

# KML - The Missing Manual

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There has been a fair deal of material written on KiSS Products, but very little for the people actually writing KML for the players. The purpose of this document is to document what is known. All information in this document has been tried on a DP-558, or has been found on the Internet.

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## 1. Quick Introduction

KML stands for Kiss Markup Language. A code in development at KiSS technology that allows internet to be used on the KiSS. It's like your browser is loading HTML pages, KiSS players can load KML pages on the internet. Features for KML are only limited by the developers imagination and can be used for a wider range of adjustments for KiSS players with Ethernet connection. These KiSS players can connect to websites and read pages authored in KML. KML is an XML format. You make one file per screen you want to display.

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>
<KMLPAGE version='2.0'>
(...add page content...)
</KMLPAGE>
```

This very simple example renders a blue screen fading to black, with a plain white text in the top left hand corner stating 'Hello World!'.

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>
<KMLPAGE version="2.0">
<BACKGROUND vgradient="0,0,0-0,0,128" />
<FILLRECT coords="0,0,719,479" pen="0" />
<TEXT coords="60,60" font="0" pen="255">Hello world!</TEXT>
</KMLPAGE>
```

## 2. Longer introduction

### 2.1. Client Versions

DP-558 has KML client version 2.1. Others have version 2.0.

### 2.2. How to get started

If you own a DP-558 you can set up a webserver on port 8888 on the host that runs PC-Link. Then click on the **Menu** button on the remote, scroll down to Online KML-services, and select PC-Link

KML Start page. The player will then fetch the /index.kml file from the webserver. You can type in one of the examples in the document to get started.

One might make the assumption, that it is possible to create an index.kml on a CD-ROM and then insert the CD-ROM into the player to get a standalone application, but this doesn't work.

## 2.3. How the player accesss the website

The player makes a HTTP 1.0 GET request to the website and automatically adds some information about your player. /index.kml?PlayerID=ugeodosahwis&PlayerBrand=KiSS&PlayerModel=DP-558&PlayerLanguage=4&PlayerFirmware=105&ScreenWidth=720&ScreenHeight=576&ScreenForm=4x3

If possible set the mime-type to text/xml of the page. That way Internet Explorer and Mozilla will display the KML as XML when you look at the page. The player doesn't care.

# 3. KML Commands in alphabetical order

## BACKGROUND

### Name

BACKGROUND — Set the screen background

### Synopsis

```
<BACKGROUND {href=" url" | gradient=" 1,2,3-4,5,6" | vgradient=" 1,2,3-4,5,6" |  
hgradient=" 1,2,3-4,5,6" | wgradient=" 1,2,3-4,5,6"/> }
```

### Description

<BACKGROUND> sets the background. The url can point to JPG or GIF. If the image is smaller than the size of the screen, then it is centered. Setting the background doesn't clear the content.

## FILLRECT

### Name

FILLRECT — Draw filled rectangle

## Synopsis

```
<FILLRECT coords=" x,y,w,h" pen="colour" />
```

## Description

Draws a filled rectangle in the pen colour. The coordinates are x, y, width and height. Bottom right corner on NTSC televisions is 720,480. On European PAL it is 720,576. Useful to blank the screen.

# FIP

## Name

FIP — Set text on front panel

## Synopsis

```
<FIP speed='a' intensity='b'>
```

## Description

Parameters: speed (a) - For scrolling messages (texts longer than available display space) number of 'ticks' between updating scroll position. Each tick is about 1/10 second. Thus, a scroll speed of 2 means at every other 'tick' the scroll message advances one position. If parameter is omitted, assumed to be 5 (~ 0.5 sec between scroll position advance) intensity (b) - The VFD display on the DP-5xx platform has 8 intensities, with 0 being dark and 7 being bright. If parameter omitted, assumed to be 7 (brightest).

## Example

```
<FIP speed='2' intensity='6'>Add SCROLLING MESSAGE HERE</FIP>
```

# GOTO

## Name

GOTO — Jump to target

## Synopsis

```
<GOTO href="http://go to where" />
```

## Description

Does the following: 1. Cancels all events associated with current KML document 2. Unloads (discards) current KML document 3. Loads new KML document. Node Parameters: href Location of KML document to be loaded [opened]. `<GOTO href='$$PREVIOUSDOCUMENT$$' />` is possible.

## Example

```
<GOTO href="http://www.host.com/kml/page2.xml" />
```

# IMAGE

## Name

IMAGE — Display a GIF image

## Synopsis

```
<IMAGE id=" logo" coords=" 74,84" [src=" http://which graphic.gif" />]
```

## Description

Displays a GIF image at the coordinates. The src attribute is available from version 2.1. If 'id' is used, the image must have been loaded in an earlier LOADIMAGE command with matching 'id' attribute.

# KEY

## Name

KEY — Set action for key

## Synopsis

```
<KEY id="key_id">
```

## Description

KEY sets the action for a button on the remote. The id must be a numeric value from the list of key ids.

## Example

```
<KEY id="93">  
  <ONCLICK><![CDATA[ <GOTO href='http://...' />]]></ONCLICK>  
</KEY>
```

# LINE

## Name

LINE — Draw line

## Synopsis

```
<LINE coords="100,100,400,100" pen="255" />
```

## Description

Draws a one-pixel wide line.

# LOADIMAGE

## Name

LOADIMAGE — Fetch image from webserver

## Synopsis

```
<LOADIMAGE id="logo" href="http://which graphic.gif"/>
```

## Description

Loads a GIF image from the URL given into a buffer in the player. The image can then be used by the <IMAGE/> element.

Be aware that on older players the ability to overwrite, update or delete loaded images from the KML image buffer is missing. This means, as soon as the ~20 image buffers are spent, you can load no new images.

You preload and display GIFs with separate commands, example:

```
<LOADIMAGE id='ebbec123' href='http://host/path/image.gif' />
<IMAGE coords='100,100' id='ebbec123' />
```

From version 2.1, you can load the image directly from the IMAGE command.

```
<IMAGE coords='100,100' id='bufferID' src='http://host/path/image.gif' />
```

Relative URLs are not available in version 2.1, but will come in version 2.5.

# MENUITEM

## Name

MENUITEM — Define menu item

## Synopsis

```
<MENUITEM id="itemid">
```

## Description

The player has builtin support for menus. If you define a number of menu items in the KML page, the player will automatically make the first one active, i.e. execute the commands associated with the ONHILITE eventhandler.

The down and right buttons are by default set to jump to the next menu item. Up and left are set to jump to the previous menu item.

## Example

```
<MENUITEM id="04">
  <ONRIGHT><![CDATA[
    <MENUSELECT item='14' />
  ]]></ONRIGHT>
  <ONCLICK><![CDATA[
    <GOTO href='http://webpage/playerinfo.kml' />
  ]]></ONCLICK>
  <ONHILITE><![CDATA[
    <TEXT coords='220,176' font='0' pen='47'>Player information</TEXT>
  ]]></ONHILITE>
  <ONUNHILITE><![CDATA[
    <TEXT coords='220,176' font='0' pen='255'>Player information</TEXT>
  ]]></ONUNHILITE>
</MENUITEM>
```

# MENUSELECT

## Name

MENUSELECT — Jump to menu item

## Synopsis

```
<MENUSELECT item="one"/>
```

## Description

This command makes the menu item referenced in the item attribute the active one.

## Example

```
<KEY id="79">
  <ONCLICK><![CDATA[<MENUSELECT item='menu5' />]]></ONCLICK>
</KEY>
```

# ONCLICK

## Name

ONCLICK — Eventhandler for click or Enter

## Synopsis

```
<ONCLICK>
```

## Description

ONCLICK is used inside MENUITEM and KEY elements. It encapsulates the actions to execute when the user clicks on the **Enter** button. If ONCLICK is used inside KEY, then it is the button number from KEY command that triggers the action.

## Example

```
<ONCLICK><![CDATA[
  <GOTO href='http://webpage/playerinfo.kml' />
]]></ONCLICK>
```

# ONDOWN

## Name

ONDOWN — Eventhandler for down button



## Synopsis

`<ONDOWN>`

## Example

```
<ONDOWN><![CDATA[
    (...commands to be executed...)
]]></ONDOWN>
```

# ONHILITE

## Name

ONHILITE — Eventhandler for activation of menu item

## Synopsis

`<ONHILITE>`

## Description

Onhिलite is used inside MENUITEM elements. It encapsulates the actions to execute when the user high-lights the menuitem. These are usually something that display the item as active.

## Example

```
<ONHILITE><![CDATA[
    <TEXT coords='110,340' font='0' pen='255'>Menu text</TEXT>
]]></ONHILITE>
```

# ONINTERVAL

## Name

ONINTERVAL — Eventhandler

## Synopsis

```
<ONINTERVAL interval="number">
```

## Description

Number is a number 1..10. The block inside is executed everytime the interval is over.

# ONLEFT

## Name

ONLEFT — Eventhandler for left button

## Synopsis

```
<ONLEFT>
```

## Description

```
<ONLEFT><![CDATA[ (...commands to be executed...) ]]></ONLEFT>
```

## Example

```
<ONLEFT><![CDATA[
    <MENUSELECT item='item5' />
]]></ONLEFT>
```

# ONMEDIASTOPPED

## Name

ONMEDIASTOPPED — Eventhandler to trigger when media stops

## Synopsis

<ONMEDIASTOPPED>

## Description

```
<ONMEDIASTOPPED><![CDATA[
    (...commands to be executed...)
]]></ONMEDIASTOPPED>
```

## Example

```
<ONMEDIASTOPPED><![CDATA[
    <FIP speed='1' intensity='7'>STOPPED</FIP>
]]></ONMEDIASTOPPED>
```

# ONMETADATA

## Name

ONMETADATA — Eventhandler media streams

## Synopsis

<ONMETADATA>

## Description

This is an eventhandler for metadata coming from shoutcast audio streams. Interjected into the stream are blocks containing information about the song, station etc. You can set up the

ONMETADATA handler to catch this data and display it. The protocol isn't officially documented. The Kiss player can extract title, bitrate, genre and URL and will set the variables `$$MP3_TITLE$$`, `$$MP3_BITRATE$$`, `$$MP3_GENRE$$` and `$$MP3_URL$$`.

For more information see the ShoutCast metadata protocol (<http://ample.sourceforge.net/developers.shtml#shoutmeta>) document on the Internet.

## Example

```
<ONMETADATA><![CDATA[
<FILLRECT coords='0,395,719,85' pen='0' />
<TEXT coords="76,406" font="0" pen="118"> $$MP3_TITLE$$ </TEXT>
]]></ONMETADATA>
```

# ONRIGHT

## Name

ONRIGHT — Eventhandler for right button

## Synopsis

`<ONRIGHT>`

## Example

```
<ONRIGHT><![CDATA[
    (...commands to be executed...)
]]></ONRIGHT>
```

# ONTIMER

## Name

ONTIMER — Set a timer

## Synopsis

```
<ONTIMER timeout="num">
```

## Description

Set some actions to happen in the future. The timeout is in milliseconds.

## Example

```
<ONTIMER timeout='1000'><![CDATA[
  <MENUSELECT item='14' />
]]></ONTIMER>
```

# ONUNHILITE

## Name

ONUNHILITE — Eventhandler for deactivation of menu item

## Synopsis

```
<ONUNHILITE>
```

## Description

Onunhिलite is used inside MENUITEM elements. It encapsulates the actions to execute when the user leaves the menuitem. These are usually something that visually show that the item is now inactive.

## Example

```
<ONUNHILITE><![CDATA[
  <TEXT coords='110,340' font='0' pen='255'>Menu text</TEXT>
]]></ONUNHILITE>
```

# ONUNLOAD

## Name

ONUNLOAD — Eventhandler

## Synopsis

<ONUNLOAD>

## Description

...

## Example

```
<ONUNLOAD><![CDATA[  
    (...commands to be executed...)  
]]></ONUNLOAD>
```

# ONUP

## Name

ONUP — Eventhandler for up button

## Synopsis

<ONUP>

## Description

This command describes what should happen when the user clicks on the up button. The default action for menu items is to go to the preceeding menu item.

## Example

```
<ONUP><![CDATA[
    (...commands to be executed...)
]]></ONUP>
```

# PLAYMEDIA

## Name

PLAYMEDIA — Play multimedia file from address

## Synopsis

```
<PLAYMEDIA href="http://tothefile.pls" />
```

## Description

Media must be a Shoutcast playlist (.pls) file. Each file inside the PLS file must point to a Shoutcast stream. Pointing to an MP3 file appears not to work.

## Example

```
<ONCLICK><![CDATA[
<PLAYMEDIA href='http://www.shoutcast.com/sbin/shoutcast-playlist.pls?rn=5224&file=f
]]></ONCLICK>
```

# RECT

## Name

RECT — Draw rectangle

## Synopsis

```
<RECT coords="100,100,400,100" pen="255" />
```

## Description

Draws rectangle (1 pixel line width) on graphics layer. Parameters:

- coords Placement and size of rectangle.
- pen Color or palette index.

Parameter data for "coords" :

- x Pixel X coordinate of top-left corner
- y Pixel Y coordinates of top-left corner
- w Pixel Width of rectangle
- h Pixel Height of rectangle

## Example

```
<RECT coords="100,100,400,100" pen="255" />
```

Draws a 400 x 100 white rectangle.

# STOPMEDIA

## Name

STOPMEDIA — Stop play of multimedia file

## Synopsis

```
<STOPMEDIA/>
```

## Description

...



# SYSTEM

## Name

SYSTEM — System function

## Synopsis

```
<SYSTEM function="browsedisc|browsehdd|browsepc|link" param1="audio|video|pictures"
[param2="_" | param3="_" | param4="_" | param5="_" | param6="_"]
function="runsetup|runethernetsetup|exit" />
```

## Description

Only works from local KML-pages, containing "file:/" in the URL. If the URL starts with "http:/" SYSTEM is ignored.

# TEXT

## Name

TEXT — Display text at coordinate

## Synopsis

```
<TEXT coords='101,180' font='size' pen='colour'>
```

## Description

The font attribute can be from 0 to 3. Zero is the small font, and three is the largest font. The "4" font has some strange glyphs. Text does not wrap if it is longer than screen width.

## Example

```
<TEXT coords='101,250' font='0' pen='31'>
```

```
Text here will show Small!
</TEXT>
```

## UNLOADIMAGE

### Name

UNLOADIMAGE — Remove image from buffer

### Synopsis

```
<UNLOADIMAGE id="imageid"/>
```

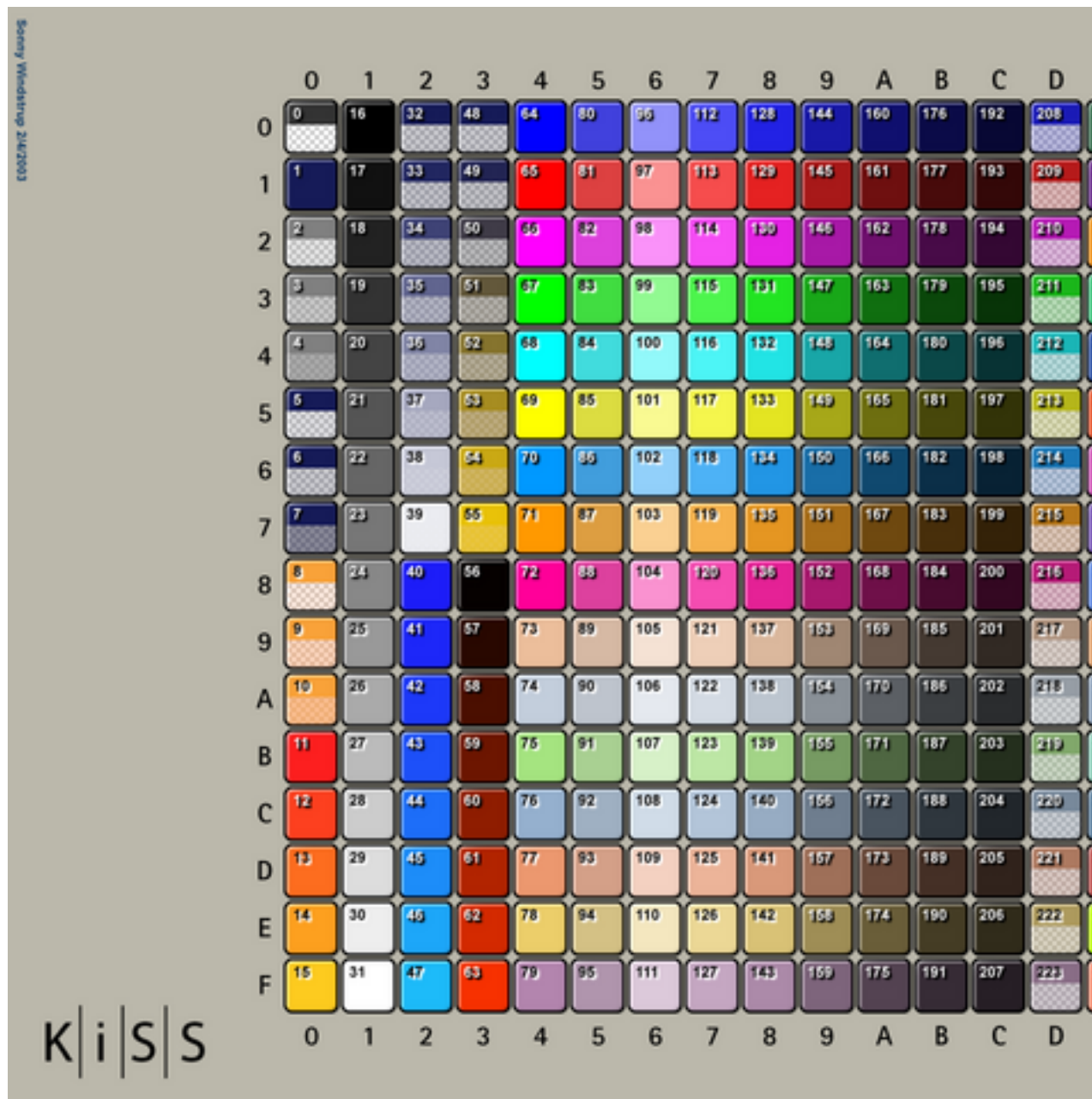
### Description

There are 24 buffers available for images on the player. This command frees one buffer. The buffers are presumably cleared when the player is directed to another page.

## 4. Colour Codes

DP-5xx OSD graphics are 8-bit. All images and graphics on the 8-bit OSD layer share a common 256-colour palette. Each colour entry in the palette has an associated alpha (opacity) value as well. Newer KiSS products based on the EM86xx chip will have full 32-bit colour (24-bit RGB + 8-bit alpha), but this is not an option on the DP-5xx. The GIF decoder discards the palette bundled with the image, and makes no attempt to re-map the image to the common system palette either.

KiSS currently has no plans for changing the colour table, the behavior of the GIF decoder, or providing KML options for letting individual KML sites alter the colour table, the main reason being that the colour table is shared with menus and everything else that happens on the OSD layer. Instead you should adapt your 8-bit artwork for the OSD to fit the existing palette.



## 5. Button Codes

### 5.1. Key IDs :

ID	Button
73	Button 0
74	Button 1
75	Button 2
76	Button 3

<b>ID</b>	<b>Button</b>
77	Button 4
79	Button 5
80	Button 6
81	Button 7
82	Button 8
83	Button 9
84	Button TITLE MENU
93	Button RETURN
94	Button <<
95	Button >>
96	Button STEP
97	Button AUDIO
98	Button SUBPIC
99	Button ZOOM
100	Button ANGLE
101	Button REPEAT
102	Button MARK
103	Button CLEAR
104	Button SRCH
768	Button SETUP
16387	Button PLAY/PAUSE
16388	Button NEXT
16389	Button PREVIOUS

## 5.2. Button Codes

<b>Button Code Name</b>	<b>Button</b>
SHOW_ONE_KEYDOWN	1
SHOW_TWO_KEYDOWN	2
SHOW_THREE_KEYDOWN	3
SHOW_FOUR_KEYDOWN	4
SHOW_FIVE_KEYDOWN	5
SHOW_SIX_KEYDOWN	6
SHOW_SEVEN_KEYDOWN	7
SHOW_EIGHT_KEYDOWN	8
SHOW_NINE_KEYDOWN	9
SHOW_ZERO_KEYDOWN	0
SHOW_TITLE_KEYDOWN	Title Menu
SHOW_MENU_KEYDOWN	Root Menu
SHOW_RETURN_KEYDOWN	Return
SHOW_UP_KEYDOWN	Up

Button Code Name	Button
SHOW_DOWN_KEYDOWN	Down
SHOW_LEFT_KEYDOWN	Left
SHOW_RIGHT_KEYDOWN	Right
SHOW_ENTER_KEYDOWN	Enter
SHOW_REV_KEYDOWN	Fast Reverse
SHOW_PLAY_KEYDOWN	Play/Pause
SHOW_FWD_KEYDOWN	Fast Forward
SHOW_PREV_KEYDOWN	Previous
SHOW_NEXT_KEYDOWN	Next
SHOW_STEP_KEYDOWN	Single Step
SHOW_AUDIO_KEYDOWN	Audio
SHOW_SUBTITLE_KEYDOWN	Subtitle
SHOW_ANGLE_KEYDOWN	Angle
SHOW_ZOOM_KEYDOWN	Zoom
SHOW_REPEAT_KEYDOWN	Repeat
SHOW_BOOKMARK_KEYDOWN	Bookmark
SHOW_SETUP_KEYDOWN	Setup
SHOW_CLEAR_KEYDOWN	Clear
SHOW_SEARCH_KEYDOWN	Search

## 6. Examples

### Example 1. One-item menu

This example shows a menu item that highlights when selected.

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>
<KMLPAGE version='2.0'>
<FILLRECT coords="0,0,719,479" pen="0" />
<MENUITEM id="1">
  <ONCLICK><![CDATA[ <GOTO href='http://www.movimu.com/kml/kml-index.php' /> ]]></ONCLICK>
  <ONHILITE><![CDATA[ <TEXT coords='220,108' font='0' pen='47'>Craig's portal</TEXT>
    ]]></ONHILITE>
  <ONUNHILITE><![CDATA[ <TEXT coords='220,108' font='0' pen='255'>Craig's portal</TEXT>
    ]]></ONUNHILITE>
</MENUITEM>
</KMLPAGE>
```

**Example 2. Shoutcast PLS file**

Shoutcast PLS file for PLAYMEDIA action.

```
[playlist]
numberofentries=4
File1=http://64.236.34.67:80/stream/1038
Title1=(#1 - 792/13658) HitzRadio.com - #1 For All The Hits!
Length1=-1
File2=http://64.236.34.196:80/stream/1038
Title2=(#2 - 1268/21073) HitzRadio.com - #1 For All The Hits!
Length2=-1
File3=http://64.236.34.97:80/stream/1038
Title3=(#3 - 1531/22082) HitzRadio.com - #1 For All The Hits!
Length3=-1
File4=http://205.188.234.38:8070
Title4=(#4 - 10/10) HitzRadio.com - #1 For All The Hits!
Length4=-1
Version=2
```

Explanation of entries:

[playlist]: Signifies that this is a playlist. This is case sensitive.

File#=: Location of the file in any of the formats described above. This is also case sensitive. Also the # sign after "File" signifies what file number it is. The first file in the playlist is "File1", the second is "File2" and so on.

Title#=: Title to display. This is usually the title read from the file name or ID3 tags. Like the other fields, this is case sensitive. This also can be the name of a stream. Like "File#" the pound sign (#) is replaced by the entry number that is in the playlist.

Length#=: Length in seconds, this is also case sensitive. On the last entry there is a negative one, this is usually seen on streams, it tells the program to ignore the time entry. Like "File#" the pound sign (#) is replaced by the entry number that is in the playlist.

NumberOfEntries=: The total number of entries in the playlist. This should match the last number on the "File#", "Title#", and "Length#" fields. Also case sensitive.

Version=2: This required entry near the bottom tells the player what format the PLS is in. Older versions of the PLS format did not include this. Like everything else, it is case sensitive.