage of `--exclude` are used to tell eyeD3 what files or directories to process. Directories are searched recursively and every file encountered is passed to the plugin until no more files are found.

To list the available plugins use the `--plugins` option and to select a plugin pass its name using `--plugin=<name>`.

If no `--plugin=` option is provided the *default* plugin is selected. Currently this is set to be the command line tag viewer/editor that has been the primary interface in all versions of eyeD3 prior to 0.7.x.

## Plugins

### Plugins

#### art(work) plugin

*Art for albums, artists, etc.*

#### Names

art

#### Description

#### Options

```
-F, --update-files  Write art files from tag images.
-T, --update-tags  Write tag image from art files.
-D, --download     Attempt to download album art if missing.
-v, --verbose      Show detailed information for all art found.
```

## classic - Tag Viewer/Editor

*Classic eyeD3 interface for viewing and editing tags.*

### Names

classic

### Description

All PATH arguments are parsed and displayed. Directory paths are searched recursively. Any editing options (`--artist`, `--title`) are applied to each file read.

All date options (`-Y`, `--release-year` excepted) follow ISO 8601 format. This is `yyyy-mm-ddThh:mm:ss`. The year is required, and each component thereafter is optional. For example, `2012-03` is valid, `2012-12` is not.

### Options

```
-a STRING, --artist STRING
                        Set the artist name.
-A STRING, --album STRING
                        Set the album name.
-b STRING, --album-artist STRING
                        Set the album artist name. 'Various Artists', for example.
↳Another example is collaborations when the track artist might be 'Eminem
                        featuring Proof' the album artist would be 'Eminem'.
-t STRING, --title STRING
                        Set the track title.
-n NUM, --track NUM   Set the track number. Use 0 to clear.
-N NUM, --track-total NUM
                        Set total number of tracks. Use 0 to clear.
--track-offset N      Increment/decrement the track number by [-]N. This option is
↳applied after --track=N is set.
--composer STRING     Set the composer's name.
--orig-artist STRING  Set the original artist's name. For example, a cover song can
↳include the original author of the track.
-d NUM, --disc-num NUM
                        Set the disc number. Use 0 to clear.
-D NUM, --disc-total NUM
                        Set total number of discs in set. Use 0 to clear.
-G GENRE, --genre GENRE
                        Set the genre. If the argument is a standard ID3 genre name
↳or number both will be set. Otherwise, any string can be used. Run
                        'eyeD3 --plugin=genres' for a list of standard ID3 genre
↳names/ids.
--non-std-genres      Disables certain ID3 genre standards, such as the mapping of
↳numeric value to genre names. For example, genre=1 is taken literally,
                        not mapped to 'Classic Rock'.
-Y YEAR, --release-year YEAR
                        Set the year the track was released. Use the date options for
↳more precise values or dates other than release.
-c STRING, --comment STRING
                        Set a comment. In ID3 tags this is the comment with an empty
↳description. See --add-comment to add multiple comment frames.
```

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```

--artist-city STRING The artist's city of origin. Stored as a user text frame
↳ `eyeD3#artist_origin`
--artist-state STRING
The artist's state of origin. Stored as a user text frame
↳ `eyeD3#artist_origin`
--artist-country STRING
The artist's country of origin. Stored as a user text frame
↳ `eyeD3#artist_origin`
--rename PATTERN Rename file (the extension is not affected) based on data in
↳ the tag using substitution variables: $album, $album_artist, $artist,
$best_date, $best_date:prefer_recording, $best_date:prefer_
↳ recording:year, $best_date:prefer_release,
$best_date:prefer_release:year, $best_date:year, $disc:num,
↳ $disc:total, $file, $file:ext, $original_release_date,
$original_release_date:year, $recording_date, $recording_
↳ date:year, $release_date, $release_date:year, $title, $track:num,
$track:total

ID3 options:
-1, --v1 Only read and write ID3 v1.x tags. By default, v1.x tags are
↳ only read or written if there is not a v2 tag in the file.
-2, --v2 Only read/write ID3 v2.x tags. This is the default unless the
↳ file only contains a v1 tag.
--to-v1.1 Convert the file's tag to ID3 v1.1 (Or 1.0 if there is no
↳ track number)
--to-v2.3 Convert the file's tag to ID3 v2.3
--to-v2.4 Convert the file's tag to ID3 v2.4
--release-date DATE Set the date the track/album was released
--orig-release-date DATE
Set the original date the track/album was released
--recording-date DATE
Set the date the track/album was recorded
--encoding-date DATE Set the date the file was encoded
--tagging-date DATE Set the date the file was tagged
--publisher STRING Set the publisher/label name
--play-count <+>N Set the number of times played counter. If the argument value
↳ begins with '+' the tag's play count is incremented by N, otherwise
the value is set to exactly N.
--bpm N Set the beats per minute value.
--unique-file-id OWNER_ID:ID
Add a unique file ID frame. If the ID arg is empty the frame
↳ is removed. An OWNER_ID is required. The ID may be no more than 64
bytes.
--add-comment COMMENT[:DESCRIPTION[:LANG]]
Add or replace a comment. There may be more than one comment
↳ in a tag, as long as the DESCRIPTION and LANG values are unique. The
default DESCRIPTION is '' and the default language code is
↳ 'eng'.
--remove-comment DESCRIPTION[:LANG]
Remove comment matching DESCRIPTION and LANG. The default
↳ language code is 'eng'.
--remove-all-comments
Remove all comments from the tag.
--add-lyrics LYRICS_FILE[:DESCRIPTION[:LANG]]
Add or replace a lyrics. There may be more than one set of
↳ lyrics in a tag, as long as the DESCRIPTION and LANG values are unique.
The default DESCRIPTION is '' and the default language code
↳ is 'eng'.

```

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```

--remove-lyrics DESCRIPTION[:LANG]
    Remove lyrics matching DESCRIPTION and LANG. The default
↪ language code is 'eng'.
--remove-all-lyrics    Remove all lyrics from the tag.
--text-frame FID:TEXT
    Set the value of a text frame. To remove the frame, specify
↪ an empty value. For example, --text-frame='TDRC:'
--user-text-frame DESC:TEXT
    Set the value of a user text frame (i.e., TXXX). To remove
↪ the frame, specify an empty value. e.g., --user-text-frame='SomeDesc:'
--url-frame FID:URL    Set the value of a URL frame. To remove the frame, specify an
↪ empty value. e.g., --url-frame='WCOM:'
--user-url-frame DESCRIPTION:URL
    Set the value of a user URL frame (i.e., WXXX). To remove the
↪ frame, specify an empty value. e.g., --user-url-frame='SomeDesc:'
--add-image IMG_PATH:TYPE[:DESCRIPTION]
    Add or replace an image. There may be more than one image in
↪ a tag, as long as the DESCRIPTION values are unique. The default
    DESCRIPTION is ''. If PATH begins with 'http[s]://' then it
↪ is interpreted as a URL instead of a file containing image data. The
    TYPE must be one of the following: OTHER, ICON, OTHER_ICON,
↪ FRONT_COVER, BACK_COVER, LEAFLET, MEDIA, LEAD_ARTIST, ARTIST, CONDUCTOR,
    BAND, COMPOSER, LYRICIST, RECORDING_LOCATION, DURING_
↪ RECORDING, DURING_PERFORMANCE, VIDEO, BRIGHT_COLORED_FISH, ILLUSTRATION,
    BAND_LOGO, PUBLISHER_LOGO.
--remove-image DESCRIPTION
    Remove image matching DESCRIPTION.
--remove-all-images    Remove all images from the tag
--write-images DIR      Causes all attached images (APIC frames) to be written to the
↪ specified directory.
--add-object OBJ_PATH:MIME-TYPE[:DESCRIPTION[:FILENAME]]
    Add or replace an object. There may be more than one object
↪ in a tag, as long as the DESCRIPTION values are unique. The default
    DESCRIPTION is ''.
--remove-object DESCRIPTION
    Remove object matching DESCRIPTION.
--write-objects DIR    Causes all attached objects (GEOB frames) to be written to
↪ the specified directory.
--remove-all-objects  Remove all objects from the tag
--add-popularity EMAIL:RATING[:PLAY_COUNT]
    Adds a popularity metric. There may be multiples popularity
↪ values, but each must have a unique email address component. The rating
    is a number between 0 (worst) and 255 (best). The play count
↪ is optional, and defaults to 0, since there is already a dedicated play
    count frame.
--remove-popularity EMAIL
    Removes the popularity frame with the specified email key.
--remove-v1            Remove ID3 v1.x tag.
--remove-v2            Remove ID3 v2.x tag.
--remove-all          Remove ID3 v1.x and v2.x tags.
--remove-frame FID     Remove all frames with the given ID. This option may be
↪ specified multiple times.
--max-padding NUM_BYTES
    Shrink file if tag padding (unused space) exceeds the given
↪ number of bytes. (Useful e.g. after removal of large cover art.) Default
    is 64 KiB, file will be rewritten with default padding (1
↪ KiB) or max padding, whichever is smaller.

```

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--no-max-padding      Disable --max-padding altogether.
--encoding latin1|utf8|utf16|utf16-be
                    Set the encoding that is used for all text frames. This
↳option is only applied if the tag is updated as the result of an edit option
                    (e.g. --artist, --title, etc.) or --force-update is specified.

Misc options:
--force-update        Rewrite the tag despite there being no edit options.
-v, --verbose        Show all available tag data
--preserve-file-times When writing, do not update file modification times.

```

## Examples

eyeD3 can do more than edit existing tags, it can also create new tags from nothing. For these examples we'll make a dummy file to work with.

```

$ rm -f example.id3
$ touch example.id3
$ ls -s example.id3

0 example.id3

```

Now let's set some common attributes like artist and title.

Most options have a shorter name that can be used to save typing. Let's add the album name (`-A`), the genre (`-G`), and the year (`-Y`) the record was released.

Notice how the genre displayed as "Hardcore (id 129)" in the above tag listing. This happens because the genre is a recognized value as defined by the ID3 v1 standard. eyeD3 used to be very strict about genres, but no longer. You can store any value you'd like. For a list of recognized genres and their respective IDs see the [genres plugin](#).

By default writes ID3 v2.4 tags. This is the latest standard and supports UTF-8 which is a very nice thing. Some players are not caught up with the latest standards (iTunes, pfft) so it may be necessary to convert amongst the various versions. In some cases this can be a lossy operation if a certain data field is not supported, but eyeD3 does its best to convert when the data whenever possible.

```

# Convert the current v2.4 frame to v2.3
$ eyeD3 --to-v2.3 example.id3 -Q

.../home/travis/devel/eyeD3/git/example.id3[ 0.00 Bytes ]
-----
ID3 v2.4: 0 frames
Writing ID3 version v2.3
-----

# Convert back
$ eyeD3 --to-v2.4 example.id3 -Q

.../home/travis/devel/eyeD3/git/example.id3[ 266.00 Bytes ]
-----
ID3 v2.3: 0 frames
Writing ID3 version v2.4
-----

```

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```
# Convert to v1, this will lose all the more advanced data members ID3 v2 offers
$ eyeD3 --to-v1.1 example.id3 -Q

.../home/travis/devel/eyeD3/git/example.id3[ 266.00 Bytes ]
-----
ID3 v2.4: 0 frames
Writing ID3 version v1.1
-----
```

The last conversion above converted to v1.1, or so the output says. The final listing shows that the tag is version 2.4. This is because tags can contain both versions at once and eyeD3 will always show/load v2 tags first. To select the version 1 tag use the `-1` option. Also note how the the non-standard genre was lost by the conversion, thankfully it is still in the v2 tag.

```
$ eyeD3 -1 example.id3

.../home/travis/devel/eyeD3/git/example.id3[ 394.00 Bytes ]
-----
ID3 v1.0:
title:
artist:
album:
track:                genre: Other (id 12)
-----
```

The `-1` and `-2` options also determine which tag will be edited, or even which tag will be converted when one of the conversion options is passed.

```
# Set an artist value in the ID3 v1 tag
$ eyeD3 -1 example.id3 -a id3v1

.../home/travis/devel/eyeD3/git/example.id3[ 394.00 Bytes ]
-----
Setting artist: id3v1
ID3 v1.0:
title:
artist: id3v1
album:
track:                genre: Other (id 12)
Writing ID3 version v1.0
-----

# The file now has a v1 and v2 tag, change the v2 artist
$ eyeD3 -2 example.id3 -a id3v2

.../home/travis/devel/eyeD3/git/example.id3[ 394.00 Bytes ]
-----
Setting artist: id3v2
ID3 v2.4:
title:
artist: id3v2
album:
track:
Writing ID3 version v2.4
-----
```

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```

# Take all the values from v2.4 tag (the default) and set them in the v1 tag.
$ eyeD3 -2 --to-v1.1 example.id3

.../home/travis/devel/eyeD3/git/example.id3[ 394.00 Bytes ]
-----
ID3 v2.4:
title:
artist: id3v2
album:
track:
Writing ID3 version v1.1
-----

# Take all the values from v1 tag and convert to ID3 v2.3
$ eyeD3 -1 --to-v2.3 example.id3

.../home/travis/devel/eyeD3/git/example.id3[ 394.00 Bytes ]
-----
ID3 v1.0:
title:
artist: id3v2
album:
track:                genre: Other (id 12)
Writing ID3 version v2.3
-----

```

At this point the tag is all messed up with by these experiments, you can always remove the tags to start again.

```

$ eyeD3 --remove-all example.id3

.../home/travis/devel/eyeD3/git/example.id3[ 394.00 Bytes ]
-----
Removing ID3 v1.x and/or v2.x tag: SUCCESS
No ID3 v1.x/v2.x tag found!

```

## Complex Options

Some of the command line options contain multiple pieces of information in a single value. Take for example the `--add-image` option:

```
--add-image IMG_PATH:TYPE[:DESCRIPTION]
```

This option has 3 pieces of information where one (DESCRIPTION) is optional (denoted by the square brackets). Each individual value is separated by a ':' like so:

```
$ eyeD3 --add-image cover.png:FRONT_COVER
```

This will load the image data from `cover.png` and store it in the tag with the type value for `FRONT_COVER` images. The list of valid image types are listed in the `--help` usage information which also states that the `IMG_PATH` value may be a URL so that the image data does not have to be stored in the tag itself. Let's try that now.

```

$ eyeD3 --add-image http://example.com/cover.jpg:FRONT_COVER
eyeD3: error: argument --add-image: invalid ImageArg value: 'http://example.com/cover.
↪ jpg:FRONT_COVER'

```

The problem is the ':' character in the the URL, it confuses the format description of the option value. To solve this escape all delimiter characters in option values with '\\\' (for linux and macOS), single \'\' for Windows).

Linux/macOS:

```
$ eyeD3 --add-image http\\://example.com/cover.jpg:FRONT_COVER example.id3
.../home/travis/devel/eyeD3/git/example.id3[ 0.00 Bytes ]
-----
Adding image http://example.com/cover.jpg
ID3 v2.4:
title:
artist:
album:
track:
FRONT_COVER Image: [Type: -->] [URL: b'http://example.com/cover.jpg']
Description:

Writing ID3 version v2.4
-----
```

Windows:

```
$ eyeD3 --add-image http\\://example.com/cover.jpg:FRONT_COVER example.id3
.../home/travis/devel/eyeD3/git/example.id3[ 311.00 Bytes ]
-----
Adding image http://example.com/cover.jpg
ID3 v2.4:
title:
artist:
album:
track:
FRONT_COVER Image: [Type: -->] [URL: b'http://example.com/cover.jpg']
Description:

Writing ID3 version v2.4
-----
```

### display - Display tag information by pattern

*Prints specific tag information which are specified by a pattern.*

## Names

display

## Description

Displays tag information for each file. With a pattern the concrete output can be specified.

The pattern EBNF:

```

pattern  := { <text> | tag | function }*
tag      := '%' <name> { ',' parameter }* '%'
function := '$' <name> '(' [ parameter { ',' parameter }* ] ')'
parameter := [ <name> '=' ] [ pattern ]
<text>   := string with escaped special characters
<name>   := string without special characters

```

Tags are surrounded by two '%'. There are also functions that starts with a '\$'. Both tag and function could be parametrized.

## Options

```

--pattern-help      Detailed pattern help
-p STRING, --pattern STRING
                    Pattern string
-f FILE, --pattern-file FILE
                    Pattern file
--no-newline        Print no newline after each output

```

## Pattern elements

ID3 Tags:

```

a, artist          Artist
A, album           Album
b, album-artist    Album artist
t, title           Title
n, track           Track number
N, track-total     Total track number
d, disc, disc-num  Disc number
D, disc-total      Total disc number
G, genre           Genre
genre-id           Genre ID
Y, year            Release year
c, comment         First comment that matches description and language.
                    Parameters:
                    description (optional)
                    language (optional)
comments           All comments that are matching description and language (with
                    output placeholders #d as description, #l as language & #t as
                    ↪text).
                    Parameters:
                    description (optional)

```

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```

        language (optional)
        output (optional, default='Comment: [Description: #d]_
↳[Lang: #l]: #t')
        separation (optional, default='\n')
lyrics      All lyrics that are matching description and language (with_
↳output     placeholders #d as description, #l as language & #t as text).
            Parameters:
                description (optional)
                language (optional)
                output (optional, default='Lyrics: [Description: #d]_
↳[Lang: #l]: #t')
                separation (optional, default='\n')
release-date      Release date
original-release-date  Original Release date
recording-date    Recording date
encoding-date     Encoding date
tagging-date      Tagging date
play-count        Play count
popm, popularities  Popularities (with output placeholders #e as email, #r as_
↳rating &      #c as count)
            Parameters:
                output (optional, default='Popularity: [email: #e]_
↳[rating: #r] [play count: #c]')
                separation (optional, default='\n')
bpm              BPM
publisher        Publisher
ufids, unique-file-ids  Unique File IDs (with output placeholders #o as owner & #i as_
↳unique id)
            Parameters:
                output (optional, default='Unique File ID: [#o] : #i')
                separation (optional, default='\n')
txxx, texts      User text frames (with output placeholders #d as description &
↳#d] #t')      #t as text)
            Parameters:
                output (optional, default='UserTextFrame: [Description:
                separation (optional, default='\n')
user-urls        User URL frames (with output placeholders #i as frame id, #d_
↳as           description & #u as url)
            Parameters:
                output (optional, default='#i [Description: #d]: #u')
                separation (optional, default='\n')
artist-url       Artist URL
audio-source-url  Audio source URL
audio-file-url   Audio file URL
internet-radio-url  Internet radio URL
commercial-url   Comercial URL
payment-url      Payment URL
publisher-url    Publisher URL
copyright-url    Copyright URL
images, apic     Attached pictures (APIC)
↳#s as size in bytes & #d as description)
            Parameters:

```

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↪bytes] #d')	output (optional, default='#t Image: [Type: #m] [Size: #b
	separation (optional, default='\n')
image-urls	Attached pictures URLs
	(with output placeholders #t as image type, #m as mime type,
↪#u as URL & #d as description)	
	Parameters:
↪#d')	output (optional, default='#t Image: [Type: #m] [URL: #u]
	separation (optional, default='\n')
objects, gobj	Objects (GOBJ)
	(with output placeholders #s as size, #m as mime type, #d as
↪description and #f as file name)	
	Parameters:
↪#t] Description: #d   Filename: #f')	output (optional, default='GEOB: [Size: #s bytes] [Type:
	separation (optional, default='\n')
privates, priv	Privates (with output placeholders #c as content, #b as
↪number of bytes & #o as owner)	
	Parameters:
↪#o')	output (optional, default='PRIV-Content: #b bytes   Owner:
	separation (optional, default='\n')
music-cd-id, mcidi	Music CD Identification
terms-of-use	Terms of use

#### Functions:

format	Formats text bold and colored (grey, red, green, yellow, blue,
↪magenta,	cyan or white)
	Parameters:
	text
	bold (optional)
	color (optional)
num, number-format	Appends leading zeros
	Parameters:
	number
	digits
filename, fn	File name
	Parameter:
	basename (optional)
filesize	Size of file
tag-version	Tag version
length	Length of aufile file
mpeg-version	MPEG version (with output placeholders #v as version & #l as
↪layer)	
	Parameter:
	output (optional, default='MPEG#v\, Layer #l')
bit-rate	Bit rate of aufile file
sample-freq	Sample frequency of aufile file in Hz
audio-mode	Mode of aufile file: mono/stereo
not-empty	If condition is not empty (with output placeholder #t as text)
	Parameters:
	text
	output (optional, default='#t')
	empty (optional)

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repeat	Repeats text
	Parameters:
	text
	count

**Special characters:**

escape seq.	character
\\	\
\%	%
\\$	\$
\,	,
\(	(
\)	)
\=	=
\n	New line
\t	Tab

**Example**

Assuming an audio file with artist 'Madonna', title 'Frozen' and album 'Ray of Light'

<pre>%artist% - %album% - %title% %a% - %A% - %t%</pre>
---

Both patterns produce the following output: Madonna - Ray of Light - Frozen

<pre>\$format(title:,bold=y) %title%\n</pre>
--

This pattern produces the output: **title:** Frozen

**Extract Plugin**

*Extract tags from audio files.*

**Names**

extract

**Description****Options**

<pre>-o OUTPUT_FILE, --output-file OUTPUT_FILE</pre>	The the tag is written to this file in native format.
<pre>-H, --hex</pre>	Output hexadecimal format.
<pre>--strip-padding</pre>	Exclude tag padding, if any.



## fixup - Music directory fixer

*Performs various checks and fixes to directories of audio files.*

### Names

fixup

### Description

Operates on directories at a time, fixing each as a unit (album, compilation, live set, etc.). All of these should have common dates, for example but other characteristics may vary. The `--type` should be used whenever possible, `lp` is the default.

The following test and fixes always apply:

1. Every file will be given an ID3 tag if one is missing.
2. Set ID3 v2.4.
3. Set a consistent album name for all files in the directory.
4. Set a consistent artist name for all files, unless the type is `various` in which case the artist may vary (but must exist).
5. Ensure each file has a title.
6. Ensure each file has a track # and track total.
7. Ensure all files have a release and original release date, unless the type is `live` in which case the recording date is set.
8. All ID3 frames of the following types are removed: USER, PRIV
9. All ID3 files have TLEN (track length in ms) set (or updated).
10. The album/dir type is set in the tag. Types of `lp` and `various` do not have this field set since the latter is the default and the former can be determined during sync. In ID3 terms the value is in TXXX (description: `eyeD3#album_type`).
11. Files are renamed as follows: - Type `various`: `${track:num} - ${artist} - ${title}` - Type `single`: `${artist} - ${title}` - All other types: `${artist} - ${track:num} - ${title}` - A rename template can be supplied in `-file-rename-pattern`
12. Directories are renamed as follows: - Type `live`: `${best_date:prefer_recording} - ${album}` - All other types: `${best_date:prefer_release} - ${album}` - A rename template can be supplied in `-dir-rename-pattern`

Album types:

- `lp`: A traditional “album” of songs from a single artist. No extra info is written to the tag since this is the default.
- `ep`: A short collection of songs from a single artist. The string ‘ep’ is written to the tag’s `eyeD3#album_type` field.
- `various`: A collection of songs from different artists. The string ‘various’ is written to the tag’s `eyeD3#album_type` field.
- `live`: A collection of live recordings from a single artist. The string ‘live’ is written to the tag’s `eyeD3#album_type` field.

- `compilation`: A collection of songs from various recordings by a single artist. The string 'compilation' is written to the tag's `eyeD3#album_type` field. Compilation dates, unlike other types, may differ.
- `demo`: A demo recording by a single artist. The string 'demo' is written to the tag's `eyeD3#album_type` field.
- `single`: A track that should no be associated with an album (even if it has album metadata). The string 'single' is written to the tag's `eyeD3#album_type` field.

## Options

```
- All other types: ${artist} - ${track:num} - ${title} - A rename template can be
↳ supplied in --file-rename-pattern 12. Directories are renamed as
follows: - Type ``live``: ${best_date:prefer_recording} - ${album} - All other types:
↳ ${best_date:prefer_release} - ${album} - A rename template can be
supplied in --dir-rename-pattern Album types: - ``lp``: A traditinal "album" of songs,
↳ from a single artist. No extra info is written to the tag since
this is the default. - ``ep``: A short collection of songs from a single artist. The
↳ string 'ep' is written to the tag's ``eyeD3#album_type`` field. -
``various``: A collection of songs from different artists. The string 'various' is
↳ written to the tag's ``eyeD3#album_type`` field. - ``live``: A
collection of live recordings from a single artist. The string 'live' is written to
↳ the tag's ``eyeD3#album_type`` field. - ``compilation``: A
collection of songs from various recordings by a single artist. The string
↳ 'compilation' is written to the tag's ``eyeD3#album_type`` field. Compilation
dates, unlike other types, may differ. - ``demo``: A demo recording by a single
↳ artist. The string 'demo' is written to the tag's ``eyeD3#album_type``
field. - ``single``: A track that should no be associated with an album (even if it
↳ has album metadata). The string 'single' is written to the tag's
``eyeD3#album_type`` field.

--type {lp,ep,compilation,live,various,demo,single}
How to treat each directory. The default is 'lp', although you
↳ may be prompted for an alternate choice if the files look like
another type.
--fix-case          Fix casing on each string field by capitalizing each word.
-n, --dry-run      Only print the operations that would take place, but do not
↳ execute them.
--no-prompt        Exit if prompted.
--dotted-dates     Separate date with '.' instead of '-' when naming directories.
--file-rename-pattern FILE_RENAME_PATTERN
Rename file (the extension is not affected) based on data in
↳ the tag using substitution variables: $album, $album_artist, $artist,
$best_date, $best_date:prefer_recording, $best_date:prefer_
↳ recording:year, $best_date:prefer_release,
$best_date:prefer_release:year, $best_date:year, $disc:num,
↳ $disc:total, $file, $file:ext, $original_release_date,
$original_release_date:year, $recording_date, $recording_
↳ date:year, $release_date, $release_date:year, $title, $track:num,
$track:total
--dir-rename-pattern DIR_RENAME_PATTERN
Rename directory based on data in the tag using substitution
↳ variables: $album, $album_artist, $artist, $best_date,
$best_date:prefer_recording, $best_date:prefer_recording:year,
↳ $best_date:prefer_release, $best_date:prefer_release:year,
$best_date:year, $disc:num, $disc:total, $file, $file:ext,
↳ $original_release_date, $original_release_date:year, $recording_date,
```

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```

                                $recording_date:year, $release_date, $release_date:year, $title,
↪ $track:num, $track:total

```

## itunes-podcast - Convert files so iTunes recognizes them as podcasts

*Adds (or removes) the tags necessary for Apple iTunes to identify the file as a podcast.*

### Names

itunes-podcast

### Description

### Options

```

--add      Add the podcast frames.
--remove   Remove the podcast frames.

```

### Example

```

$ eyeD3 -P itunes-podcast example.id3

/home/travis/devel/eyeD3/git/example.id3
iTunes podcast? :-(

$ eyeD3 -P itunes-podcast example.id3 --add

/home/travis/devel/eyeD3/git/example.id3
iTunes podcast? :-(
Adding...
iTunes podcast? :-)

$ eyeD3 -P itunes-podcast example.id3 --remove

/home/travis/devel/eyeD3/git/example.id3
iTunes podcast? :-)
Removing...
iTunes podcast? :-(

```

## JSON Plugin

*Outputs all tags as JSON.*

### Names

json

### Description

### Options

```
-c, --compact  Output in compact form, wound new lines or indentation.  
-s, --sort    Output JSON in sorted by key.
```

## genres - ID3 Genre List

*Display the full list of standard ID3 genres.*

### Names

genres

### Description

ID3 v1 defined a list of genres and mapped them to to numeric values so they can be stored as a single byte. It is *recommended* that these genres are used although most newer software (including eyeD3) does not care.

### Options

```
-l, --single-column  List on genre per line.
```

### Example

```
$ eyeD3 --plugin=genres  
  
0: Blues                96: Big Band  
1: Classic Rock         97: Chorus  
2: Country              98: Easy Listening  
3: Dance                99: Acoustic  
4: Disco                100: Humour  
5: Funk                 101: Speech  
6: Grunge               102: Chanson  
7: Hip-Hop              103: Opera  
8: Jazz                 104: Chamber Music
```

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9: Metal	105: Sonata
10: New Age	106: Symphony
11: Oldies	107: Booty Bass
12: Other	108: Primus
13: Pop	109: Porn Groove
14: R&B	110: Satire
15: Rap	111: Slow Jam
16: Reggae	112: Club
17: Rock	113: Tango
18: Techno	114: Samba
19: Industrial	115: Folklore
20: Alternative	116: Ballad
21: Ska	117: Power Ballad
22: Death Metal	118: Rhythmic Soul
23: Pranks	119: Freestyle
24: Soundtrack	120: Duet
25: Euro-Techno	121: Punk Rock
26: Ambient	122: Drum Solo
27: Trip-Hop	123: A Cappella
28: Vocal	124: Euro-House
29: Jazz+Funk	125: Dance Hall
30: Fusion	126: Goa
31: Trance	127: Drum & Bass
32: Classical	128: Club-House
33: Instrumental	129: Hardcore
34: Acid	130: Terror
35: House	131: Indie
36: Game	132: BritPop
37: Sound Clip	133: Negerpunk
38: Gospel	134: Polsk Punk
39: Noise	135: Beat
40: AlternRock	136: Christian Gangsta Rap
41: Bass	137: Heavy Metal
42: Soul	138: Black Metal
43: Punk	139: Crossover
44: Space	140: Contemporary Christian
45: Meditative	141: Christian Rock
46: Instrumental Pop	142: Merengue
47: Instrumental Rock	143: Salsa
48: Ethnic	144: Thrash Metal
49: Gothic	145: Anime
50: Darkwave	146: JPop
51: Techno-Industrial	147: Synthpop
52: Electronic	148: Abstract
53: Pop-Folk	149: Art Rock
54: Eurodance	150: Baroque
55: Dream	151: Bhangra
56: Southern Rock	152: Big Beat
57: Comedy	153: Breakbeat
58: Cult	154: Chillout
59: Gangsta Rap	155: Downtempo
60: Top 40	156: Dub
61: Christian Rap	157: EBM
62: Pop / Funk	158: Eclectic
63: Jungle	159: Electro
64: Native American	160: Electroclash
65: Cabaret	161: Emo

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66: New Wave	162: Experimental
67: Psychedelic	163: Garage
68: Rave	164: Global
69: Showtunes	165: IDM
70: Trailer	166: Illbient
71: Lo-Fi	167: Industro-Goth
72: Tribal	168: Jam Band
73: Acid Punk	169: Krautrock
74: Acid Jazz	170: Leftfield
75: Polka	171: Lounge
76: Retro	172: Math Rock
77: Musical	173: New Romantic
78: Rock & Roll	174: Nu-Breakz
79: Hard Rock	175: Post-Punk
80: Folk	176: Post-Rock
81: Folk-Rock	177: Psytrance
82: National Folk	178: Shoegaze
83: Swing	179: Space Rock
84: Fast Fusion	180: Trop Rock
85: Bebob	181: World Music
86: Latin	182: Neoclassical
87: Revival	183: Audiobook
88: Celtic	184: Audio Theatre
89: Bluegrass	185: Neue Deutsche Welle
90: Avantgarde	186: Podcast
91: Gothic Rock	187: Indie Rock
92: Progressive Rock	188: G-Funk
93: Psychedelic Rock	189: Dubstep
94: Symphonic Rock	190: Garage Rock
95: Slow Rock	191: Psybient

## lameinfo (xing) - Lame (Xing) Header Information

*Outputs lame header (if one exists) for file.*

### Names

lameinfo (aliases: xing)

### Description

The 'lame' (or xing) header provides extra information about the mp3 that is useful to players and encoders but not officially part of the mp3 specification. Variable bit rate mp3s, for example, use this header.

For more details see [here](#)

## Options

```
No extra options supported
```

## Example

```
$ eyeD3 -P lameinfo test/data/notag-vbr.mp3

.../home/travis/devel/eyeD3/git/test/data/notag-vbr.mp3[ 5.98 MB ]
-----
Encoder Version      : LAME3.91
LAME Tag Revision   : 0
VBR Method          : Variable Bitrate method2 (mtrh)
Lowpass Filter      : 19500
Encoding Flags      : --nspsytune
ATH Type            : 3
Bitrate (Minimum)   : 0
Encoder Delay       : 576 samples
Encoder Padding     : 1848 samples
Noise Shaping       : 1
Stereo Mode         : Joint
Unwise Settings     : False
Sample Frequency    : 44.1 kHz
MP3 Gain            : 0 (+0.0 dB)
Preset              : Unknown
Surround Info       : None
Music Length        : 5.98 MB
Music CRC-16        : 675C
LAME Tag CRC-16     : 5B62
```

## Mime-types Plugin

*eyeD3 plugin*

### Names

mimetypes

### Description

### Options

```
--status      Print dot status.
--parse-files Parse each file.
--hide-notfound
```

## nfo - (I)NFO File Generator

Create NFO files for each directory scanned.

### Names

nfo

### Description

Each directory scanned is treated as an album and a NFO file is written to standard out.

NFO files are often found in music archives.

### Options

```
No extra options supported
```

### Example

```
$ eyeD3 -P nfo ~/music/Nine\ Inch\ Nails/1992\ -\ Broken/
```

```
Artist   : Nine Inch Nails
Album    : Broken
Released : 1992
Genre    : Noise

Source   :
Encoder  : LAME3.95
Codec    : mp3
Bitrate  : ~167 K/s @ 44100 Hz, Joint stereo
Tag      : ID3 v2.3
```

Ripped By:

Track Listing

```
-----
1. Pinion                (01:02)
2. Wish                  (03:46)
3. Last                  (04:44)
4. Help Me I am in Hell (01:56)
5. Happiness in Slavery (05:21)
6. Gave Up               (04:08)
7. Physical (You're So) (05:29)
8. Suck                  (05:07)
```

```
Total play time : 31:33
Total size       : 37.74 MB
```

```
=====
```

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```
.NFO file created with eyeD3 0.7.0 on Tue Oct 23 23:44:27 2012
For more information about eyeD3 go to http://eyeD3.nicfit.net/
=====
```

## pymod - Use simple python modules as eyeD3 plugins

*Imports a Python module file and calls its functions for the the various plugin events.*

### Names

pymod

### Description

If no module if provided a file named eyeD3mod.py in the current working directory is imported. If any of the following methods exist they still be invoked:

**def audioFile(audio\_file):** ““Invoked for every audio file that is encountered. The audio\_file is of type eyed3.core.AudioFile; currently this is the concrete type eyed3.mp3.Mp3AudioFile.”” pass

**def audioDir(d, audio\_files, images):** ““This function is invoked for any directory (d) that contains audio (audio\_files) or image (images) media.”” pass

**def done():** ““This method is invoke before successful exit.”” pass

### Options

```
-m MODULE, --module MODULE
                        The Python module module to invoke. The default is ./eyeD3mod.py
```

### Example

TODO

## stats - Music Collection Statistics

*Computes statistics for all audio files scanned.*

## Names

stats

## Description

## Options

```
--verbose Show details for each file with rule violations.
```

## xep-118 - Jabber (XMPP) Tune Format

*Outputs all tags in XEP-118 XML format. (see: <http://xmpp.org/extensions/xep-0118.html>)*

## Names

xep-118

## Description

## Options

```
--no-pretty-print Output without new lines or indentation.
```

## YAML Plugin

*Outputs all tags as YAML.*

## Names

yaml

## Description

## Options

```
No extra options supported
```

## Configuration Files

Command line options can be read from a configuration file using the `-C/--config` option. It expects a path to an Ini file contain sections with option values. A sample config file, for example:

```
# eyeD3 config file.
# default: ~/.eyeD3/config.ini
# override using -c/--config
[default]

# Default plugin to use.
plugin =

# General options to always use. These can be plugin specific but SHOULD NOT be.
# Any -C/--config and -P/--plugin options are ignored.
options =
#options = --pdb

# Extra directories to load plugins. Separated by ':'
plugin_path = ~/.eyeD3

# vim: set filetype=dosini:
```

If the file `${HOME}/.eyeD3/config.ini` exists it is loaded each time eyeD3 is run and the values take effect. This can be disabled with `--no-config`.

## Custom Plugins

Plugins are any class found in the plugin search path (see ‘plugin\_path’ in *Configuration Files*) that inherits from `eyed3.plugins.Plugin`. The interface is simple, the basic attributes of the plugin (name, description, etc.) are set using member variables and for each file eyeD3 traverses (using the given path(s) and optional `--exclude` options) the method `handleFile` will be called. The return value of this call is ignored, but if you wish to halt processing of files a `StopIteration` exception can be raised. Here is where the plugin should do whatever interesting it things it would like to do with the files it is passed. When all input files are processed the method `handleDone` is called and the program exits. Below is an ‘echo’ plugin that prints each filename/path and the file’s mime-type.

```
import eyed3
from eyed3.plugins import Plugin
from eyed3.utils import guessMimetype

class EchoPlugin(eyed3.plugins.Plugin):
    NAMES = ["echo"]
    SUMMARY = u"Displays each filename and mime-type passed to the plugin"

    def handleFile(self, f):
        print("%s\t[ %s ]" % (f, guessMimetype(f)))
```

Many plugins might prefer to deal with only file types eyeD3 natively supports, namely mp3 audio files. To automatically load `eyed3.core.AudioFile` objects using `eyed3.core.load()` inherit from the `eyed3.plugins.LoaderPlugin` class. In this model the member `self.audio_file` is initialized to the parsed mp3/id3 objects. If the file is not a supported audio file type the value is set to `None`.

In the next example the `LoaderPlugin` is used to set the `audio_file` member variable which contains the info and tag objects.

```
from eyed3.plugins import LoaderPlugin

class Echo2Plugin(LoaderPlugin):
    SUMMARY = u"Displays details about audio files"
    NAMES = ["echo2"]

    def handleFile(self, f):
        super(Echo2Plugin, self).handleFile(f)

        if not self.audio_file:
            print("%s: Unsupported type" % f)
        else:
            print("Audio info: %s Metadata tag: %s " %
                  ("yes" if self.audio_file.info else "no",
                   "yes" if self.audio_file.tag else "no"))
```

**See also:**

*Configuration Files*, *eyed3.plugins.Plugin*, *eyed3.plugins.classic.ClassicPlugin*, *eyed3.mp3.Mp3AudioInfo*, *eyed3.id3.tag.Tag*

## Documenting Plugins

Plugin docs are generated. Start each plugin with the following template; **but replace the square brackets with curly.\***

```
Example Plugin
=====

.. [[cog
.. cog.out(cog_pluginHelp("example-plugin"))
.. ]]

.. [[end]]
```

The documentation build process will run `eyeD3 -plugin example-plugin` and generate docs from the command line options and plugin metadata such as the description. The plugin index in *cli.rst* should also be updated to include the new plugin.

## 4.2.2 eyed3 module

**eyed3 package**

**Subpackages**

**eyed3.id3 package**

**Submodules**

## eyed3.id3.apple module

Here lies Apple frames, all of which are non-standard. All of these would have been standard user text frames by anyone not being a bastard, on purpose.

**class** eyed3.id3.apple.**PCST** (*\_=None*)

Bases: *eyed3.id3.frames.Frame*

Indicates a podcast. The 4 bytes of data is undefined, and is typically all 0.

**render** ()

**class** eyed3.id3.apple.**TKWD** (*\_=None*)

Bases: *eyed3.id3.frames.TextFrame*

Podcast keywords.

**class** eyed3.id3.apple.**TDES** (*\_=None*)

Bases: *eyed3.id3.frames.TextFrame*

Podcast description. One encoding byte followed by text per encoding.

**class** eyed3.id3.apple.**TGID** (*\_=None*)

Bases: *eyed3.id3.frames.TextFrame*

Podcast URL of the audio file. This should be a W frame!

**class** eyed3.id3.apple.**WFED** (*\_=None, url=""*)

Bases: *eyed3.id3.frames.TextFrame*

Another podcast URL, the feed URL it is said.

**class** eyed3.id3.apple.**GRP1** (*\_=None*)

Bases: *eyed3.id3.frames.TextFrame*

Apple grouping, could be a TIT1 conversion.

## eyed3.id3.frames module

**exception** eyed3.id3.frames.**FrameException** (*\*args*)

Bases: *eyed3.Error*

**class** eyed3.id3.frames.**Frame** (*\*\*kwargs*)

Bases: *object*

**property** header

**parse** (*\*\*kwargs*)

**render** ()

**static** decompress (*data*)

**static** compress (*data*)

**static** decrypt (*data*)

**static** encrypt (*data*)

**property** text\_delim

**property** encoding

```

class eyed3.id3.frames.TextFrame (**kwargs)
    Bases: eyed3.id3.frames.Frame

    Text frames. Data string format: encoding (one byte) + text

    property text

    parse (data, frame_header)

    render ()

class eyed3.id3.frames.UserTextFrame (**kwargs)
    Bases: eyed3.id3.frames.TextFrame

    property description

    parse (data, frame_header)
        Data string format: encoding (one byte) + description + b"" + text

    render ()

class eyed3.id3.frames.DateFrame (id, date='')
    Bases: eyed3.id3.frames.TextFrame

    parse (data, frame_header)

    property date

class eyed3.id3.frames.UrlFrame (id, url='')
    Bases: eyed3.id3.frames.Frame

    property url

    parse (data, frame_header)

    render ()

class eyed3.id3.frames.UserUrlFrame (**kwargs)
    Bases: eyed3.id3.frames.UrlFrame

    Data string format: encoding (one byte) + description + b"" + url (iso-8859-1)

    property description

    parse (data, frame_header)

    render ()

class eyed3.id3.frames.ImageFrame (**kwargs)
    Bases: eyed3.id3.frames.Frame

    OTHER = 0

    ICON = 1

    OTHER_ICON = 2

    FRONT_COVER = 3

    BACK_COVER = 4

    LEAFLET = 5

    MEDIA = 6

    LEAD_ARTIST = 7

    ARTIST = 8

```

```

CONDUCTOR = 9
BAND = 10
COMPOSER = 11
LYRICIST = 12
RECORDING_LOCATION = 13
DURING_RECORDING = 14
DURING_PERFORMANCE = 15
VIDEO = 16
BRIGHT_COLORED_FISH = 17
ILLUSTRATION = 18
BAND_LOGO = 19
PUBLISHER_LOGO = 20
MIN_TYPE = 0
MAX_TYPE = 20
URL_MIME_TYPE = b'-->'
URL_MIME_TYPE_STR = '-->'
URL_MIME_TYPE_VALUES = (b'-->', '-->')
property description
property mime_type
property picture_type
parse (data, frame_header)
render ()
static picTypeToString (t)
static stringToPicType (s)
makeFileName (name=None)
class eyed3.id3.frames.ObjectFrame (**kwargs)
    Bases: eyed3.id3.frames.Frame
    property description
    property mime_type
    property filename
    parse (data, frame_header)
        Parse the frame from data bytes using details from frame_header.

        Data string format: <Header for 'General encapsulated object', ID: "GEOB"> Text encoding $xx MIME
        type <text string> $00 Filename <text string according to encoding> $00 (00) Content description <text
        string according to encoding> $00 (00) Encapsulated object <binary data>

    render ()

```

```

class eyed3.id3.frames.PrivateFrame (id=b'PRIV', owner_id=b'', owner_data=b'')
    Bases: eyed3.id3.frames.Frame
    PRIV
    parse (data, frame_header)
    render ()

class eyed3.id3.frames.MusicCDIdFrame (id=b'MCDI', toc=b'')
    Bases: eyed3.id3.frames.Frame
    property toc
    parse (data, frame_header)

class eyed3.id3.frames.PlayCountFrame (id=b'PCNT', count=0)
    Bases: eyed3.id3.frames.Frame
    parse (data, frame_header)
    render ()

class eyed3.id3.frames.PopularityFrame (id=b'POPM', email=b'', rating=0, count=0)
    Bases: eyed3.id3.frames.Frame
    Frame type for 'POPM' frames; popularity. Frame format: <Header for 'Popularimeter', ID: "POPM"> Email
    to user <text string> $00 Rating $xx Counter $xx xx xx xx (xx ...)
    property rating
    property email
    property count
    parse (data, frame_header)
    render ()

class eyed3.id3.frames.UniqueFileIDFrame (id=b'UFID', owner_id=b'', uniq_id=b'')
    Bases: eyed3.id3.frames.Frame
    property owner_id
    property uniq_id
    parse (data, frame_header)
        Data format Owner identifier <text string> $00 Identifier up to 64 bytes binary data>
    render ()

class eyed3.id3.frames.LanguageCodeMixin
    Bases: object
    property lang

class eyed3.id3.frames.DescriptionLangTextFrame (**kwargs)
    Bases: eyed3.id3.frames.Frame, eyed3.id3.frames.LanguageCodeMixin
    property description
    property text
    parse (data, frame_header)
    render ()

```



```
class eyed3.id3.frames.CommentFrame (id=b'COMM', description="", lang=b'eng', text="")
    Bases: eyed3.id3.frames.DescriptionLangTextFrame
```

```
class eyed3.id3.frames.LyricsFrame (id=b'USLT', description="", lang=b'eng', text="")
    Bases: eyed3.id3.frames.DescriptionLangTextFrame
```

```
class eyed3.id3.frames.TermsOfUseFrame (**kwargs)
    Bases: eyed3.id3.frames.Frame, eyed3.id3.frames.LanguageCodeMixin

    property text
    parse (data, frame_header)
    render ()
```

```
class eyed3.id3.frames.TocFrame (**kwargs)
    Bases: eyed3.id3.frames.Frame
```

Table of content frame. There may be more than one, but only one may have the top-level flag set.

Data format: Element ID: <string>TOC flags: %000000ab Entry count: %xx Child elem IDs: <string>(... num entry count) Description: TIT2 frame (optional)

```
TOP_LEVEL_FLAG_BIT = 6
```

```
ORDERED_FLAG_BIT = 7
```

```
parse (data, frame_header)
```

```
render ()
```

```
class eyed3.id3.frames.RelVolAdjFrameV24 (fid=b'RVA2', identifier=None, channel_type=None, adjustment=None, peak=None)
    Bases: eyed3.id3.frames.Frame
```

```
CHANNEL_TYPE_OTHER = 0
```

```
CHANNEL_TYPE_MASTER = 1
```

```
CHANNEL_TYPE_FRONT_RIGHT = 2
```

```
CHANNEL_TYPE_FRONT_LEFT = 3
```

```
CHANNEL_TYPE_BACK_RIGHT = 4
```

```
CHANNEL_TYPE_BACK_LEFT = 5
```

```
CHANNEL_TYPE_FRONT_CENTER = 6
```

```
CHANNEL_TYPE_BACK_CENTER = 7
```

```
CHANNEL_TYPE_BASS = 8
```

```
property identifier
```

```
property channel_type
```

```
property adjustment
```

```
property peak
```

```
parse (data, frame_header)
```

```
render ()
```

```
class eyed3.id3.frames.RelVolAdjFrameV23 (fid=b'RVAD')
    Bases: eyed3.id3.frames.Frame
```

```
FRONT_CHANNEL_RIGHT_BIT = 0
```

```
FRONT_CHANNEL_LEFT_BIT = 1
BACK_CHANNEL_RIGHT_BIT = 2
BACK_CHANNEL_LEFT_BIT = 3
FRONT_CENTER_CHANNEL_BIT = 4
BASS_CHANNEL_BIT = 5
CHANNEL_DEFN = [('front_right', 0), ('front_left', 1), ('front_right_peak', None), ('f
class VolumeAdjustments(master: int = 0, master_peak: int = 0, front_right: int = 0, front_left:
    int = 0, front_right_peak: int = 0, front_left_peak: int = 0, back_right:
    int = 0, back_left: int = 0, back_right_peak: int = 0, back_left_peak:
    int = 0, front_center: int = 0, front_center_peak: int = 0, back_center:
    int = 0, back_center_peak: int = 0, bass: int = 0, bass_peak: int = 0,
    other: int = 0, other_peak: int = 0)
    Bases: object
    master: int = 0
    master_peak: int = 0
    front_right: int = 0
    front_left: int = 0
    front_right_peak: int = 0
    front_left_peak: int = 0
    back_right: int = 0
    back_left: int = 0
    back_right_peak: int = 0
    back_left_peak: int = 0
    front_center: int = 0
    front_center_peak: int = 0
    back_center: int = 0
    back_center_peak: int = 0
    bass: int = 0
    bass_peak: int = 0
    other: int = 0
    other_peak: int = 0
    property has_master_channel
    property has_front_channel
    property has_back_channel
    property has_front_center_channel
    property has_back_center_channel
    property has_bass_channel
    property has_other_channel
```

```

    boundsCheck ()
    setChannelAdj (chan_type, value)
    setChannelPeak (chan_type, value)
toV24 () → list
    Return a list of RVA2 frames
parse (data, frame_header)
render ()
class eyed3.id3.frames.StartEndTuple (start, end)
    Bases: tuple
    A 2-tuple, with names 'start' and 'end'.
property end
    Alias for field number 1
property start
    Alias for field number 0
class eyed3.id3.frames.ChapterFrame (id=b'CHAP', element_id=None, times=None, offsets=None, sub_frames=None)
    Bases: eyed3.id3.frames.Frame
    Frame type for chapter/section of the audio file. <ID3v2.3 or ID3v2.4 frame header, ID: "CHAP"> (10 bytes)
    Element ID <text string> $00 Start time $xx xx xx xx End time $xx xx xx xx Start offset $xx xx xx xx End
    offset $xx xx xx xx <Optional embedded sub-frames>
NO_OFFSET = 4294967295
    No offset value, aka '0xff0xff0xff0xff'
parse (data, frame_header)
render ()
property title
property subtitle
property user_url
class eyed3.id3.frames.FrameSet
    Bases: dict
parse (f, tag_header, extended_header)
    Read frames starting from the current read position of the file object. Returns the amount of padding which
    occurs after the tag, but before the audio content. A return value of 0 does not mean error.
getAllFrames ()
    Return all the frames in the set as a list. The list is sorted in an arbitrary but consistent order.
setTextFrame (**kwargs)
eyed3.id3.frames.deunsyncData (data)
eyed3.id3.frames.createFrame (tag_header, frame_header, data)
eyed3.id3.frames.decodeUnicode (bites, encoding)
eyed3.id3.frames.splitUnicode (data, encoding)
eyed3.id3.frames.id3EncodingToString (encoding)
eyed3.id3.frames.stringToEncoding (s)

```

`eyed3.id3.frames.map2_2FrameId(orig_id)`

### eyed3.id3.headers module

**class** `eyed3.id3.headers.TagHeader` (*version=(2, 4, 0)*)

Bases: `object`

**SIZE** = 10

**clear**()

**property** `version`

**property** `major_version`

**property** `minor_version`

**property** `rev_version`

**parse**(*f*)

Parse an ID3 v2 header starting at the current position of *f*.

If a header is parsed *True* is returned, otherwise *False*. If a header is found but malformed an `eyed3.id3.tag.TagException` is thrown.

**render**(*tag\_len=None*)

**class** `eyed3.id3.headers.ExtendedTagHeader`

Bases: `object`

**RESTRICT\_TAG\_SZ\_LARGE** = 0

**RESTRICT\_TAG\_SZ\_MED** = 1

**RESTRICT\_TAG\_SZ\_SMALL** = 2

**RESTRICT\_TAG\_SZ\_TINY** = 3

**RESTRICT\_TEXT\_ENC\_NONE** = 0

**RESTRICT\_TEXT\_ENC\_UTF8** = 1

**RESTRICT\_TEXT\_LEN\_NONE** = 0

**RESTRICT\_TEXT\_LEN\_1024** = 1

**RESTRICT\_TEXT\_LEN\_128** = 2

**RESTRICT\_TEXT\_LEN\_30** = 3

**RESTRICT\_IMG\_ENC\_NONE** = 0

**RESTRICT\_IMG\_ENC\_PNG\_JPG** = 1

**RESTRICT\_IMG\_SZ\_NONE** = 0

**RESTRICT\_IMG\_SZ\_256** = 1

**RESTRICT\_IMG\_SZ\_64** = 2

**RESTRICT\_IMG\_SZ\_64\_EXACT** = 3

**property** `update_bit`

**property** `crc_bit`

**property** `crc`

```

property restrictions_bit
property tag_size_restriction
property tag_size_restriction_description
property text_enc_restriction
property text_enc_restriction_description
property text_length_restriction
property text_length_restriction_description
property image_enc_restriction
property image_enc_restriction_description
property image_size_restriction
property image_size_restriction_description
render (version, frame_data, padding=0)

```

```

parse (fp, version)

```

Parse an ID3 v2 extended header starting at the current position of `fp` and per the format defined by `version`. This method should only be called when the presence of an extended header is known since it moves the file position. If a header is found but malformed an `eyed3.id3.tag.TagException` is thrown. The return value is `None`.

```

class eyed3.id3.headers.FrameHeader (**kwargs)

```

```

    Bases: object

```

A header for each and every ID3 frame in a tag.

```

TAG_ALTER = None

```

```

FILE_ALTER = None

```

```

READ_ONLY = None

```

```

COMPRESSED = None

```

```

ENCRYPTED = None

```

```

GROUPED = None

```

```

UNSYNC = None

```

```

DATA_LEN = None

```

```

copyFlags (rhs)

```

```

property major_version

```

```

property minor_version

```

```

property version

```

```

property tag_alter

```

```

property file_alter

```

```

property read_only

```

```

property compressed

```

```

property encrypted

```

```

property grouped

```

```
property unsync
property data_length_indicator
render (data_size)
static parse (f, version)
```

### eyed3.id3.tag module

```
exception eyed3.id3.tag.TagException (*args)
    Bases: eyed3.Error
```

```
class eyed3.id3.tag.Tag (**kwargs)
    Bases: eyed3.core.Tag
```

```
clear ()
    Reset all tag data.
parse (fileobj, version=(3, None, None))
```

```
property version
```

```
isV1 ()
    Test ID3 major version for v1.x
```

```
isV2 ()
    Test ID3 major version for v2.x
```

```
setTextFrame (**kwargs)
```

```
getTextFrame (fid: bytes)
```

```
property composer
```

```
property comments
```

```
property bpm
```

```
property play_count
```

```
property publisher
```

```
property cd_id
```

```
property images
```

```
property encoding_date
```

```
property best_release_date
```

This method tries its best to return a date of some sort, amongst all the possible date frames. The order of preference for a release date is 1) date of original release 2) date of this versions release 3) the recording date. Or None is returned.

```
getBestDate (prefer_recording_date=False)
```

This method returns a date of some sort, amongst all the possible date frames. The order of preference is:

- 1) date of original release
- 2) date of this versions release
- 3) the recording date.

Unless `prefer_recording_date` is True in which case the order is 3, 1, 2.

None will be returned if no dates are available.

**property release\_date**

The date the audio was released. This is NOT the original date the work was released, instead it is more like the pressing or version of the release. Original release date is usually what is intended but many programs use this frame and/or don't distinguish between the two.

NOTE: ID3v2.3 only has original release date, so setting `release_date` is the same as `original_release_value`; they both set TORY.

**property original\_release\_date**

The date the work was originally released.

NOTE: ID3v2.3 only stores year. If the Date object is more precise it is store in *XDOR*, and XDOR is preferred when accessing. The year-only date is stored in the standard *TORY* frame as well.

**property recording\_date**

The date of the recording. Many applications use this for release date regardless of the fact that this value is rarely known, and release dates are more correct.

**property tagging\_date****property lyrics****property disc\_num****property objects****property privates****property popularities****property genre****property non\_std\_genre****property user\_text\_frames****property commercial\_url****property copyright\_url****property audio\_file\_url****property audio\_source\_url****property artist\_url****property internet\_radio\_url****property payment\_url****property publisher\_url****property user\_url\_frames****property unique\_file\_ids****property terms\_of\_use****property copyright****property encoded\_by**

**save** (*filename=None, version=None, encoding=None, backup=False, preserve\_file\_time=False, max\_padding=None*)

Save the tag. If `filename` is not give the value from the `file_info` member is used, or a `TagException` is raised. The `version` argument can be used to select an ID3 version other than

the version read. Select text encoding with ``encoding or use the existing (or default) encoding. If backup is True the original file is preserved; likewise if preserve\_file\_time is True the file's modification/access times are not updated.

**static remove** (*filename, version=(3, None, None), preserve\_file\_time=False*)

**property chapters**

**property table\_of\_contents**

**property album\_type**

**property artist\_origin**

Returns None or a *ArtistOrigin* dataclass: (city, state, country) Any may be None.

**frameiter** (*fids=None*)

A iterator for tag frames. If *fids* is passed it must be a list of frame IDs to filter and return.

**property original\_artist**

**class** eyed3.id3.tag.**FileInfo** (*file\_name, tagsz=0, tpadd=0*)

Bases: *object*

This class is for storing information about a parsed file. It contains info such as the filename, original tag size, and amount of padding; all of which can make rewriting faster.

**initStatTimes** ()

**touch** (*times*)

*times* is a 2-tuple of (atime, mtime).

**class** eyed3.id3.tag.**AccessorBase** (*fid, fs, match\_func=None*)

Bases: *object*

**get** (*\*args, \*\*kwargs*)

**remove** (*\*args, \*\*kwargs*)

Returns the removed item or None if not found.

**class** eyed3.id3.tag.**DltAccessor** (*FrameClass, fid, fs*)

Bases: *eyed3.id3.tag.AccessorBase*

Access matching tag frames by “description” and/or “lang” values.

**set** (*\*\*kwargs*)

**remove** (*\*\*kwargs*)

**get** (*\*\*kwargs*)

**class** eyed3.id3.tag.**CommentsAccessor** (*fs*)

Bases: *eyed3.id3.tag.DltAccessor*

**class** eyed3.id3.tag.**LyricsAccessor** (*fs*)

Bases: *eyed3.id3.tag.DltAccessor*

**class** eyed3.id3.tag.**ImagesAccessor** (*fs*)

Bases: *eyed3.id3.tag.AccessorBase*

**set** (*\*\*kwargs*)

**remove** (*\*\*kwargs*)

**get** (*\*\*kwargs*)

**class** eyed3.id3.tag.**ObjectsAccessor** (*fs*)

Bases: *eyed3.id3.tag.AccessorBase*



```

    set (**kwargs)
    remove (**kwargs)
    get (**kwargs)
class eyed3.id3.tag.PrivatesAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (data, owner_id)
    remove (owner_id)
        Returns the removed item or None if not found.
    get (owner_id)
class eyed3.id3.tag.UserTextsAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (**kwargs)
    remove (**kwargs)
    get (**kwargs)
class eyed3.id3.tag.UniqueFileIdAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (data, owner_id)
    remove (owner_id)
        Returns the removed item or None if not found.
    get (owner_id)
class eyed3.id3.tag.UserUrlsAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (**kwargs)
    remove (**kwargs)
    get (**kwargs)
class eyed3.id3.tag.PopularitiesAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (email, rating, play_count)
    remove (email)
        Returns the removed item or None if not found.
    get (email)
class eyed3.id3.tag.ChaptersAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (element_id, times, offsets=(None, None), sub_frames=None)
    remove (element_id)
        Returns the removed item or None if not found.
    get (element_id)
class eyed3.id3.tag.TocAccessor (fs)
    Bases: eyed3.id3.tag.AccessorBase
    set (**kwargs)

```

**remove** (*element\_id*)  
 Returns the removed item or None if not found.

**get** (*element\_id*)

**class** eyed3.id3.tag.TagTemplate (*pattern, path\_friendly='-', dotted\_dates=False*)  
 Bases: `string.Template`

**pattern** = `re.compile('\n \\$(?:\n (?P<escaped>\\$) | # Escape sequence of two delimiters`

**idpattern** = `'[_a-z][_a-z0-9:]*'`

**substitute** (*tag, zeropad=True*)

**safe\_substitute** (*tag, zeropad=True*)

## Module contents

**eyed3.id3.isValidVersion** (*v, fully\_qualified=False*)

Check the tuple *v* against the list of valid ID3 version constants. If *fully\_qualified* is True it is enforced that there are 3 components to the version in *v*. Returns True when valid and False otherwise.

**eyed3.id3.normalizeVersion** (*v*)

If version tuple *v* is of the non-specific type (v1 or v2, any, etc.) a fully qualified version is returned.

**eyed3.id3.versionToString** (*v*)

Conversion version tuple *v* to a string description.

**exception** eyed3.id3.GenreException (*\*args*)

Bases: `eyed3.Error`

Exception type for exceptions related to genres.

**class** eyed3.id3.Genre (*name=None, id: int = None, genre\_map=None*)

Bases: `object`

A genre in terms of a name and an id. Only when name is a “standard” genre (as defined by ID3 v1) will id be a value other than None.

Constructor takes an optional name and ID. If *id* is provided the *name*, regardless of value, is set to the string the id maps to. Likewise, if *name* is passed and is a standard genre the *id* is set to the correct value. Any invalid id values cause a `ValueError` to be raised. Genre names that are not in the standard list are still accepted but the *id* value is set to `None`.

### property id

The Genre’s id property. When setting the value is strictly enforced and if the value is not a valid genre code a `ValueError` is raised. Otherwise the id is set **and** the name property is updated to the code’s string name.

### property name

The Genre’s name property. When setting the value the name is looked up in the standard genre map and if found the id property is set to the numeric value **and** the name is normalized to the string found in the map. Non standard genres are set (with a warning log) and the id is set to `None`. It is valid to set the value to `None`.

**static parse** (*g\_str, id3\_std=True*)

Parses genre information from *genre\_str*. The following formats are supported: 01, 2, 23, 125 - ID3 v1.x style. (01), (2), (129)Hardcore, (9)Metal, Indie - ID3v2 style with and without

refinement.

Raises `GenreException` when an invalid string is passed.

```
class eyed3.id3.GenreMap(*args)
```

```
Bases: dict
```

Classic genres defined around ID3 v1 but suitable anywhere. This class is used primarily as a way to map numeric genre values to a string name. Genre strings on the other hand are not required to exist in this list.

The optional `*args` are passed directly to the `dict` constructor.

```
GENRE_MIN = 0
```

```
GENRE_MAX = 191
```

```
ID3_GENRE_MIN = 0
```

```
ID3_GENRE_MAX = 79
```

```
WINAMP_GENRE_MIN = 80
```

```
WINAMP_GENRE_MAX = 191
```

```
GENRE_ID3V1_MAX = 255
```

```
get (key)
```

Return the value for key if key is in the dictionary, else default.

```
property ids
```

```
iter ()
```

```
class eyed3.id3.TagFile(path, version=(3, None, None))
```

```
Bases: eyed3.core.AudioFile
```

A shim class for dealing with files that contain only ID3 data, no audio.

Construct with a path and invoke `_read`. All other members are set to `None`.

```
initTag (version=(2, 4, 0))
```

Add a `id3.Tag` to the file (removing any existing tag if one exists).

## eyed3.mp3 package

### Submodules

#### eyed3.mp3.headers module

```
eyed3.mp3.headers.isValidHeader (header)
```

Determine if header (an integer, 4 bytes compared) is a valid mp3 frame header.

```
eyed3.mp3.headers.findHeader (fp, start_pos=0)
```

Locate the first mp3 header in file stream `fp` starting a offset `start_pos` (defaults to 0). Returned is a 3-tuple containing the offset where the header was found, the header as an integer, and the header as 4 bytes. If no header is found `header_int` will equal 0.

```
eyed3.mp3.headers.timePerFrame (mp3_header, vbr)
```

Computes the number of seconds per mp3 frame. It can be used to compute overall playtime and bitrate. The mp3 layer and sample rate from `mp3_header` are used to compute the number of seconds (fractional float point value) per mp3 frame. Be sure to set `vbr` `True` when dealing with VBR, otherwise playtimes may be incorrect.

```
eyed3.mp3.headers.compute_time_per_frame (mp3_header)
```

Deprecated since version 0.9a2: This will be removed in 1.0. Use `timePerFrame` instead

```
class eyed3.mp3.headers.Mp3Header (header_data=None)
    Bases: object
```

Header container for MP3 frames.

```
    decode (header)
```

```
class eyed3.mp3.headers.VbriHeader
    Bases: object
```

```
    decode (frame)
```

```
class eyed3.mp3.headers.XingHeader
    Bases: object
```

Header class for the Xing header extensions.

```
    decode (frame)
```

```
class eyed3.mp3.headers.LameHeader (frame)
    Bases: dict
```

Mp3 Info tag (AKA LAME Tag)

Lame (and some other encoders) write a tag containing various bits of info about the options used at encode time. If available, the following are parsed and stored in the LameHeader dict:

encoder\_version: short encoder version [str] tag\_revision: revision number of the tag [int] vbr\_method: VBR method used for encoding [str] lowpass\_filter: lowpass filter frequency in Hz [int] replaygain: if available, radio and audiofile gain (see below) [dict] encoding\_flags: encoding flags used [list] nogap: location of gaps when -nogap was used [list] ath\_type: ATH type [int] bitrate: bitrate and type (Constant, Target, Minimum) [tuple] encoder\_delay: samples added at the start of the mp3 [int] encoder\_padding: samples added at the end of the mp3 [int] noise\_shaping: noise shaping method [int] stereo\_mode: stereo mode used [str] unwise\_settings: whether unwise settings were used [boolean] sample\_freq: source sample frequency [str] mp3\_gain: mp3 gain adjustment (rarely used) [float] preset: preset used [str] surround\_info: surround information [str] music\_length: length in bytes of original mp3 [int] music\_crc: CRC-16 of the mp3 music data [int] infotag\_crc: CRC-16 of the info tag [int]

Prior to ~3.90, Lame simply stored the encoder version in the first frame. If the infotag\_crc is invalid, then we try to read this version string. A simple way to tell if the LAME Tag is complete is to check for the infotag\_crc key.

Replay Gain data is only available since Lame version 3.94b. If set, the replaygain dict has the following structure:

```
code peak_amplitude: peak signal amplitude [float] radio:
```

```
    name: name of the gain adjustment [str] adjustment: gain adjustment [float] originator: originator
    of the gain adjustment [str]
```

```
    audiofile: [same as radio]
```

```
endcode
```

Note that as of 3.95.1, Lame uses 89dB as a reference level instead of the 83dB that is specified in the Replay Gain spec. This is not automatically compensated for. You can do something like this if you want:

```
code import    eyed3    af    =    eyed3.mp3.Mp3AudioFile('/path/to/some.mp3')    lamever    =
    af.lameTag['encoder_version']    name,    ver    =    lamever[:4],    lamever[4:]    gain    =
    af.lameTag['replaygain']['radio']['adjustment']    if name == 'LAME' and eyed3.mp3.lamevercmp(ver,
    '3.95') > 0:
```

```
    gain -= 6
```

encode

Radio and Audiofile Replay Gain are often referred to as Track and Album gain, respectively. See <http://replaygain.hydrogenaudio.org/> for further details on Replay Gain.

See <http://gabriel.mp3-tech.org/mp3infotag.html> for the gory details of the LAME Tag.

Read the LAME info tag. frame should be the first frame of an mp3.

```
ENCODER_FLAGS = {'NOGAP_NEXT': 4, 'NOGAP_PREV': 8, 'NSPSYTUNE': 1, 'NSSAFEJOINT': 2}
PRESETS = {0: 'Unknown', 410: 'V9', 420: 'V8', 430: 'V7', 440: 'V6', 450: 'V5',
REPLAYGAIN_NAME = {0: 'Not set', 1: 'Radio', 2: 'Audiofile'}
REPLAYGAIN_ORIGINATOR = {0: 'Not set', 1: 'Set by artist', 2: 'Set by user', 3: 'S
SAMPLE_FREQUENCIES = {0: '<= 32 kHz', 1: '44.1 kHz', 2: '48 kHz', 3: '> 48 kHz'}
STEREO_MODES = {0: 'Mono', 1: 'Stereo', 2: 'Dual', 3: 'Joint', 4: 'Force', 5: 'A
SURROUND_INFO = {0: 'None', 1: 'DPL encoding', 2: 'DPL2 encoding', 3: 'Ambisonic e
VBR_METHODS = {0: 'Unknown', 1: 'Constant Bitrate', 2: 'Average Bitrate', 3: 'Vari
```

**decode** (*frame*)

Decode the LAME info tag.

`eyed3.mp3.headers.lamevercmp` (*x*, *y*)

Compare LAME version strings.

alpha and beta versions are considered older. Versions with sub minor parts or end with 'r' are considered newer.

#### Parameters

- **x** – The first version to compare.
- **y** – The second version to compare.

**Returns** Return negative if  $x < y$ , zero if  $x == y$ , positive if  $x > y$ .

## Module contents

**exception** `eyed3.mp3.Mp3Exception` (*\*args*)

Bases: `eyed3.Error`

Used to signal mp3-related errors.

**class** `eyed3.mp3.Mp3AudioInfo` (*file\_obj*, *start\_offset*, *tag*)

Bases: `eyed3.core.AudioInfo`

**property** `bit_rate_str`

**class** `eyed3.mp3.Mp3AudioFile` (*path*, *version*=(3, None, None))

Bases: `eyed3.core.AudioFile`

Audio file container for mp3 files.

Construct with a path and invoke `_read`. All other members are set to None.

**initTag** (*version*=(2, 4, 0))

Add a id3.Tag to the file (removing any existing tag if one exists).

**property** `tag`

Returns a concrete implementation of `eyed3.core.Tag`

## eyed3.plugins package

### Submodules

#### eyed3.plugins.art module

**class** eyed3.plugins.art.**ArtFile** (*file\_path*)

Bases: `object`

**property** `image_data`

**property** `mime_type`

**class** eyed3.plugins.art.**ArtPlugin** (*arg\_parser*)

Bases: `eyed3.plugins.LoaderPlugin`

Constructor. If `cache_files` is `True` (off by default) then each `AudioFile` is appended to `_file_cache` during `handleFile` and the list is cleared by `handleDirectory`.

**SUMMARY** = 'Art for albums, artists, etc.'

**DESCRIPTION** = ''

**NAMES** = ['art']

**start** (*args, config*)

Called after command line parsing but before any paths are processed. The `self.args` argument (the parsed command line) and `self.config` (the user config, if any) is set here.

**handleDirectory** (*d, \_*)

Override to make use of `self._file_cache`. By default the list is cleared, subclasses should consider doing the same otherwise every `AudioFile` will be cached.

**handleDone** ()

If no audio files were loaded this simply prints 'Nothing to do'.

eyed3.plugins.art.**pillImage** (*source*)

eyed3.plugins.art.**pillImageDetails** (*img*)

eyed3.plugins.art.**md5Data** (*data*)

eyed3.plugins.art.**md5File** (*file\_name*)

Compute md5 hash for contents of `file_name`.

#### eyed3.plugins.classic module

**class** eyed3.plugins.classic.**ClassicPlugin** (*arg\_parser*)

Bases: `eyed3.plugins.LoaderPlugin`

Constructor. If `cache_files` is `True` (off by default) then each `AudioFile` is appended to `_file_cache` during `handleFile` and the list is cleared by `handleDirectory`.

**SUMMARY** = 'Classic eyed3 interface for viewing and editing tags.'

**DESCRIPTION** = '\nAll PATH arguments are parsed and displayed. Directory paths are searched for audio files.'

**NAMES** = ['classic']

```

handleFile (f)
    Loads f and sets self.audio_file to an instance of eyed3.core.AudioFile or None if an
    error occurred or the file is not a recognized type.

    The *args and **kwargs are passed to eyed3.core.load().

printHeader (file_path)
printAudioInfo (info)
printTag (tag)
handleRemoves (tag)
handlePadding (tag)
handleEdits (tag)

```

### eyed3.plugins.display module

```

class eyed3.plugins.display.Pattern (text=None, sub_patterns=None)
    Bases: object

    output_for (audio_file)

    property sub_patterns

    static sub_pattern_classes (base_class)

    static pattern_class_parameters (pattern_class)

class eyed3.plugins.display.TextPattern (text)
    Bases: eyed3.plugins.display.Pattern

    SPECIAL_CHARACTERS = ['\\', '%', '$', ',', '(', ')', '=', '\n', '\t']
    SPECIAL_CHARACTERS_DESCRIPTIONS = ['\\', '%', '$', ',', '(', ')', '=', 'New line', '\t']

    output_for (audio_file)

class eyed3.plugins.display.ComplexPattern (name, parameters)
    Bases: eyed3.plugins.display.Pattern

    TYPE = 'unknown'
    NAMES = []
    DESCRIPTION = ''
    PARAMETERS = []

    class ExpectedParameter (name, **kwargs)
        Bases: object

    class Parameter (value, provided)
        Bases: object

    output_for (audio_file)

    property parameters

    property name

class eyed3.plugins.display.PlaceholderUsagePattern
    Bases: object

```

```
class eyed3.plugins.display.TagPattern (name, parameters)
    Bases: eyed3.plugins.display.ComplexPattern

    TYPE = 'tag'

class eyed3.plugins.display.ArtistTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['a', 'artist']
    DESCRIPTION = 'Artist'

class eyed3.plugins.display.AlbumTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['A', 'album']
    DESCRIPTION = 'Album'

class eyed3.plugins.display.AlbumArtistTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['b', 'album-artist']
    DESCRIPTION = 'Album artist'

class eyed3.plugins.display.ComposerTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['C', 'composer']
    DESCRIPTION = 'Composer'

class eyed3.plugins.display.TitleTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['t', 'title']
    DESCRIPTION = 'Title'

class eyed3.plugins.display.TrackTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['n', 'track']
    DESCRIPTION = 'Track number'

class eyed3.plugins.display.TrackTotalTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['N', 'track-total']
    DESCRIPTION = 'Total track number'

class eyed3.plugins.display.DiscTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['d', 'disc', 'disc-num']
    DESCRIPTION = 'Disc number'

class eyed3.plugins.display.DiscTotalTagPattern (name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['D', 'disc-total']
    DESCRIPTION = 'Total disc number'
```



```

class eyed3.plugins.display.GenreTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern
    NAMES = ['G', 'genre']
    DESCRIPTION = 'Genre'

class eyed3.plugins.display.GenreIdTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern
    NAMES = ['genre-id']
    DESCRIPTION = 'Genre ID'

class eyed3.plugins.display.YearTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern
    NAMES = ['Y', 'year']
    DESCRIPTION = 'Release year'

class eyed3.plugins.display.DescriptableTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern
    PARAMETERS = [description(None), language(None)]

class eyed3.plugins.display.CommentTagPattern(name, parameters)
    Bases: eyed3.plugins.display.DescriptableTagPattern
    NAMES = ['c', 'comment']
    PARAMETERS = [description(None), language(None)]
    DESCRIPTION = 'First comment that matches description and language.'

class eyed3.plugins.display.AllCommentsTagPattern(name, parameters)
    Bases: eyed3.plugins.display.DescriptableTagPattern, eyed3.plugins.display.
    PlaceholderUsagePattern
    NAMES = ['comments']
    PARAMETERS = [description(None), language(None), output(Comment: [Description: #d] [
    DESCRIPTION = 'All comments that are matching description and language (with output pl

class eyed3.plugins.display.AbstractDateTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

class eyed3.plugins.display.ReleaseDateTagPattern(name, parameters)
    Bases: eyed3.plugins.display.AbstractDateTagPattern
    NAMES = ['release-date']
    DESCRIPTION = 'Relase date'

class eyed3.plugins.display.OriginalReleaseDateTagPattern(name, parameters)
    Bases: eyed3.plugins.display.AbstractDateTagPattern
    NAMES = ['original-release-date']
    DESCRIPTION = 'Original Release date'

class eyed3.plugins.display.RecordingDateTagPattern(name, parameters)
    Bases: eyed3.plugins.display.AbstractDateTagPattern
    NAMES = ['recording-date']
    DESCRIPTION = 'Recording date'

```

```

class eyed3.plugins.display.EncodingDateTagPattern(name, parameters)
    Bases: eyed3.plugins.display.AbstractDateTagPattern

    NAMES = ['encoding-date']

    DESCRIPTION = 'Encoding date'

class eyed3.plugins.display.TaggingDateTagPattern(name, parameters)
    Bases: eyed3.plugins.display.AbstractDateTagPattern

    NAMES = ['tagging-date']

    DESCRIPTION = 'Tagging date'

class eyed3.plugins.display.PlayCountTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['play-count']

    DESCRIPTION = 'Play count'

class eyed3.plugins.display.PopularitiesTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
    PlaceholderUsagePattern

    NAMES = ['popm', 'popularities']

    PARAMETERS = [output(Popularity: [email: #e] [rating: #r] [play count: #c]), separ

    DESCRIPTION = 'Popularities (with output placeholders #e as email, #r as rating & #c a

class eyed3.plugins.display.BPMTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['bpm']

    DESCRIPTION = 'BPM'

class eyed3.plugins.display.PublisherTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['publisher']

    DESCRIPTION = 'Publisher'

class eyed3.plugins.display.UniqueFileIDTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
    PlaceholderUsagePattern

    NAMES = ['ufids', 'unique-file-ids']

    PARAMETERS = [output(Unique File ID: [#o] : #i), separation(\n)]

    DESCRIPTION = 'Unique File IDs (with output placeholders #o as owner & #i as unique id

class eyed3.plugins.display.LyricsTagPattern(name, parameters)
    Bases: eyed3.plugins.display.DescriptableTagPattern, eyed3.plugins.display.
    PlaceholderUsagePattern

    NAMES = ['lyrics']

    PARAMETERS = [description(None), language(None), output(Lyrics: [Description: #d] [L

    DESCRIPTION = 'All lyrics that are matching description and language (with output plac

```

```

class eyed3.plugins.display.TextsTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
            PlaceholderUsagePattern

    NAMES = ['txxx', 'texts']

    PARAMETERS = [output(UserTextFrame: [Description: #d] #t), separation(\n)]

    DESCRIPTION = 'User text frames (with output placeholders #d as description & #t as te

class eyed3.plugins.display.ArtistURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['artist-url']

    DESCRIPTION = 'Artist URL'

class eyed3.plugins.display.AudioSourceURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['audio-source-url']

    DESCRIPTION = 'Audio source URL'

class eyed3.plugins.display.AudioFileURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['audio-file-url']

    DESCRIPTION = 'Audio file URL'

class eyed3.plugins.display.InternetRadioURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['internet-radio-url']

    DESCRIPTION = 'Internet radio URL'

class eyed3.plugins.display.CommercialURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['commercial-url']

    DESCRIPTION = 'Comercial URL'

class eyed3.plugins.display.PaymentURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['payment-url']

    DESCRIPTION = 'Payment URL'

class eyed3.plugins.display.PublisherURLTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['publisher-url']

    DESCRIPTION = 'Publisher URL'

class eyed3.plugins.display.CopyrightTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['copyright-url']

    DESCRIPTION = 'Copyright URL'

```

```

class eyed3.plugins.display.UserURLsTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
           PlaceholderUsagePattern

    NAMES = ['user-urls']

    PARAMETERS = [output(#i [Description: #d]: #u), separation(\n)]

    DESCRIPTION = 'User URL frames (with output placeholders #i as frame id, #d as descrip

class eyed3.plugins.display.ImagesTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
           PlaceholderUsagePattern

    NAMES = ['images', 'apic']

    PARAMETERS = [output(#t Image: [Type: #m] [Size: #s bytes] #d), separation(\n)]

    DESCRIPTION = 'Attached pictures (APIC) (with output placeholders #t as image type, #m

class eyed3.plugins.display.ImageURLsTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
           PlaceholderUsagePattern

    NAMES = ['image-urls']

    PARAMETERS = [output(#t Image: [Type: #m] [URL: #u] #d), separation(\n)]

    DESCRIPTION = 'Attached pictures URLs (with output placeholders #t as image type, #m as

class eyed3.plugins.display.ObjectsTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
           PlaceholderUsagePattern

    NAMES = ['objects', 'gobj']

    PARAMETERS = [output(GEOB: [Size: #s bytes] [Type: #t] Description: #d | Filename:

    DESCRIPTION = 'Objects (GOBJ) (with output placeholders #s as size, #m as mime type, #d

class eyed3.plugins.display.PrivatesTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern, eyed3.plugins.display.
           PlaceholderUsagePattern

    NAMES = ['privates', 'priv']

    PARAMETERS = [output(PRIV-Content: #b bytes | Owner: #o), separation(\n)]

    DESCRIPTION = 'Privates (APIC) (with output placeholders #c as content, #b as number o

class eyed3.plugins.display.MusicCDIdTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['music-cd-id', 'mcdi']

    DESCRIPTION = 'Music CD Identification'

class eyed3.plugins.display.TermsOfUseTagPattern(name, parameters)
    Bases: eyed3.plugins.display.TagPattern

    NAMES = ['terms-of-use']

    DESCRIPTION = 'Terms of use'

class eyed3.plugins.display.FunctionPattern(name, parameters)
    Bases: eyed3.plugins.display.ComplexPattern

```

```

    TYPE = 'function'

class eyed3.plugins.display.FunctionFormatPattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['format']

    PARAMETERS = [text, bold(None), color(None)]

    DESCRIPTION = 'Formats text bold and colored (grey, red, green, yellow, blue, magenta,

class eyed3.plugins.display.FunctionNumberPattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['num', 'number-format']

    PARAMETERS = [number, digits]

    DESCRIPTION = 'Appends leading zeros'

class eyed3.plugins.display.FunctionFilenamePattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['filename', 'fn']

    PARAMETERS = [basename(None)]

    DESCRIPTION = 'File name'

class eyed3.plugins.display.FunctionFilesizePattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['filesize']

    DESCRIPTION = 'Size of file'

class eyed3.plugins.display.FunctionTagVersionPattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['tag-version']

    DESCRIPTION = 'Tag version'

class eyed3.plugins.display.FunctionLengthPattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['length']

    DESCRIPTION = 'Length of aufile file'

class eyed3.plugins.display.FunctionMPEGVersionPattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern, eyed3.plugins.display.
    PlaceholderUsagePattern

    NAMES = ['mpeg-version']

    PARAMETERS = [output(MPEG#v\, Layer #1)]

    DESCRIPTION = 'MPEG version (with output placeholders #v as version & #1 as layer)'

class eyed3.plugins.display.FunctionBitRatePattern(name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['bit-rate']

    DESCRIPTION = 'Bit rate of aufile file'

```

```

class eyed3.plugins.display.FunctionSampleFrequencyPattern (name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['sample-freq']

    DESCRIPTION = 'Sample frequency of audio file in Hz'

class eyed3.plugins.display.FunctionAudioModePattern (name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['audio-mode']

    DESCRIPTION = 'Mode of audio file: mono/stereo'

class eyed3.plugins.display.FunctionNotEmptyPattern (name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern, eyed3.plugins.display.
    PlaceholderUsagePattern

    NAMES = ['not-empty']

    PARAMETERS = [text, output(#t), empty(None)]

    DESCRIPTION = 'If condition is not empty (with output placeholder #t as text)'

class eyed3.plugins.display.FunctionRepeatPattern (name, parameters)
    Bases: eyed3.plugins.display.FunctionPattern

    NAMES = ['repeat']

    PARAMETERS = [text, count]

    DESCRIPTION = 'Repeats text'

class eyed3.plugins.display.DisplayPlugin (arg_parser)
    Bases: eyed3.plugins.LoaderPlugin

    Constructor. If cache_files is True (off by default) then each AudioFile is appended to _file_cache
    during handleFile and the list is cleared by handleDirectory.

    NAMES = ['display']

    SUMMARY = 'Tag Display'

    DESCRIPTION = '\nPrints specific tag information.\n'

    start (args, config)
        Called after command line parsing but before any paths are processed. The self.args argument (the
        parsed command line) and self.config (the user config, if any) is set here.

    handleFile (f, *args, **kwargs)
        Loads f and sets self.audio_file to an instance of eyed3.core.AudioFile or None if an
        error occurred or the file is not a recognized type.

        The *args and **kwargs are passed to eyed3.core.load().

    handleDone ()
        If no audio files were loaded this simply prints 'Nothing to do'.

exception eyed3.plugins.display.DisplayException (message)
    Bases: Exception

    property message

exception eyed3.plugins.display.PatternCompileException (message)
    Bases: Exception

    property message

```

## eyed3.plugins.extract module

**class** eyed3.plugins.extract.**ExtractPlugin**(*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['extract']

**SUMMARY** = 'Extract tags from audio files.'

**handleFile**(*f*, *\*args*, *\*\*kwargs*)

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

## eyed3.plugins.fixup module

eyed3.plugins.fixup.**dirDate**(*d*)

**class** eyed3.plugins.fixup.**FixupPlugin**(*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['fixup']

**SUMMARY** = 'Performs various checks and fixes to directories of audio files.'

**DESCRIPTION** = '\nOperates on directories at a time, fixing each as a unit (album,\ncomp

**start**(*args*, *config*)

Called after command line parsing but before any paths are processed. The *self.args* argument (the parsed command line) and *self.config* (the user config, if any) is set here.

**handleFile**(*f*, *\*args*, *\*\*kwargs*)

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

**handleDirectory**(*directory*, *\_*)

Override to make use of *self.\_file\_cache*. By default the list is cleared, subclasses should consider doing the same otherwise every *AudioFile* will be cached.

**handleDone**()

If no audio files were loaded this simply prints 'Nothing to do'.

### eyed3.plugins.genres module

**class** eyed3.plugins.genres.**GenreListPlugin** (*arg\_parser*)

Bases: *eyed3.plugins.Plugin*

**SUMMARY** = 'Display the full list of standard ID3 genres.'

**DESCRIPTION** = 'ID3 v1 defined a list of genres and mapped them to to numeric values so

**NAMES** = ['genres']

**start** (*args, config*)

Called after command line parsing but before any paths are processed. The *self.args* argument (the parsed command line) and *self.config* (the user config, if any) is set here.

### eyed3.plugins.itunes module

**class** eyed3.plugins.itunes.**Podcast** (*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['itunes-podcast']

**SUMMARY** = 'Adds (or removes) the tags necessary for Apple iTunes to identify the file .

**handleFile** (*f*)

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

### eyed3.plugins.jsontag module

**class** eyed3.plugins.jsontag.**JsonTagPlugin** (*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['json']

**SUMMARY** = 'Outputs all tags as JSON.'

**handleFile** (*f, \*args, \*\*kwargs*)

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

eyed3.plugins.jsontag.**audioFileToJson** (*audio\_file*)



## eyed3.plugins.lameinfo module

```
class eyed3.plugins.lameinfo.LameInfoPlugin(arg_parser, cache_files=False,
                                           track_images=False)
```

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each AudioFile is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

```
NAMES = ['lameinfo', 'xing']
```

```
SUMMARY = 'Outputs lame header (if one exists) for file.'
```

```
DESCRIPTION = "The 'lame' (or xing) header provides extra information about the mp3 th
```

```
printHeader (file_path)
```

```
handleFile (f, *_, **_)
```

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

## eyed3.plugins.lastfm module

## eyed3.plugins.mimetype module

```
class eyed3.plugins.mimetype.MimetypesPlugin(arg_parser)
```

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each AudioFile is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

```
NAMES = ['mimetypes']
```

```
start (args, config)
```

Called after command line parsing but before any paths are processed. The *self.args* argument (the parsed command line) and *self.config* (the user config, if any) is set here.

```
handleFile (f, *args, **kwargs)
```

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

```
handleDone ()
```

If no audio files were loaded this simply prints 'Nothing to do'.

## eyed3.plugins.nfo module

```
class eyed3.plugins.nfo.NfoPlugin(arg_parser)
```

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each AudioFile is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

```
NAMES = ['nfo']
```

```
SUMMARY = 'Create NFO files for each directory scanned.'
```

**DESCRIPTION** = 'Each directory scanned is treated as an album and a `NFO <<http://en.wik>

**handleFile** (*f*)

Loads *f* and sets *self.audio\_file* to an instance of `eyed3.core.AudioFile` or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to `eyed3.core.load()`.

**handleDone** ()

If no audio files were loaded this simply prints 'Nothing to do'.

## eyed3.plugins.pymod module

**class** eyed3.plugins.pymod.**PyModulePlugin** (*arg\_parser*)

Bases: `eyed3.plugins.LoaderPlugin`

Constructor. If *cache\_files* is True (off by default) then each `AudioFile` is appended to *\_file\_cache* during `handleFile` and the list is cleared by `handleDirectory`.

**SUMMARY** = 'Imports a Python module file and calls its functions for the the various pl

**DESCRIPTION** = "\nIf no module if provided a file named eyed3mod.py in the current work

**NAMES** = ['pymod']

**start** (*args, config*)

Called after command line parsing but before any paths are processed. The *self.args* argument (the parsed command line) and *self.config* (the user config, if any) is set here.

**handleFile** (*f*)

Loads *f* and sets *self.audio\_file* to an instance of `eyed3.core.AudioFile` or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to `eyed3.core.load()`.

**handleDirectory** (*d, \_*)

Override to make use of *self.\_file\_cache*. By default the list is cleared, subclasses should consider doing the same otherwise every `AudioFile` will be cached.

**handleDone** ()

If no audio files were loaded this simply prints 'Nothing to do'.

## eyed3.plugins.stats module

**class** eyed3.plugins.stats.**Rule**

Bases: `object`

**test** (*path, audio\_file*)

**class** eyed3.plugins.stats.**Id3TagRules**

Bases: `eyed3.plugins.stats.Rule`

**test** (*path, audio\_file*)

**class** eyed3.plugins.stats.**BitrateRule**

Bases: `eyed3.plugins.stats.Rule`

**BITRATE\_DEDUCTIONS** = [(128, -20), (192, -10)]

**test** (*path, audio\_file*)

**class** eyed3.plugins.stats.**FileRule**

Bases: *eyed3.plugins.stats.Rule*

**test** (*path, audio\_file*)

**class** eyed3.plugins.stats.**ArtworkRule**

Bases: *eyed3.plugins.stats.Rule*

**test** (*path, audio\_file*)

**class** eyed3.plugins.stats.**Id3FrameRules**

Bases: *eyed3.plugins.stats.Rule*

**test** (*path, audio\_file*)

**class** eyed3.plugins.stats.**Stat** (\*args, \*\*kwargs)

Bases: *collections.Counter*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

**TOTAL** = 'total'

**compute** (*file, audio\_file*)

**report** ()

**percent** (*key*)

**class** eyed3.plugins.stats.**AudioStat** (\*args, \*\*kwargs)

Bases: *eyed3.plugins.stats.Stat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

**compute** (*audio\_file*)

**class** eyed3.plugins.stats.**FileCounterStat**

Bases: *eyed3.plugins.stats.Stat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

**SUPPORTED\_AUDIO** = 'audio'

**UNSUPPORTED\_AUDIO** = 'audio (unsupported)'

**HIDDEN\_FILES** = 'hidden'

```
OTHER_FILES = 'other'
```

```
class eyed3.plugins.stats.MimeTypeStat (*args, **kwargs)
```

Bases: *eyed3.plugins.stats.Stat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

```
class eyed3.plugins.stats.Id3VersionCounter
```

Bases: *eyed3.plugins.stats.AudioStat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

```
class eyed3.plugins.stats.Id3FrameCounter (*args, **kwargs)
```

Bases: *eyed3.plugins.stats.AudioStat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

```
class eyed3.plugins.stats.BitrateCounter
```

Bases: *eyed3.plugins.stats.AudioStat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

```
class eyed3.plugins.stats.RuleViolationStat (*args, **kwargs)
```

Bases: *eyed3.plugins.stats.Stat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

```
class eyed3.plugins.stats.Id3ImageTypeCounter
```

Bases: *eyed3.plugins.stats.AudioStat*

Create a new, empty Counter object. And if given, count elements from an input iterable. Or, initialize the count from another mapping of elements to their counts.

```
>>> c = Counter() # a new, empty counter
>>> c = Counter('gallahad') # a new counter from an iterable
>>> c = Counter({'a': 4, 'b': 2}) # a new counter from a mapping
>>> c = Counter(a=4, b=2) # a new counter from keyword args
```

**class** eyed3.plugins.stats.**StatisticsPlugin**(*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['stats']

**SUMMARY** = 'Computes statistics for all audio files scanned.'

**handleFile**(*path*)

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

**handleDone**()

If no audio files were loaded this simply prints 'Nothing to do'.

### eyed3.plugins.xep\_118 module

**class** eyed3.plugins.xep\_118.**Xep118Plugin**(*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['xep-118']

**SUMMARY** = 'Outputs all tags in XEP-118 XML format. (see: <http://xmpp.org/extensions/>)'

**handleFile**(*f*, *\*args*, *\*\*kwargs*)

Loads *f* and sets *self.audio\_file* to an instance of *eyed3.core.AudioFile* or None if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to *eyed3.core.load()*.

**getXML**(*audio\_file*)

### eyed3.plugins.yamltag module

**class** eyed3.plugins.yamltag.**YamlTagPlugin**(*arg\_parser*)

Bases: *eyed3.plugins.LoaderPlugin*

Constructor. If *cache\_files* is True (off by default) then each *AudioFile* is appended to *\_file\_cache* during *handleFile* and the list is cleared by *handleDirectory*.

**NAMES** = ['yaml']

**SUMMARY** = 'Outputs all tags as YAML.'

**handleFile** (*f*, *\*args*, *\*\*kwargs*)

Loads *f* and sets `self.audio_file` to an instance of `eyed3.core.AudioFile` or `None` if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to `eyed3.core.load()`.

## Module contents

`eyed3.plugins.load` (*name=None*, *reload=False*, *paths=None*)

Returns the `eyed3.plugins.Plugin` class identified by *name*. If *name* is `None` then the full list of plugins is returned. Once a plugin is loaded its class object is cached, and future calls to this function will return the cached version. Use *reload=True* to refresh the cache.

**class** `eyed3.plugins.Plugin` (*arg\_parser*)

Bases: `eyed3.utils.FileHandler`

Base class for all eyeD3 plugins

**SUMMARY** = 'eyeD3 plugin'

**DESCRIPTION** = ''

**NAMES** = []

**start** (*args*, *config*)

Called after command line parsing but before any paths are processed. The `self.args` argument (the parsed command line) and `self.config` (the user config, if any) is set here.

**handleFile** (*f*)

Called for each file walked. The file *f* is the full path and the return value is ignored. If the walk should abort the method should raise a `StopIteration` exception.

**handleDone** ()

Called after all file/directory processing; before program exit. The return value is passed to `sys.exit` (`None` results in 0).

**class** `eyed3.plugins.LoaderPlugin` (*arg\_parser*, *cache\_files=False*, *track\_images=False*)

Bases: `eyed3.plugins.Plugin`

A base class that provides auto loading of audio files

Constructor. If *cache\_files* is `True` (off by default) then each `AudioFile` is appended to `_file_cache` during `handleFile` and the list is cleared by `handleDirectory`.

**handleFile** (*f*, *\*args*, *\*\*kwargs*)

Loads *f* and sets `self.audio_file` to an instance of `eyed3.core.AudioFile` or `None` if an error occurred or the file is not a recognized type.

The *\*args* and *\*\*kwargs* are passed to `eyed3.core.load()`.

**handleDirectory** (*d*, *\_*)

Override to make use of `self._file_cache`. By default the list is cleared, subclasses should consider doing the same otherwise every `AudioFile` will be cached.

**handleDone** ()

If no audio files were loaded this simply prints 'Nothing to do'.

## eyed3.utils package

### Submodules

#### eyed3.utils.art module

`eyed3.utils.art.FRONT_COVER = 'FRONT_COVER'`  
Album front cover.

`eyed3.utils.art.BACK_COVER = 'BACK_COVER'`  
Album back cover.

`eyed3.utils.art.MISC_COVER = 'MISC_COVER'`  
Other part of the album cover; liner notes, gate-fold, etc.

`eyed3.utils.art.LOGO = 'LOGO'`  
Artist/band logo.

`eyed3.utils.art.ARTIST = 'ARTIST'`  
Artist/band images.

`eyed3.utils.art.LIVE = 'LIVE'`  
Artist/band images.

`eyed3.utils.art.FILENAMES = {'ARTIST': ['artist*'], 'BACK_COVER': ['cover-back', 'back', 'c...']}`  
A mapping of art types to lists of filename patterns (excluding file extension): type -> [file\_pattern, ..]

`eyed3.utils.art.TO_ID3_ART_TYPES = {'ARTIST': [7, 8, 10], 'BACK_COVER': [4], 'FRONT_COVER': [1]}`  
A mapping of art types to ID3 APIC (image) types: type -> [apic\_type, ..]

`eyed3.utils.art.FROM_ID3_ART_TYPES = {0: 'FRONT_COVER', 1: 'FRONT_COVER', 3: 'FRONT_COVER'}`  
A mapping of ID3 art types to eyed3 art types; the opposite of TO\_ID3\_ART\_TYPES.

`eyed3.utils.art.matchArtFile(filename)`  
Compares filename (case insensitive) with lists of common art file names and returns the type of art that was matched, or None if no types were matched.

`eyed3.utils.art.getArtFromTag(tag, type_=None)`  
Returns a list of eyed3.id3.frames.ImageFrame objects matching type\_, all if type\_ is None, or empty if tag does not contain art.

#### eyed3.utils.bifuncs module

`eyed3.utils.bifuncs.bytes2bin(bites, sz=8)`  
Accepts a string of bytes (chars) and returns an array of bits representing the bytes in big endian byte order. An optional max sz for each byte (default 8 bits/byte) which can be used to mask out higher bits.

`eyed3.utils.bifuncs.bin2bytes(x)`  
Convert an array of bits (MSB first) into a string of characters.

`eyed3.utils.bifuncs.bin2dec(x)`  
Convert x, an array of “bits” (MSB first), to its decimal value.

`eyed3.utils.bifuncs.bytes2dec(bites, sz=8)`

`eyed3.utils.bifuncs.dec2bin(n, p=1)`  
Convert a decimal value n to an array of bits (MSB first). Optionally, pad the overall size to p bits.

`eyed3.utils.bifuncs.dec2bytes(n, p=1)`

`eyed3.utils.binfuncs.bin2synchsafe(x)`

Convert *x*, a list of bits (MSB first), to a synch safe list of bits. (section 6.2 of the ID3 2.4 spec).

`eyed3.utils.binfuncs.bytes2signedInt16(bites: bytes)`

`eyed3.utils.binfuncs.signedInt162bytes(n: int)`

### **eyed3.utils.console module**

**class** `eyed3.utils.console.AnsiCodes` (*codes*)

Bases: `object`

**classmethod** `init` (*allow\_colors*)

**class** `eyed3.utils.console.AnsiFore`

Bases: `object`

**GREY** = 30

**RED** = 31

**GREEN** = 32

**YELLOW** = 33

**BLUE** = 34

**MAGENTA** = 35

**CYAN** = 36

**WHITE** = 37

**RESET** = 39

**class** `eyed3.utils.console.AnsiBack`

Bases: `object`

**GREY** = 40

**RED** = 41

**GREEN** = 42

**YELLOW** = 43

**BLUE** = 44

**MAGENTA** = 45

**CYAN** = 46

**WHITE** = 47

**RESET** = 49

**class** `eyed3.utils.console.AnsiStyle`

Bases: `object`

**RESET\_ALL** = 0

**BRIGHT** = 1

**RESET\_BRIGHT** = 22

**DIM** = 2



```

RESET_DIM = 22
ITALICS = 3
RESET_ITALICS = 23
UNDERLINE = 4
RESET_UNDERLINE = 24
BLINK_SLOW = 5
RESET_BLINK_SLOW = 25
BLINK_FAST = 6
RESET_BLINK_FAST = 26
INVERSE = 7
RESET_INVERSE = 27
STRIKE_THRU = 9
RESET_STRIKE_THRU = 29

```

```
eyed3.utils.console.ERROR_COLOR()
```

```
eyed3.utils.console.WARNING_COLOR()
```

```
eyed3.utils.console.HEADER_COLOR()
```

```
class eyed3.utils.console.Spinner(msg, file=None, step=1, chars=None, use_unicode=True,
                                print_done=True)
```

Bases: `object`

A class to display a spinner in the terminal.

It is designed to be used with the *with* statement:

```

with Spinner("Reticulating splines", "green") as s:
    for item in enumerate(items):
        s.next()

```

```
class eyed3.utils.console.ProgressBar(total_or_items, file=None)
```

Bases: `object`

A class to display a progress bar in the terminal.

It is designed to be used either with the *with* statement:

```

with ProgressBar(len(items)) as bar:
    for item in enumerate(items):
        bar.update()

```

or as a generator:

```

for item in ProgressBar(items):
    item.process()

```

**total\_or\_items** [int or sequence] If an int, the number of increments in the process being tracked. If a sequence, the items to iterate over.

**file** [writable file-like object, optional] The file to write the progress bar to. Defaults to `sys.stdout`. If *file* is not a tty (as determined by calling its *isatty* member, if any), the scrollbar will be completely silent.

**next** ()

**update** (*value=None*)

Update the progress bar to the given value (out of the total given to the constructor).

**classmethod map** (*function, items, multiprocess=False, file=None*)

Does a *map* operation while displaying a progress bar with percentage complete.

```
def work(i):
    print(i)

ProgressBar.map(work, range(50))
```

Parameters:

**function** [function] Function to call for each step

**items** [sequence] Sequence where each element is a tuple of arguments to pass to *function*.

**multiprocess** [bool, optional] If *True*, use the *multiprocessing* module to distribute each task to a different processor core.

**file** [writable file-like object, optional] The file to write the progress bar to. Defaults to *sys.stdout*. If *file* is not a tty (as determined by calling its *isatty* member, if any), the scrollbar will be completely silent.

`eyed3.utils.console.printMsg(s)`

`eyed3.utils.console.printError(s)`

`eyed3.utils.console.printWarning(s)`

`eyed3.utils.console.printHeader(s)`

`eyed3.utils.console.boldText(s, c=None)`

`eyed3.utils.console.formatText(s, b=False, c=None)`

`eyed3.utils.console.cformat(msg, fg, bg=None, styles=None)`

Format *msg* with foreground and optional background. Optional *styles* lists will also be applied. The formatted string is returned.

`eyed3.utils.console.getTtySize(fd=<_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8'>, check_tty=True)`

`eyed3.utils.console.cprint(msg, fg, bg=None, styles=None, file=<_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8'>)`

Calls `cformat` and prints the result to output stream *file*.

## eyed3.utils.log module

**class** `eyed3.utils.log.Logger` (*name*)

Bases: `logging.Logger`

Base class for all loggers

Initialize the logger with a name and an optional level.

**verbose** (*msg, \*args, \*\*kwargs*)

Log *msg* at 'verbose' level, debug < verbose < info

`eyed3.utils.log.getLogger(name)`

`eyed3.utils.log.initLogging()`

initialize the default logger with console output

## eyed3.utils.prompt module

`eyed3.utils.prompt.DISABLE_PROMPT = None`

Whenever a prompt occurs and this value is not `None` it can be `exit` to call `sys.exit` (see `EXIT_STATUS`) or `raise` to throw a `RuntimeError`, which can be caught if desired.

**exception** `eyed3.utils.prompt.PromptExit`

Bases: `RuntimeError`

Raised when `DISABLE_PROMPT` is 'raise' and `prompt` is called.

`eyed3.utils.prompt.parseIntList (resp)`

`eyed3.utils.prompt.prompt (msg, default=None, required=True, type_=<class 'str'>, validate=None, choices=None)`

Prompt user for input, the prequest is in `msg`. If `default` is not `None` it will be displayed as the default and returned if not input is entered. The value `None` is only returned if `required` is `False`. The response is passed to `type_` for conversion (default is `unicode`) before being returned. An optional list of valid responses can be provided in `choices`.

## Module contents

`eyed3.utils.os_walk_unpack (w)`

`eyed3.utils.guessMimetype (filename, with_encoding=False)`

Deprecated since version 0.9a2: This will be removed in 1.0. Use `eyed3.mimetype.guessMimetype()` instead.

`eyed3.utils.walk (handler, path, excludes=None, fs_encoding='utf-8', recursive=False)`

A wrapper around `os.walk` which handles exclusion patterns and multiple path types (`str`, `pathlib.Path`, `bytes`).

**class** `eyed3.utils.FileHandler`

Bases: `object`

A handler interface for `eyed3.utils.walk()` callbacks.

**handleFile (f)**

Called for each file walked. The file `f` is the full path and the return value is ignored. If the walk should abort the method should raise a `StopIteration` exception.

**handleDirectory (d, files)**

Called for each directory `d` **after** `handleFile` has been called for each file in `files`. `StopIteration` may be raised to halt iteration.

**handleDone ()**

Called when there are no more files to handle.

`eyed3.utils.requireUnicode (*args)`

Function decorator to enforce `str/unicode` argument types. `None` is a valid argument value, in all cases, regardless of not being `unicode`. `*args` Positional arguments may be numeric argument index values (`requireUnicode(1, 3)` - requires argument 1 and 3 are `unicode`) or keyword argument names (`requireUnicode("title")`) or a combination thereof.

`eyed3.utils.requireBytes (*args)`

Function decorator to enforce `byte string` argument types.

`eyed3.utils.formatTime (seconds, total=None, short=False)`

Format `seconds` (number of seconds) as a string representation. When `short` is `False` (the default) the format is:

HH:MM:SS.

Otherwise, the format is exactly 6 characters long and of the form:

1w 3d 2d 4h 1h 5m 1m 4s 15s

If `total` is not `None` it will also be formatted and appended to the result separated by `' / '`.

`eyed3.utils.formatSize` (*size*, *short=False*)

Format size (number of bytes) into string format doing KB, MB, or GB conversion where necessary.

When `short` is `False` (the default) the format is smallest unit of bytes and largest gigabytes; `'234 GB'`. The short version is 2-4 characters long and of the form

256b 64k 1.1G

`eyed3.utils.formatTimeDelta` (*td*)

Format a `timedelta` object `td` into a string.

`eyed3.utils.chunkCopy` (*src\_fp*, *dest\_fp*, *chunk\_sz=524288*)

Copy `src_fp` to `dest_fp` in `chunk_sz` byte increments.

**class** `eyed3.utils.ArgumentParser` (*\*args*, *\*\*kwargs*)

Bases: `argparse.ArgumentParser`

Subclass of `argparse.ArgumentParser` that adds version and log level options.

**class** `eyed3.utils.LoggingAction` (*\*args*, *\*\*kwargs*)

Bases: `argparse._AppendAction`

`eyed3.utils.datePicker` (*thing*, *prefer\_recording\_date=False*)

This function returns a date of some sort, amongst all the possible dates (members called `release_date`, `original_release_date`, and `recording_date` of type `eyed3.core.Date`).

The order of preference is: 1) date of original release 2) date of this version's release 3) the recording date.

Unless `prefer_recording_date` is `True` in which case the order is 3, 1, 2.

`None` will be returned if no dates are available.

`eyed3.utils.makeUniqueFileName` (*file\_path*, *uniq=""*)

The `file_path` is the desired file name, and it is returned if the file does not exist. In the case that it already exists the path is adjusted to be unique. First, the `uniq` string is added, and then a counter is used to find a unique name.

`eyed3.utils.b` (*x*, *encoder=None*)

Converts `x` to a bytes string if not already. :param `x`: The string. :param `encoder`: Optional codec encoder to perform the conversion. The default is

`codecs.latin_1_encode`.

**Returns** The byte string if conversion was needed.

## Submodules

### eyed3.core module

Basic core types and utilities.

**class** `eyed3.core.ArtistOrigin` (*city: str*, *state: str*, *country: str*)

Bases: `object`

**city:** `str = None`

**state:** `str = None`

**country:** str = None

**id3Encode()**

`eyed3.core.load(path, tag_version=None)`

Loads the file identified by `path` and returns a concrete type of `eyed3.core.AudioFile`. If `path` is not a file an `IOError` is raised. None is returned when the file type (i.e. mime-type) is not recognized. The following AudioFile types are supported:

- `eyed3.mp3.Mp3AudioFile` - For mp3 audio files.
- `eyed3.id3.TagFile` - For raw ID3 data files.

If `tag_version` is not None (the default) only a specific version of metadata is loaded. This value must be a version constant specific to the eventual format of the metadata.

**class** `eyed3.core.AudioInfo`

Bases: `object`

A base container for common audio details.

**time\_secs** = 0.0

**size\_bytes** = 0

**class** `eyed3.core.Tag` (*title=None, artist=None, album=None, album\_artist=None, track\_num=None*)

Bases: `object`

An abstract interface for audio tag (meta) data (e.g. artist, title, etc.)

**read\_only** = False

**property** title

**property** artist

**property** album

**property** album\_artist

**property** track\_num

Track number property. Must return a 2-tuple of (track-number, total-number-of-tracks). Either tuple value may be None.

**class** `eyed3.core.AudioFile` (*path*)

Bases: `object`

Abstract base class for audio file types (AudioInfo + Tag)

Construct with a path and invoke `_read`. All other members are set to None.

**rename** (*name, fsencoding='utf-8', preserve\_file\_time=False*)

Rename the file to `name`. The encoding used for the file name is `eyed3.LOCAL_FS_ENCODING` unless overridden by `fsencoding`. Note, if the target file already exists, or the full path contains non-existent directories the operation will fail with `IOError`. File times are not modified when `preserve_file_time` is True, False is the default.

**property** info

Returns a concrete implementation of `eyed3.core.AudioInfo`

**property** tag

Returns a concrete implementation of `eyed3.core.Tag`

**property** path

The absolute path of this file.

**class** eyed3.core.Date (*year, month=None, day=None, hour=None, minute=None, second=None*)

Bases: `object`

A class for representing a date and time (optional). This class differs from `datetime.datetime` in that the default values for month, day, hour, minute, and second is `None` and not 'January 1, 00:00:00'. This allows for an object that is simply 1987, and not January 1 12AM, for example. But when more resolution is required those vales can be set as well.

**TIME\_STAMP\_FORMATS** = ['%Y', '%Y-%m', '%Y-%m-%d', '%Y-%m-%dT%H', '%Y-%m-%dT%H:%M', '%Y-

Valid time stamp formats per ISO 8601 and used by *strptime*.

**property** year

**property** month

**property** day

**property** hour

**property** minute

**property** second

**static** parse (*s*)

Parses date strings that conform to ISO-8601.

eyed3.core.parseError (*ex*)

A function that is invoked when non-fatal parse, format, etc. errors occur. In most cases the invalid values will be ignored or possibly fixed. This function simply logs the error.

## eyed3.main module

eyed3.main.main (*args, config*)

eyed3.main.profileMain (*args, config*)

This is the main function for profiling <http://code.google.com/appengine/kb/commontasks.html#profiling>

eyed3.main.setFileScannerOpts (*arg\_parser, default\_recursive=False, paths\_metavar='PATH', paths\_help='Files or directory paths'*)

eyed3.main.makeCmdLineParser (*subparser=None*)

eyed3.main.parseCommandLine (*cmd\_line\_args=None*)

## eyed3.mimetype module

eyed3.mimetype.guessMimetype (*filename*)

Return the mime-type for *filename*.

**class** eyed3.mimetype.Mp2x

Bases: `filetype.types.base.Type`

Implements the MP2.x audio type matcher.

**MIME** = 'audio/mpeg'

**EXTENSION** = 'mp3'

**match** (*buf*)

```

class eyed3.mimetype.Mp3Invalids
    Bases: filetype.types.base.Type

    Implements a MP3 audio type matcher this is odd or/corrupt mp3.

    MIME = 'audio/mpeg'

    EXTENSION = 'mp3'

    match(buf)

class eyed3.mimetype.Id3Tag
    Bases: filetype.types.base.Type

    Implements a MP3 audio type matcher this is odd or/corrupt mp3.

    MIME = 'application/x-id3'

    EXTENSION = 'id3'

    match(buf)

class eyed3.mimetype.Id3TagExt
    Bases: eyed3.mimetype.Id3Tag

    EXTENSION = 'tag'

class eyed3.mimetype.M3u
    Bases: filetype.types.base.Type

    Implements the m3u playlist matcher.

    MIME = 'audio/x-mpegurl'

    EXTENSION = 'm3u'

    match(buf)

```

## Module contents

```

exception eyed3.Error(*args)
    Bases: Exception

    Base exception type for all eyed3 errors.

```

```

eyed3.load(path, tag_version=None)

```

Loads the file identified by `path` and returns a concrete type of `eyed3.core.AudioFile`. If `path` is not a file an `IOError` is raised. `None` is returned when the file type (i.e. mime-type) is not recognized. The following `AudioFile` types are supported:

- `eyed3.mp3.Mp3AudioFile` - For mp3 audio files.
- `eyed3.id3.TagFile` - For raw ID3 data files.

If `tag_version` is not `None` (the default) only a specific version of metadata is loaded. This value must be a version constant specific to the eventual format of the metadata.

## 4.2.3 Compliance

### ID3

#### Unsupported Features

- ID3 frame encryption
- Writing of sync-safe data (i.e. unsynchronized) because it is 2012. Reading of unsynchronized tags (v2.3) and frames (v2.4) **is** supported.

#### Dates

One of the major differences between 2.3 and 2.4 is dates.

#### ID3 v2.3 Date Frames

- TDAT date (recording date of form DDMM, always 4 bytes)
- TYER year (recording year of form YYYY, always 4 bytes)
- TIME time (recording time of form HHMM, always 4 bytes)
- TORY orig release year
- TRDA recording date (more freeform replacement for TDAT, TYER, TIME. e.g., “4th-7th June, 12th June” in combination with TYER)
- TDLY playlist delay (also defined in ID3 v2.4)

#### ID3 v2.4 Date Frames

All v2.4 dates follow ISO 8601 formats.

- TDEN encoding datetime
- TDOR orig release date
- TDRC recording date
- TDRL release date
- TDTG tagging time
- TDLY playlist delay (also defined in ID3 v2.3)

From the ID3 specs:

```
yyyy-MM-ddTHH:mm:ss (year, "-", month, "-", day, "T", hour (out of
24), ":", minutes, ":", seconds), but the precision may be reduced by
removing as many time indicators as wanted. Hence valid timestamps
are yyyy, yyyy-MM, yyyy-MM-dd, yyyy-MM-ddTHH, yyyy-MM-ddTHH:mm
and yyyy-MM-ddTHH:mm:ss. All time stamps are UTC. For
durations, use the slash character as described in 8601, and for
multiple non- contiguous dates, use multiple strings, if allowed
by the frame definition.
```



The ISO 8601 'W' delimiter for numeric weeks is NOT supported.

Times that contain a 'Z' at the end to signal the time is UTC is supported.

## Common Date Frame Extensions

MusicBrainz uses *XDOR* in v2.3 tags as the **full** original release date, whereas *TORY* (v2.3) only represents the release year. Version 2.4 does not use/need this extension since *TDOR* is available.

### v2.4 <-> 2.3 mappings

When converting to/from v2.3 and v2.4 it is necessary to convert date frames. The following is the mappings eyeD3 uses when converting.

Version 2.3 → version 2.4

- TYER, TDAT, TIME → TDRC
- TORY → TDOR
- TRDA → none
- XDOR → TDOR

If both *TORY* and *XDOR* exist, *XDOR* is preferred.

Version 2.4 → version 2.3

- TDRC → TYER, TDAT, TIME
- TDOR → TORY
- TDRL → TORY
- TDEN → none
- TDTG → none

## Non Standard Frame Support

### NCON

A MusicMatch extension of unknown binary format. Frames of this type are parsed as raw `Frame` objects, therefore the data is not parsed. The frames are preserved and can be deleted and written (as is).

### TCMP

An iTunes extension to signify that a track is part of a compilation. This frame is handled by `TextFrame` and the data is either a '1' if part of a compilation or '0' (or empty) if not.

## XSOA, XSOP, XSOT

These are alternative sort-order strings for album, performer, and title, respectively. They are often added to ID3v2.3 tags while v2.4 does not require them since TSOA, TSOP, and TSOT are native frames.

These frames are preserved but are not written when using v2.3. If the tag is converted to v2.4 then the corresponding native frame is used.

## XDOR

A MusicBrainz extension for the **full** original release date, since TORY only contains the year of original release. In ID3 v2.4 this frame became TDOR.

## PCST, WFED, TKWD, TDES, TGID

Apple extensions for podcasts.

## 4.2.4 Contributing

Contributions are welcome, and they are greatly appreciated! Every little bit helps, and credit will always be given.

You can contribute in many ways:

### Types of Contributions

#### Report Bugs

Report bugs at <https://github.com/nicfit/eyeD3/issues>.

If you are reporting a bug, please include:

- Your operating system name and version.
- Any details about your local setup that might be helpful in troubleshooting.
- Detailed steps to reproduce the bug.

#### Fix Bugs

Look through the GitHub issues for bugs. Anything tagged with “bug” is open to whoever wants to implement it.

#### Implement Features

Look through the GitHub issues for features. Anything tagged with “feature” is open to whoever wants to implement it.

## Write Documentation

eyeD3 could always use more documentation, whether as part of the official eyeD3 docs, in docstrings, or even on the web in blog posts, articles, and such.

## Submit Feedback

The best way to send feedback is to file an issue at <https://github.com/nicfit/eyeD3/issues>.

If you are proposing a feature:

- Explain in detail how it would work.
- Keep the scope as narrow as possible, to make it easier to implement.
- Remember that this is a volunteer-driven project, and that contributions are welcome :)

## Get Started!

Ready to contribute? Here's how to set up eyeD3 for local development.

1. Fork the *eyeD3* repo on GitHub.
2. Clone your fork locally:

```
$ git clone git@github.com:your_name_here/eyeD3.git
```

3. Install your local copy into a virtualenv. Assuming you have virtualenvwrapper installed, this is how you set up your fork for local development:

```
$ mkvirtualenv eyed3
$ cd eyed3/
$ python setup.py develop
```

4. Install all dependencies for development and extra packages. For full test coverage you'll also need some test data.:

```
$ for reqs in $(ls requirements/*.txt); do pip install -U -r $reqs ; done
$ make test-data
```

5. Create a branch for local development:

```
$ git checkout -b name-of-your-bugfix-or-feature
```

Now you can make your changes locally.

6. When you're done making changes, check that your changes pass flake8 and the tests, including testing other Python versions with tox:

```
$ make lint
$ make test
$ make test-all    # Optional, requires multiple versions of Python
```

To get flake8 and tox, just pip install them into your virtualenv.

7. Commit your changes and push your branch to GitHub.:

```
$ git add .
$ git commit -m "Your detailed description of your changes."
$ git push origin name-of-your-bugfix-or-feature
```

8. Submit a pull request through the GitHub website.

## Pull Request Guidelines

Before you submit a pull request, check that it meets these guidelines:

1. The pull request should include tests.
2. If the pull request adds functionality, the docs should be updated. Put your new functionality into a function with a docstring, and add the feature to the list in README.rst.
3. The pull request should work for Python 2.7, and 3.3, 3.4, 3.5, and for PyPy. Check <https://travis-ci.org/nicfit/eyeD3/pulls> and make sure that the tests pass for all supported Python versions.

## 4.2.5 Authors

eyeD3 is written and maintained by:

- Travis Shirk <[travis@pobox.com](mailto:travis@pobox.com)>

and has been contributed to by (ordered by date of first contribution):

- Ryan Finnie <[ryan@finnie.org](mailto:ryan@finnie.org)>
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## 4.2.6 Release History

### v0.9.4 (2020-03-21) : The Devil Made Me Do It

#### New

- Relative volume adjustments (RVA2 and RVAD) (#399)
- Tag properties copyright and encoded\_by
- Support GRP1 (Apple) frames.

#### Changes

- Genre serialization not ID3 v2.3 format by default, and other genre cleanup (#402) fixes #382

#### Fix

- Date correctness between ID3 versions (#396)
- PopularityFrame email encoding bug.
- Plugins more featured in docs

### v0.9.3 (2020-03-01) : It Dawned On Me

#### Changes

- Track/disc numbers can be set with integer strings.
- Disc number getter and setter hooks

### v0.9.2 (2020-02-10) : Into The Future

#### Fix

- Removed setting of PYTHONIOENCODING, it breaks MacOS. Fixes #388

### v0.9.1 (2020-02-09) : Dead and Gone

#### Fix

- Docs and pep8.

#### Other

- Experiment with setting utf-8 writer for stdout and stderr.

### v0.9 (2020-01-01) : Favorite Thing

#### Major Changes

- Dropped support for Python versions 2.7, 3.4, and 3.5.
- File scanning is no longer recursive by default; use *-r / -recursive*.
- Default log-level changed from WARNING to ERROR.

#### New

- Mime-type detection uses filetype.py (libmagic no longer required)
- setFileScannerOpts function accepts *default\_recursive* option.
- A new *jsontag* plugin for converting tags to JSON.
- A new *extract* plugin for extracting tags from media.
- A new *yamltag* plugin for converting tags to YAML.
- A new *mimetypes* plugin for listing file mime-types / measuring performance
- Original artist support (TOPE frame, *-orig-artist*)
- Added support for Python 3.8 and pypy3.

## Changes

- Log warning when ID3 v1.x text truncation occurs. Fixes #299.
- Accept (invalid) date strings for the form YYYYMMDD. Fixes #379
- Adjust replay gain correctly for lame  $\geq$  3.95.1 headers.
- Added `-r/--recursive` argument. eyeD3 is no longer recursive by default (#378)
- Regenerated grako parser.
- New ValueError for `_setNum` when unknown type/values are passed.
- Moved `src/*` to top-level repo directory.

## Fix

- PRIV data type checking, fixed examples, etc.
- Use `tox` for *make test*
- ID3 v2.3 to v2.4 date conversion.
- Match mp3 mime-types against all possible mime-types. Specifically, `application/x-font-gdos`. Fixes #338
- Fix simple typo: `titel` -> `title`. <tim.gates@iress.com>
- Fixed: load the right config file in arguments. <zhumumu@gmail.com>
- Fix issue tracker link. Fixes #333.
- Fixed art plugin when `pylast` is not installed.
- Unbound variable for track num/total. Fixes #327.
- Fixed MP3 header search to not false match on BOMs.
- Honor APIC text encoding when description is `""`. #200.
- Fixed bug with improper types when re-rendering unique file ID. (#324) <gabrieldiegoteixeira@gmail.com>
- UFID fixes, update (#325) <gabrieldiegoteixeira@gmail.com>

## Other

- Deprecation of `eyed3.utils.guessMimeType`
- Removed `ipdb` from dev requirements

### v0.8.12 (2019-12-27)

## Changes

- Accept (invalid) date strings for the form YYYYMMDD. Fixes #379

## Other

- Test with py38

## v0.8.11 (2019-11-09)

### Fix

- ID3 v2.3 to v2.4 date conversion.
- Match mp3 mime-types against all possible mime-types. Specifically, application/x-font-gdos. Fixes #338

## v0.8.10 (2019-03-07) : Apples

### New

- Log warning when ID3 v1.x text truncation occurs. Fixes #299.

### Fix

- Honor APIC text encoding when description is "". #200.
- Fixed bug with improper types when re-rendering unique file ID. (#324) <gabrieldiegoteixeira@gmail.com>

## v0.8.9 (2019-01-12) : Descent Into...

### Changes

- Fixup plugin: -t changed to -type.
- Pin pathlib to latest version 1.0.1 (#304) <github-bot@pyup.io>

### Fix

- Force no-color output when stdout is not a terminal (#297) <gaetano.guerriero@gmx.com>
- Requirements.txt: pathlib is only needed for older python versions (#284) <Mic92@users.noreply.github.com>
- Art plugin: Pin pylast to 2.x to preserve Python2 support.

## v0.8.8 (2018-11-28) : In Ruins

### New

- Follow symlink directories. Fixes #224



## Changes

- Eyed3.core.AudioInfo *time\_secs* is now a float and non-lossy. Fixes #210
- Removed Python 3.3 support.

## Fix

- Better type handling during TLEN [fixup plugin].
- Don't tweak logging by default, only thru *main*. Fixes #243

## Other

- Added a separate example for Windows (`-add-image <url>`) [Addresses the issue #219] (#220) <chamatht@gmail.com>

## v0.8.7 (2018-06-11) : Aeon

### Fix

- Only use `os.fwalk` where supported.

## v0.8.6 (2018-05-27) : Robot Man

### New

- Art plugin can now download album covers from last.fm.

## Changes

- Use `os.fwalk` for its better performance (esp. `>= py37`) Fixes #166
- TagTemplate *path\_friendly* is now a string, namely the delimiter to use.

## Fix

- Classic plugin: `-write-image` will work with `-quiet`. Fixes #188
- Multiple fixes for display plugin `%images%` replacements. Fixes #176
- Allow `-remove-*` options to work when there are no tags. Fixes #183

## v0.8.5 (2018-03-27) : 30\$ Bag

### New

- `Mp3AudioFile.initTag` now returns the new tag.
- `Eyed3.core.EP_MAX_SIZE_HINT`.
- Added docs for install level dependencies and test data.

### Changes

- Similarly to `TextFrame`, fallback to `latin1` for invalid encodings.
- Removed `paver` as a dep.
- Removed `fabfile` and `mkenv`.
- Clean `pytest_cache`.
- `Nicfit.py` cc update.

### Fix

- Handle missing `fcntl` on Windows. Fixes #135.
- In addition to `None`, `""` will now clear dates.
- Update `index.rst` to reflect the code is in a Git repo, not Mercurial (#164) <deoren@users.noreply.github.com>

### Other

- Update `pytest` from 3.2.2 to 3.5.0 (#175) <github-bot@pyup.io>
- Update `twine` from 1.9.1 to 1.11.0 (#173) <github-bot@pyup.io>
- Update `sphinx` from 1.6.5 to 1.7.2 (#174) <github-bot@pyup.io>
- Update `sphinxcontrib-paverutils` from 1.16.0 to 1.17.0 (#172) <github-bot@pyup.io>
- Update `pytest-runner` from 3.0 to 4.2 (#171) <github-bot@pyup.io>
- Update `nicfit.py` from 0.7 to 0.8 (#161) <github-bot@pyup.io>
- Update `ipdb` from 0.10.3 to 0.11 (#159) <github-bot@pyup.io>
- Update `factory-boy` from 2.9.2 to 2.10.0 (#150) <github-bot@pyup.io>
- Update `pyaml` from 17.10.0 to 17.12.1 (#138) <github-bot@pyup.io>
- Update `python-magic` to 0.4.15 (#130) <github-bot@pyup.io>
- Update `pip-tools` from 1.10.1 to 1.11.0 (#129) <github-bot@pyup.io>
- Update `check-manifest` from 0.35 to 0.36 (#125) <github-bot@pyup.io>

## v0.8.4 (2017-11-17) : The Cold Vein

### New

- Composer (TCOM) support (#123)
- Check for version incompatibilities during version changes.

### Changes

- More forgiving of invalid text encoding identifiers (fixes #101)
- More forgiving of bad Unicode in text frames (fixes #105)
- EyeD3 cmd line helper turned not session-scoped fixture.
- Only warn about missing grako when the plugin is used. Fixes #115.

### Fix

- Fix python3 setup when system encoding is not utf-8 (#120) <x.guerriero@tin.it>
- Fix bad frames detection in stats plugin for python3 (#113) <x.guerriero@tin.it>
- Script exits with 0 status when called with `-version/-help` (#109) <x.guerriero@tin.it>
- Help pymagic with poorly encoded filenames.
- [display plugin] Handle comments.
- [display plugin] Handle internal exception types. Fixes #118.
- IOError (nor OSError) have a message attr.

### Other

- Set theme jekyll-theme-slate.
- Update pytest to 3.2.5 (#122) <github-bot@pyup.io>
- Update pytest-runner to 3.0 (#108) <github-bot@pyup.io>
- Update sphinx to 1.6.5 (#106) <github-bot@pyup.io>
- Update flake8 to 3.5.0 (#107) <github-bot@pyup.io>

## v0.8.3 (2017-10-22) : So Alone

### Fix

- Reload and process after tag removals, fixes #102. (PR #103)
- Display incorrectly encoded strings (usually filenames)

## Other

- Make the classic output span the actual width of the tty so you can see the actual path with a long file name. (#92) <redshodan@gmail.com>

## v0.8.2 (2017-09-23) : Standing At the Station

### New

- Pypy and pypy3 support.

### Changes

- ‘nose’ is no longer used/required for testing.

### Fix

- Fix for Unicode paths when using Python2. Fixes #56.

## v0.8.1 (2017-08-26) : I Can't Talk To You

### New

- make `pkg-test-data` target.
- Sample mime-type tests.

### Fix

- Added `python-magic` as a dependency for reliable mime-type detection. Fixes #61
- Add `pathlib` to requirements. Fixes #43.
- [doc] Fixed github URL.

## v0.8 (2017-05-13) : I Don't Know My Name

**Warning:** This release is **NOT** API compatible with 0.7.x. The majority of the command line interface has been preserved although many options have either changed or been removed. Additionally, support for Python 2.6 has been dropped.

### New

- Python 3 support (version 2.7 and  $\geq$  3.3 supported)
- The Display plugin (`-P/--plugin display`) enables complete control over tag output. Requires `grako`. If using `pip, pip install eyeD3[display]`. Contributed by Sebastian Patschorke.

- `Genre.parse(id3_std=False)` (and `-non-std-genres`) to disable genre # mapping.
- `eyed3.load` accept `pathlib.Path` arguments.
- `eyed3.core.AudioFile` accept `pathlib.Path` arguments.
- `eyed3.utils.walk` accept `pathlib.Path` arguments.
- New manual page. Contributed by Gaetano Guerriero
- `make test-data`

## Changes

- Project home from to GitHub: <https://github.com/nicfit/eyeD3>

## Fix

- Lang fixes, and no longer coerce invalids to eng.

## Other

- Moved to pytest, although unittest not yet purged.

## 0.7.11 - 03.12.2017 (Evergreen)

### New Features:

- Repo and issue tracker moved to GitHub: <https://github.com/nicfit/eyeD3>

### Bug Fixes:

- 'NoneType' object has no attribute 'year'
- Multiple date related fixes.
- Allow superfluous `-no-tagging-ttme-frame` option for backward compatibility.
- The `-version` option now prints a short, version-only, message.
- Allow `-year` option for backward compatibility. Converts to `-release-year`.
- Fixes for `-user-text-frame` with multiple colons and similar fixes.
- ID3 v1.1 encoding fixes.

## 0.7.10 - 12.10.2016 (Hollow)

### Bug Fixes:

- Missing import
- Fix the rendering of default constructed `id3.TagHeader`
- Fixed `Tag.frameiter`

## 0.7.9 - 11.27.2015 (Collapse/Failure)

### New Features:

- process files and directories in a sorted fashion. <Hans-Peter Jansen>
- display the ellipsis file name and path, and the file size right justified in printHeader. <Hans-Peter Jansen>
- stating to be unable to find a valid mp3 frame without a hint, where this happened is rather unfortunate. I noticed this from using eyed3.load() calls. <Hans-Peter Jansen>
- [fixup plugin] - Better compilation support.

### Bug Fixes:

- Fixed missing 'math' import.
- Replaced invalid Unicode.
- Disabled ANSI codes on Windows
- More friendly logging (as a module)

## 0.7.8 - 05.25.2015 (Chartsengrafs)

### New Features:

- [pymod plugin] – A more procedural plugin interface with modules.
- [art plugin] – Extract tag art to image files, or add images to tags.
- eyed3.utils.art - High level tag art API
- eyed3.id3.frames.ImageFrame.makeFileName produces the file extension .jpg instead of .jpeg for JPEG mime-types.
- Added eyed3.utils.makeUniqueFileName for better reuse.
- [statistics plugin] – Less score deduction for lower bit rates.
- Split example plugins module into discrete plugin modules.
- [fixup plugin] – Added `-fix-case` for applying `title()` to names
- [fixup plugin] – Detects and optionally removes files determined to be cruft.
- eyed3.id3.Tag – Added `frameiter` method for iterating over tag frames.
- Added optional `preserve_file_time` argument to eyed3.id3.Tag.remove.
- Removed python-magic dependency, it not longer offers any value (AFAICT).

### Bug Fixes:

- ashing on `-remove-frame PRIV`
- rse lameinfo even if crc16 is not correct
- po in docs/installation.rst
- Request to update the GPL License in source files
- Fixes to eyed3.id3.tag.TagTemplate when expanding empty dates.
- eyed3.plugins.Plugin.handleDone return code is not actually used.
- [classic plugin] – Fixed ID3v1 `-verbose` bug.

- [fixup plugin] – Better date handling, album type, and many bug fixes.

### 0.7.5 - 09.06.2014 (Nerve Endings)

#### New Features:

- Support for album artist info. By Cyril Roelandt <tipecaml@gmail.com>
- [fixup plugin] – Custom patterns for file/directory renaming. By Matt Black <<https://bitbucket.org/mafrosis>>
- API providing simple prompts for plugins to use.
- API and TXXX frame mappings for album type (e.g. various, album, demo, etc.) and artist origin (i.e. where the artist/band is from).
- Lower cases ANSI codes and other console fixes.
- Added the ability to set (remove) tag padding. See *eyeD3 --max-padding* option. By Hans Meine.
- Tag class contains `read_only` attribute than can be set to `True` to disable the `save` method.
- [classic plugin] – Added `--track-offset` for incrementing/decrementing the track number.
- [fixup plugin] – Check for and fix cover art files.

#### Bug Fixes:

- Build from pypi when `paver` is not available.
- Disable ANSI color codes when `TERM == "dumb"`
- Locking around `libmagic`.
- Work around for zero-padded utf16 strings.
- Safer tempfile usage.
- Better default v1.x genre.

### 0.7.3 - 07.12.2013 (Harder They Fall)

#### Bug fixes:

- Allow `setup.py` to run with having `paver` installed.
- [statistics plugin] Don't crash when 0 files are processed.

### 0.7.2 - 07.06.2013 (Nevertheless)

#### New Features:

- Python 2.6 is now supported if `argparse` and `ordereddict` dependencies are installed. Thanks to Bouke Versteegh for much of this.
- More support and bug fixes for ID3 chapters and table-of-contents.
- [classic plugin] `-d/-D` options for setting tag disc number and disc set total.
- Frames are always written in sorted order, so if a tag is rewritten with no values changed the file's checksum remains the same.

- Documentation and examples are now included in source distribution.
- [classic plugin] Removed `-p` for setting publisher since using it when `-P` is intended is destructive.
- [classic plugin] Supports `--no-color` to disable color output. Note, this happens automatically if the output streams is not a TTY.
- `Tag.save` supports preserving the file modification time; and option added to classic plugin.
- [statistics plugin] Added rules for “lint-like” checking of a collection. The rules are not yet configurable.
- ERROR is now the default log level.

### Bug fixes:

- Various fixes for PRIV frames, error handling, etc. from Bouke Versteegh
- Convert `'` to `-` in TagTemplate names (i.e. `-rename`)
- Drop TSIZ frames when converting to ID3 v2.4
- ID3 tag padding size now set correctly.
- Fixes for Unicode paths.
- License clarification in pkg-info.
- The `-b setup.py` argument is now properly supported.
- Magic module `hasattr` fix.
- More robust handling of bogus play count values.
- More robust handling of bogus date values.
- Proper unicode handling of APIC descriptions.
- Proper use of `argparse.ArgumentTypeError`
- Allow TCMP frames when parsing.
- Accept more invalid frame types (iTunes)
- Documentation fixes.
- Fix for bash completion script.
- Fix for certain mp3 bit rate and play time computations.

## 0.7.1 - 11.25.2012 (Feel It)

### New Features:

- Support for ID3 `chapters` and `table-of-contents` frames (i.e. CHAP and CTOC).
- A new plugin for toggling the state of iTunes podcast files. In other words, PCST and WFED support. Additionally, the Apple “extensions” frames TKWD, TDES, and TGID are supported. Run `eyeD3 -P itunes-podcast --help` for more info.
- Native frame type for POPM (Popularity meter). See the `eyed3.id3.tag.Tag.popularities()` accessor method.
- Plugins can deal with traversed directories instead of only file-by-file. Also, `eyed3.plugins.LoaderPlugin` can optionally cache the loaded audio file objects for each call-back to `handleDirectory`.



- [classic plugin] New `--remove-frame` option.
- [statistics plugin] More accurate values and easier to extend.

**Bug fixes:**

- Fixed a very old bug where certain values of 0 would be written to the tag as "" instead of 'x00'.
- Don't crash on malformed (invalid) UFID frames.
- Handle timestamps that are terminated with 'Z' to show the time is UTC.
- Conversions between ID3 v2.3 and v2.4 date frames fixed.
- [classic plugin] Use the system text encoding (locale) when converting lyrics files to Unicode.

**0.7.0 - 11.15.2012 (Be Quiet and Drive)**

**Warning:** This release is **NOT** API compatible with 0.6.x. The majority of the command line interface has been preserved although many options have either changed or been removed.

**New Features:**

- Command line script `eyeD3` now supports plugins. The default plugin is the classic interface for tag reading and editing.
- Plugins for writing NFO files, displaying lame/xing headers, jabber tunes, and library statistics.
- Module name is now `eyed3` (all lower case) to be more standards conforming.
- New `eyed3.id3.Tag` interface based on properties.
- Improved ID3 date frame support and 2.3<->2.4 conversion, and better conversions, in general.
- Native support for many more ID3 frame types.
- Python Package Index friendly, and installable with 'pip'.
- Improved mime-type detection.
- Improved unicode support.
- Support for config files to contain common options for the command-line tool.

**0.6.18 - 11.25.2011 (Nobunny loves you)****New features:**

- Support for disc number frames (TPOS). Thanks to Nathaniel Clark <nate@misrule.us>
- Added %Y (year) and %G (genre) substitution variables for file renames. Thanks to Otávio Pontes <otaviobp@gmail.com>
- Improved XML (`--jep-118`) escaping and a new option (`--rfc822`) to output in RFC 822 format. Thanks to Neil Schemenauer <nas@arctrix.com>
- `--rename` will NOT clobber existing files.
- New option `--itunes` to write only iTunes accepted genres. Thanks to Ben Isaacs <Ben XO me@ben-xo.com>

- If available the ‘magic’ module will be used to determine mimetypes when the filename is not enough. Thanks to Ville Skyttä <ville.skytta@iki.fi>
- `-set-encoding` can be used along with a version conversion arg to apply a new encoding to the new tag.
- Increased performance for mp3 header search when malformed GEOB frames are encountered. Thanks to Stephen Fairchild <sfairchild@bethere.co.uk>
- Less crashing when invalid user text frames are encountered.
- Less crashing when invalid BPM values (empty/non-numeric) are encountered.

#### 0.6.17 - 02.01.2009 (The Point of No Return)

**Bug fixes:**

- Workaround invalid utf16
- Show all genres during `-list-genres`
- Workaround invalid PLCT frames.
- Show all tracks during `-nfo` output.

**New features:**

- Support for URL frames (W??? and WXXX)
- Program exit code for the ‘eyeD3’ command line tool

#### 0.6.16 - 06.09.2008 (Gimme Danger)

**Bug fixes:**

- Typo fix of sysnc/unsync data. Thanks to Gergan Penkov <gergan@gmail.com>
- Infinite loop fix when dealing with malformed APIC frames.
- `Tag.removeUserTextFrame` helper. Thanks to David Grant <davidgrant@gmail.com>

#### 0.6.15 - 03.02.2008 (Doin’ The Cockroach)

**Bug fixes:**

- ID3 v1 comment encoding (latin1) bug fix (Renaud Saint-Gratien <rsg@nerim.net>)
- APIC picture type fix (Michael Schout <mschout@gkg.net>)
- Fixed console Unicode encoding for display.
- Fixed frame de-unsynchronization bugs.
- Round float BPMs to int (per the spec)

### 0.6.14 - 05.08.2007 (Breakthrough)

#### Bugs fixes:

- Fixed a nasty corruption of the first mp3 header when writing to files that do not already contain a tag.
- Fixed a bug that would duplicate TYER frames when setting new values.
- Fixed the reading/validation of some odd (i.e.,rare) mp3 headers

#### New Features:

- Encoding info extracted from Lame mp3 headers [Todd Zullinger]
- Genre names will now support ‘!’ to allow for genres like “Rock|Punk|Pop-Punk” and ‘!’ for “Oi!”

### 0.6.13 - 04.30.2007 (Undercovers On)

- Numerous write fixes, especially for v2.4 tags. Thanks to Alexander Thomas <dr-lex@dr-lex.34sp.com> for finding these.
- Add `--no-zero-padding` option to allow disabling of zero padding track numbers
- Add `--nfo` option to output NFO format files about music directories.
- Time computation fixes when MP3 frames headers were mistakenly found.

### 0.6.12 - 02.18.2007 (Rid Of Me)

- Handle Mac style line ending in lyrics and display with the proper output encoding. [Todd Zullinger]
- TDTG support and other date frame fixes. [Todd Zullinger]
- Output encoding bug fixes. [Todd Zullinger]

### 0.6.11 - 11.05.2006 (Disintegration)

- Support for GEOB (General encapsulated object) frames from Aaron VonderHaar <gruen0aermel@gmail.com>
- Decreased memory consumption during tag rewrites/removals.
- Allow the “reserved” mpeg version bits when not in strict mode.
- Solaris packages available via Blastwave - <http://www.blastwave.org/packages.php/pyeyed3>

### 0.6.10 - 03.19.2006 (Teh Mesk release)

- Unsynchronized lyrics (USLT) frame support [Todd Zullinger <tmz@pobox.com>]
- UTF16 bug fixes
- More forgiving of invalid User URL frames (WXXX)
- RPM spec file fixes [Knight Walker <kwalker@kobran.org>]
- More details in `--verbose` display

### 0.6.9 - 01.08.2005 (The Broken Social Scene Release)

- eyeD3 (the CLI) processes directories more efficiently
- A specific file system encoding can be specified for file renaming, see `-fs-encoding` (Andrew de Quincey)
- Faster mp3 header search for empty and/or corrupt mp3 files
- Extended header fixes
- Bug fix for saving files with no current tag
- What would a release be without unicode fixes, this time it's unicode filename output and JEP 0118 output.

### 0.6.8 - 08.29.2005 (The Anal Cunt Release)

- Frame header size bug. A `_serious_` bug since writes MAY be affected (note: I've had no problems reported so far).

### 0.6.7 - 08.28.2005 (The Autopsy Release)

- Beats per minute (TPBM) interface
- Publisher/label (TPUB) interface
- When not in strict mode exceptions for invalid tags are quelled more often
- Support for iTunes ID3 spec violations regarding multiple APIC frames
- Bug fix where lang in CommentFrame was unicode where it MUST be ascii
- Bug fixed for v2.2 frame header sizes
- Bug fixed for v2.2 PIC frames
- File rename bug fixes
- Added `-c` option as an alias for `-comment`
- `-i/-write-images` now takes a destination path arg. Due to optparse non-support for optional arguments the path MUST be specified. This option no longer clobbers existing files.

### 0.6.6 - 05.15.2005 (The Electric Wizard Release)

- APIC frames can now be removed.
- An interface for TBPM (beats per minute) frames.
- Utf-16 bug fixes and better unicode display/output
- RPM spec file fixes

### 0.6.5 - 04.16.2005

- Read-only support for ID3 v2.2
- TPOS frame support (disc number in set).
- Bug fixes

### 0.6.4 - 02.05.2005

- Native support for play count (PCNT), and unique file id (UFID) frames.
- More relaxed genre processing.
- Sync-safe bug fixed when the tag header requests sync-safety and not the frames themselves.
- configure should successfully detect python release candidates and betas.

### 0.6.3 - 11.23.2004

- Much better unicode support when writing to the tag.
- Added Tag.setEncoding (`-set-encoding`) and `-force-update`
- Handle MP3 frames that violate spec when in non-strict mode. (Henning Kiel <[henning.kiel@rwth-aachen.de](mailto:henning.kiel@rwth-aachen.de)>)
- Fix for Debian bug report #270964
- Various bug fixes.

### 0.6.2 - 8.29.2004 (Happy Birthday Mom!)

- TagFile.rename and Tag.tagToString (eyeD3 `-rename=PATTERN`). The latter supports substitution of tag values: %A is artist, %t is title, %a is album, %n is track number, and %N is track total.
- eyeD3 man page.
- User text frame (TXXX) API and `-set-user-text-frame`.
- Python 2.2/Optik compatibility works now.
- ebuild for Gentoo (<http://eyed3.nicfit.net/releases/gentoo/>)

### 0.6.1 - 5/14/2004 (Oz/2 Ohh my!)

- Unicode support - UTF-8, UTF-16, and UTF-16BE
- Adding images (APIC frames) is supported (`-add-image`, Tag.addImage(), etc.)
- Added a `-relaxed` option to be much more forgiving about tags that violate the spec. Quite useful for removing such tags.
- Added Tag.setTextFrame (`-set-text-frame=FID:TEXT`)
- Added `-remove-comments`.
- Now requires Python 2.3. Sorry, but I like cutting-edge python features.
- Better handling and conversion (2.3 <=> 2.4) of the multiple date frames.

- Output format per JEP 0118: User Tune, excluding xsd:duration format for <length/> (<http://www.jabber.org/jeps/jep-0118.html>)
- Lot's of bug fixes.
- Added a mailing list. Subscribe by sending a message to [eyed3-devel-subscribe@nicfit.net](mailto:eyed3-devel-subscribe@nicfit.net)

### 0.5.1 - 7/17/2003 (It's Too Damn Hot to Paint Release)

- Temporary files created during ID3 saving are now properly cleaned up.
- Fixed a “bug” when date frames are present but contain empty strings.
- Added a `--no-color` option to the eyeD3 driver.
- Workaround invalid tag sizes by implied padding.
- Updated README

### 0.5.0 - 6/7/2003 (The Long Time Coming Release)

- ID3 v2.x saving.
- The eyeD3 driver/sample program is much more complete, allowing for most common tag operations such as tag display, editing, removal, etc. Optik is required to use this program. See the README.
- Complete access to all artist and title frames (i.e. TPE\* and TIT\*)
- Full v2.4 date support (i.e. TDRC).
- Case insensitive genres and compression fixes. (Gary Shao)
- ExtendedHeader support, including CRC checksums.
- Frame groups now supported.
- Syncsafe integer conversion bug fixes.
- Bug fixes related to data length indicator bytes.
- Genre and lot's of other bug fixes.

### 0.4.0 - 11/11/2002 (The Anniversary Release)

- Added the ability to save tags in ID v1.x format, including when the linked file was IDv2. Original backups are created by default for the time being...
- Added deleting of v1 and v2 frames from the file.
- Zlib frame data decompression is now working.
- bin/eyeD3 now displays user text frames, mp3 copyright and originality, URLs, all comments, and images. Using the `--write-images` arg will write each APIC image data to disk.
- Added `eyeD3.isMp3File()`, `Tag.clear()`, `Tag.getImages()`, `Tag.getURLs()`, `Tag.getCDID()`, `FrameSet.removeFrame()`, `Tag.save()`, `ImageFrame.writeFile()`, etc...
- Modified bin/eyeD3 to grok non Mp3 files. This allows testing with files containing only tag data and lays some groundwork for future OGG support.
- Fixed ImageFrame mime type problem.
- Fixed picture type scoping problems.

### 0.3.1 - 10/24/2002

- RPM packages added.
- Fixed a bug related to ID3 v1.1 track numbers. (Aubin Paul)
- Mp3AudioFile matches \* .mp3 and \* .MP3. (Aubin Paul)

### 0.3.0 - 10/21/2002

- Added a higher level class called Mp3AudioFile.
- MP3 frame (including Xing) decoding for obtaining bit rate, play time, etc.
- Added APIC frame support (eyeD3.frames.Image).
- BUG FIX: Tag unsynchronization and deunsynchronization now works correctly and is ID3 v2.4 compliant.
- Tags can be linked with file names or file objects.
- More tag structure abstractions (TagHeader, Frame, FrameSet, etc.).
- BUG FIX: GenreExceptions were not being caught in eyeD3 driver.

### 0.2.0 - 8/15/2002

- ID3\_Tag was renamed to Tag.
- Added Genre and GenreMap (eyeD3.genres is defined as the latter type)
- Added support of ID3 v1 and v2 comments.
- The ID3v2Frame file was renamed ID3v2 and refactoring work has started with the addition of TagHeader.

### 0.1.0 - 7/31/2002

- Initial release.

## 4.3 ChangeLog

Changes made to eyeD3 and the project's release history can be found in the *Release History*.

## 4.4 References

- [ID3 v1.x Specification](#)
- [ID3 v2.4 Structure and Frames](#)
- [ID3 v2.3 Specification](#)
- [ID3 v2.2 Specification](#)
- [ISO 8601 Date and Time](#)
- [ISO 639-2 Language Codes](#)
- [MusicBrainz Tag Mappings](#)

- [MP3 Headers](#)

## 4.5 Indices and tables

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