

MPL031

Playlist

User's Guide

Version 2.1

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1. Introduction

1.1. Notation

This Documentation uses various labels and name that serve as your guides to operating this product.

■ Notational conventions

<u>Caution</u>	A “caution” indicates a section of the manual that requires special attention.
<u>Reference</u>	A “referene” provides information related to the current topic.
<u>Example</u>	An “example” indicates on example related to the current topic.
<u>Note</u>	A “note” provides supplementary information.

■ Naming Conventions

MPL031	MPL031 is networked digital signage player. It can play high definition advertisement media contents such as photo and movie.
DSP	The name of DSP(Digital Signage Player) in this document stands for MPL031.

2. Playlist

The Playlist is used to handle contents lists. The file name is "playlist.txt".

The Playlist can be stored in the root folder of internal storage device, or in the Internet server folder.

3. The inside of Playlist

3.1. The standard example of Playlist.

```
# playlist.txt

<ANY> ← Week Directive
<DEF> ← Time Directive
a01.avi
a02.avi
a03.jpg
message.txt
<12:00-13:00> ← Time Directive
a04.avi
a05.avi
a06.jpg
message_any_1200.txt
<SPY> ← Week Directive
<W:1111100><D:20120101-20121231>
<DEF>
s01.avi
s02.avi
s03.jpg
message_spy.txt
<09:00-12:00><BGM> ← Special Directive
s04.avi
s05.avi
s06.jpg
message_spy_0900.txt
```

3.2. Week Directive

- Possible Directive: <SUN>, <MON>, <TUE>, <WED>, <THU>, <FRI>, <SAT>, <ANY>, <SPY>
- <SUN>, <MON>, <TUE>, <WED>, <THU>, <FRI>, and <SAT> stand for the play list on Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday respectively.
- <ANY> stands for the play list that plays as default day.
- <SPY> stands for the play list that plays at specified day of week and date. Additional option should be followed after <SPY> directive. Additional option can be <W:1111111>, <D:YYYYMMDD-YYYYMMDD>, <D:YYYYMMDDhhmm-YYYYMMDDhhmm> and <S:DD>. The example is as follows
 - ✓ <SPY><W:1000000><D:20120501-20120530>: play every Monday from 2012.05.01 to 2012.05.30
 - ✓ <SPY><W:111100>: play from Monday to Friday. do not play on the Saturday and Sunday.
 - ✓ <SPY><D:20120501-20120530>: play all day of week form 2012.05.01 to 2012.05.30
 - ✓ <SPY><D:201205011310-201205302350>: play all absolute time form 13:10 2012.05.01 to 23:50 2012.05.30.
 - ✓ <SPY><S:15>: play on the 15th day of each month.
 - ✓ <SPY>: it is the same as <ANY>

3.3. Time Directive

- Possible Directive:<HH:MM-HH:MM>, <HH:MM:SS-HH:MM:SS>, <HH:MM>, <DEF>
- The time directive depends on week directive on the previous line.
- <HH:MM-HH:MM> is used to play during a specific period. For example, <12:00-13:00> is used to play from 12:00 to 13:00.
- <HH:MM:SS-HH:MM:SS> is alst used to play during a specific period.
- <HH:MM> is used to play just one time at specific time. For example, <13:00> is used to play just one time at 13:00.
- <DEF> stand for the play list that plays as default time.
- Time directive max value is 1024.

Caution

The Week Directive and the Time Directive MUST be included in the Playlist.

3.4. Special Directive

- Possible Directive: <BGM>, <Fxx>
- <BGM> as BGM directive can be used after time directive. This directive stands for background music mode in this time period. The movie is ignored at Playlist and play photo only with background music.
- # stand for comment for explanation.
- <Fxx> as Multi-Zone Layout Display (MLD) directive can be used after time directive. This directive stands for MLD mode. The “format.txt” file is required to use this mode.
- <BGM> and <Fxx> can't be used at the same time.

Reference

If you want to know more detail information for MLD mode, please refer to “6. Multi-Zone Layout Display”.

4. Control the Contents

- Contents list should be written bottom of time directive.
- The media contents can be movie, photo, music, and caption file.
- The all of the contents file name can have full PATH information. PATH information have to start of “/”. If there is no PATH information, the folder will be default PATH on server folder. For example, if the server IP address is 10.10.10.10, and the server folder name is “netcion”, the contents are stored following location.
- The all of the contents file name have other http server or ftp server.
 - ✓ aaa.avi : <http://10.10.10.10/netcion/aaa.avi>
 - ✓ /data/01/bbb.avi : <http://10.10.10.10/data/01/bbb.avi>
 - ✓ /data/01/ccc.jpg|004:music/03/ddd.mp3 : <http://10.10.10.10/data/01/ccc.jpg> + <http://10.10.10.10/music/03/ddd.mp3>
 - ✓ data/01/eee.avi : <http://10.10.10.10/netcion/data/01/eee.avi>
 - ✓ <http://10.20.30.40/music/04/fff.mp3> : <http://10.20.30.40/music/04/fff.mp3>
 - ✓ <ftp://10.20.30.50/data/05/ggg.avi> : <ftp://10.20.30.50/data/05/ggg.avi>
- User can give play options for all media contents. The “|nnn:” is used to give play option. The “nnn” can be following code number.

Caution

You can use text format or BMP format as a caption file. In case of text format, the file name has to start with “message” and end with “.txt” such as “message_test123.txt”. In case of BMP format, the file name has to start with “message” and end with “.bmp” such as “message_test456.bmp”.

5. Media Contents Play Options

5.1. Set Play Start Time

- filename|001:MMDDhhmm
- filename |001:YYYYMMDDhhmm
- filename |001:hhmm
- filename |001:hhmmss
- Example: a.avi|001:07010900 -> enable a.avi to be played to 1, Jul 09:00.

5.2. Set Play Stop Time

- filename|002:MMDDhhmm
- filename |002:YYYYMMDDhhmm
- filename |002:hhmm
- filename |002:hhmmss
- Example: a.avi|001:07311800 -> enable a.avi to be played until 31, Jul 18:00.

5.3. Set Continuous Playing Time

- filename|003:ssss
- Example: b.jpg|003:0060 -> play b.jpg file during 60 seconds.

5.4. Set BGM File

- filename|003:ssss|004:BGM file
- This option is valid only when the file is photo.
- BGM file can have full file PATH like other contents.
- Example: b.jpg|003:0060|004:c.mp3 -> play b.jpg file during 60 seconds with back ground music c.mp3.

5.5. Do not play

- filename|005:1
- This option causes the file not to play.
- Even though this option is used, the file is not removed from internal storage device.
- Example: a.avi|005:1 -> DSP doesn't play a.avi, but it doesn't remove this file from internal storage device.

5.6. Set Auto Scaling

- filename|006:1 or filename|006:2
- The extension number 1 means enable auto scaling.
- The extension number 2 means disable auto scaling.

5.7. Set Transition Effect

- filename|007:ee
- This option is valid only when this file and the next file are photo.
- Set slide effect between current contents and next contents.
- The “ee” can have following code number
 - ✓ 01: Not Use
 - ✓ 02: Random
 - ✓ 03: Crossfade
 - ✓ 04: Rightward
 - ✓ 05: Leftward
 - ✓ 06: Upward
 - ✓ 07: Increase
 - ✓ 08: Downward
- Example: b.jpg|007:03 -> After playing b.jpg, if the next file is photo, DSP changes photo with Crossfade transition effect.

5.8. Set the display position of Multi-Zone Layout Display

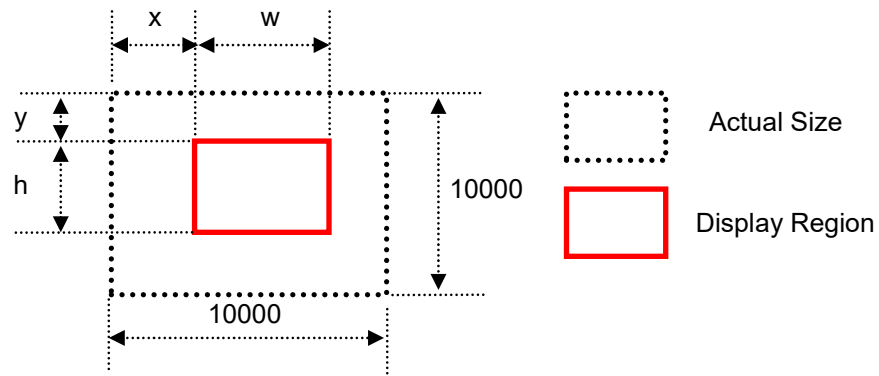
- filename|008:xx
- Set the display position of Multi-Zone Layout Display for this file.
- This option is valid only when Multi-Zone Layout Display directive exists after time directive.
- Example: a.avi|008:01 -> DSP displays a.avi on display position 01 among display positions of Multi-Zone Layout Display.

5.9. Display specific caption during playing a file

- filename|009:caption_filename
- Caption file can be message_xxxx.txt and message_xxxx.bmp.
- Caption file can have full file PATH.
- Specific caption is displayed during playing a file.
- Example: b.jpg|009:message_aaa.txt -> message_aaa.txt is displayed during playing b.jpg.

5.10. Display specific region

- filename|010:{x},{y},{w},{h}
- Display specific region of a contents that can be picture or movie. Refer to following picture to know about the meaning of x, y, w, and h.
- x+y can't be greater than 10000, and also y+w can't be greater than 10000.
- Example: a.avi|010:0,0,5000,5000 -> When playing a.avi, the specific region(x=0, y=0, w=5000, h=5000) is displayed.



5.11. Set caption type

- caption_filename|011:aa
- The "aa" can have following code number
 - ✓ 00: Scroll caption
 - ✓ 01: Left aligned static caption
 - ✓ 02: Right aligned static caption
 - ✓ 03: Top aligned static caption
 - ✓ 04: Bottom aligned static caption
 - ✓ 05: Center aligned static caption
 - ✓ 06: Left wrap around caption
 - ✓ 07: Right wrap around caption
 - ✓ 08: Upper wrap around caption
 - ✓ 09: Downward wrap around caption
 - ✓ 10: Left wrap stop caption
 - ✓ 11: Right wrap stop caption
 - ✓ 12: Upper wrap stop caption
 - ✓ 13: Downward wrap stop caption

- Static caption must have Caption Continuous Playing Time(012), the caption continuous playing time specify the time for display.
- Wrap caption and Wrap stop caption must have Caption Continuous Playing Time(012), the caption continuous playing time specify the delay time before next caption.
- Example: message_test.txt|008:04|003:10|011:05 -> Display message_test.txt on the center of zone 4 without scrolling for 10 seconds.

5.12. Set Caption Continuous Playing Time

- caption_filename|012:ssss
- This option is valid only when the file is caption.
- Example: message_test.txt|011:05|012:0003 -> play message_test.txt file during 60 seconds.

5.13. Do not Download

- filename|030:1
- This option must used by WebView or WebText layout.
- Example: <http://10.20.30.40/video/aaa.avi> -> play aaa.avi file but do not download.

6. Advanced Playlist

6.1. The standard example of Advanced Playlist.

The file name of Advanced Playlist is playlist.txt that is same as basic Playlist. The standard example is as follows.

```

<SCENE01><F01><BGM> ← Special Directive
s01_01.avi|008:01 ← Scene Directive
s01_02.jpg|008:01
s01_03.jpg|008:01
message_s01_04.txt|008:02
<SCENE02><F02><BGM>
s02_01.avi|008:01
s02_02.avi|008:01
s02_03.jpg|008:02
s02_04.jpg|008:02
message_s02_05.bmp|008:03
<SCENE20><F03> ← Special Directive
s20_01.avi|008:01 ← Scene Directive
s20_02.avi|008:01
s20_03.jpg|008:02
s20_04.jpg|008:02
<ANY> ← Week Directive
<DEF> ← Time Directive
:SCENE01
<12:00-13:00> ← Time Directive
:SCENE02

<SPY><W:0000011><D:20120801-20120831>
<DEF>
:SCENE01 ← The use of Scene
:SCENE02
:SCENE02
:SCENE03

```

6.2. Week Directive

The usage of this directive is same as basic Playlist.

6.3. Time Directive

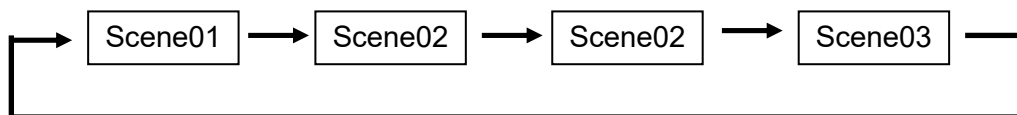
The usage of this directive is same as basic Playlist.

6.4. Special Directive

In the basic Playlist, special directive may be used after time directive, but, in the Advanced Playlist, special directive may be used after Scene directive. MLD directive such as <F01> **MUST** be used in the Advanced Playlist. The usage of this directive is same as basic Playlist. The special directive <PT:xxxxx> after Scene directive is used for set play time. The xxxxx specify play time(second).

6.5. Scene Directive

This directive defines a Scene. The Scene is a basic unit of the Advanced Playlist. MLD directive such as <F01>, contents, and the display position of MLD such as "008:01" **MUST** be used with this Scene Directive. Write Scene number such as ":SCENE01" below Time Directive to use a Scene. Each Scene is finished when the video zone of MLD is finished. On Saturday and Sunday, DSP plays as follows.



6.6. Media Contents Play Options

The usage of these options is same as basic Playlist. Display position of MLD **MUST** be used in the Advanced Playlist.

7. Time Schedule Priority

Time schedule is basic unit in a Playlist. A Playlist is composed of time schedules. DSP plays only one time schedule that has the highest priority among the time schedules that meet time condition. The priority is determined by combination of Week directive, Time directive, and Special directive. The bigger the priority value, the higher the priority.

7.1. The List which determines priority

List	Example	Priority value
Specifying a day of a month	<SPY><S:15>	30
Once time play	<12:00>	15
Specifying start date and end date	<SPY><D:20120801-20120831>	10
Specifying days of the week	<SPY><W:1111000> <MON> ~ <SUN>	8
Specifying start time and end time of a day	<09:00-10:00>	6

7.2. Examples

1	{	<ANY> <DEF> 01.avi
2	{	<12:00-13:00> 02.avi
3	{	<SPY><S:15> <DEF> 03.avi
4	{	<SPY><D:20121001-20121031> <DEF> 04.avi
5	{	<SPY><W:1111100> <09:00-10:00> 05.avi

Time Schedule	1	2	3	4	5
Specifying a day of a month	0	0	30	0	0
Specifying start date and end date	0	0	0	10	0
Specifying days of the week	0	0	0	0	8
Specifying start time and end time of a day	0	6	0	0	6
Calculated priority value	0	6	30	10	14

8. Multi-Zone Layout Display (MLD)

DSP support free Multi-Zone Layout Display (MLD). User can display various style of screen layout with this free MLD function.

MLD requires two files, "format.txt" and "playlist.txt". This two files must be stored in internal storage device or in the Internet server folder.

8.1. A typical example

A typical example of MLD is as follows.

<format.txt>

```

<FORMAT01> ← Format Information of MLD
01|V|0,0,1024,704 ← Display Position
02|M|0,704,1024,64 ← Information of MLD

<FORMAT02>
01|V|0,0,704,704
02|P|704,0,320,176
03|P|704,176,320,176
04|P|704,352,320,176
05|P|704,528,320,176
06|M|0,704,1024,64
        
```


<playlist.txt>

```

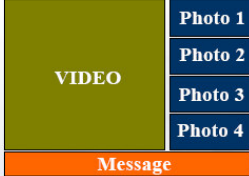
<ANY>
<DEF><F01>
1.avi|008:01
message_test1.txt|008:02

<12:00-13:00><F02>
1.avi|008:01
2.avi|008:01
3.jpg|008:02
4.jpg|008:03
5.jpg|008:04
6.jpg|008:05
7.jpg|008:02
8.jpg|008:03
9.jpg|008:04
10.jpg|008:05
message_test1.txt|008:06
message_test2.txt|008:06
        
```

FORMAT 1



FORMAT 2



8.2. Format Information of MLD

<FORMAT01>, <FORMAT02> describe the format number of MLD.

If you want to apply <FORMAT01>, you have to use <F01> directive in the Playlist.

And if you want to apply <FORMAT01>, you have to use <F01> directive in the Playlist.

8.3. Position Information of MLD

A position information of MLD is described as “display_position | media_type | options”.

- display_zone: It means the display position of MLD and is expressed such as 01, 02, or 03. It is used to describe display zone of corresponding file in the Playlist.
- media_type: It means a media type which is used in display position of MLD. “V” means video or photo, “P” means photo, “M” means caption, “C” means clock, “B” means background picture, “F” means background fill, “D” means DTV out, “W” means Web View, “T” means Web Text, and “S” means overall size of MLD.
- options: It means X position, Y position, X length, Y length and so on. It depends on media_type.
 - ✓ V: X position, Y position, X length, Y length
 - ✓ V: X position, Y position, X length, Y length, transparent
 - ◇ transparent: 0x00~0xFF, effect only picture file
 - ✓ P: X position, Y position, X length, Y length
 - ✓ P: X position, Y position, X length, Y length, transparent
 - ◇ transparent: 0x00~0xFF
 - ✓ M: X position, Y position, X length, Y length
 - ✓ M: X position, Y position, X length, Y length, portrait, direction, font size, speed, text color, background color
 - ✓ M: X position, Y position, X length, Y length, portrait, direction, font size, speed, text color, background color, transparent
 - ◇ portrait: 0=landscape, 1=portrait
 - ◇ direction: 0=leftward, 1=rightward, 2=upward, 3=downward
 - ◇ font size: -1=use local setting, others=font size
 - ◇ speed: -1=use local setting, others=speed(it is possible from 5 to 99, 5 is fastest)
 - ◇ text color: -1=use local setting, others=test color(example: red=0xFF000080, blue=0x0000FF80)
 - ◇ background color: -1=use local setting, others=background color(example: red=0xFF000080, blue=0x0000FF80)
 - ◇ transparent: 0x00~0xFF
 - ✓ C: X position, Y position, X length, Y length
 - ✓ C: X position, Y position, X length, Y length, portrait, direction, font size, alignment, text color, background color
 - ✓ C: X position, Y position, X length, Y length, portrait, direction, font size, alignment, text color, background color, “time display”
 - ✓ C: X position, Y position, X length, Y length, portrait, direction, font size, alignment, text

color, background color," time display", transparent

- ✧ portrait: 0=landscape, 1=portrait
- ✧ direction: don't care
- ✧ font size: -1=use local setting, others=font size
- ✧ alignment: -1=default, 1=left alignment, 2=center alignment, 3=right alignment, (default is center alignment)
- ✧ text color: -1=use local setting, others=test color(example: red=0xFF000080, blue=0x0000FF80)
- ✧ background color: -1=use local setting, others=background color(example: red=0xFF000080, blue=0x0000FF80)
- ✧ time display: -1 = use local setting,
Others = YYYY:year, MM:month, DD:day, W:week day, APM: use of TOD clock, hh:hour, mm:minute, ss:second, others special characters.
- ✧ transparent: 0x00~0xFF
- ✓ B: X position, Y position, X length, Y length
- ✓ F: X position, Y position, X length, Y length, color
 - ✧ color: fill color(example: red=0xFF0000FF, blue=0x0000FFFF)
- ✓ D: X position, Y position, X length, Y length
- ✓ D: X position, Y position, X length, Y length, channel number
 - ✧ channel number: virtual channel number
- ✓ W: X position, Y position, X length, Y length
- ✓ W: X position, Y position, X length, Y length, transparent
 - ✧ transparent: 0x00~0xFF
 - ✧ Only support picture contents
- ✓ T: X position, Y position, X length, Y length, portrait, direction, font size, speed, text color, background color, transparent
 - ✧ portrait: 0=landscape, 1=portrait
 - ✧ direction: don't care
 - ✧ font size: -1=use local setting, others=font size
 - ✧ alignment: -1=default, 1=left alignment, 2=center alignment, 3=right alignment, (default is center alignment)
 - ✧ text color: -1=use local setting, others=test color(example: red=0xFF000080, blue=0x0000FF80)
 - ✧ background color: -1=use local setting, others=background color(example: red=0xFF000080, blue=0x0000FF80)
 - ✧ transparent: 0x00~0xFF

- ✓ S: X position, Y position, X length, Y length
- Example
- ✓ 01|V|0,0,704,704 => X position is 0, Y position is 0, X length is 704 pixel, and Y length is 704 pixel for zone 01. Videos or pictures are displayed on this zone.
- ✓ 02|P|512,0,512,384 => X position is 512, Y position is 0, X length is 512 pixel, and Y length is 384 pixel for zone 02. Pictures are displayed on this zone.
- ✓ 03|M|0,700,1024,68 => X position is 0, Y position is 700, X length is 1024 pixel, and Y length is 68 pixel for zone 03. Captions (text format, BMP format, or RSS format) are displayed on this zone. Other properties are determined by local settings.
- ✓ 03|M|0,700,1024,68,0,0,60,20,0xFF000080,0x0000FF80 => X position is 0, Y position is 700, X length is 1024 pixel, and Y length is 68 pixel for zone 03. Captions (text format, BMP format, or RSS format) are displayed on this zone. Type is landscape, direction is leftward, font size is 60, speed is 20, text color is 0xFF000080, and background color is 0x0000FF80 for this captions.
- ✓ 04|C|950,0,74,50 => X position is 950, Y position is 0, X length is 74 pixel, and Y length is 50 pixel for zone 04. Clock is displayed on this zone. Other properties are determined by local settings.
- ✓ 04|C|950,0,74,50,0,0,60,0,0xFF000080,0x0000FF80 => X position is 950, Y position is 0, X length is 74 pixel, and Y length is 50 pixel for zone 04. Clock is displayed on this zone. Type is landscape, font size is 60, text color is 0xFF000080, and background color is 0x0000FF80 for this captions.
- ✓ 05|B|0,0,1024,768 => X position is 0, Y position is 0, X length is 1024 pixel, and Y length is 768 pixel for zone 05. Display background screen on this zone.
- ✓ 06|D|0,0,704,704,0,0,14 => X position is 0, Y position is 0, X length is 704 pixel, and Y length is 704 pixel for zone 06. DTV is displayed on this zone. Other properties are determined by local settings.
- ✓ 06|D|0,0,704,704 => X position is 0, Y position is 0, X length is 704 pixel, and Y length is 704 pixel for zone 06. DTV is displayed on this zone. Modulation type is 8VSB, reception type is Air, and channel number is 14.
- ✓ 07|S|0,0,1024,768 => X length is 1024 and Y length is 768 for overall MLD size. Other zone should be within this area. X position and Y position are not used here.

Caution

The number of Media type “V” or “D” can’t be more than one.

The maximum number of Media type is 8 for the “P”, “B”, “W” zone, 4 for the “M” zone, and 16 for the “T” zone.

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