Synchro Start Instructions for ID-AL Video Player

Instructions for VP200HD, VP200HDi, VP250HD and VP250HDi

User Manual

SUMMARY

ID-AL products are exclusively manufactured by Waves System
LA VILLE EN BOIS
44830 BOUAYE – FRANCE
Sales and information: +33 2 40 78 22 44
E-mail : **info@id-al.com** – Web site: **www.id-al.com**

Technical department: support@wsystem.com

Technical support: For a detailed list of the technical support options, we suggest you to visit our site: **www.id-al.com**.

Make a synchronization between multiple video players at each playback loop (Synchro Start)

Instructions for VP200HD, VP200HDi, VP250HD and VP250HDi

Issue:

"When multiple videos are simultaneously played in a loop, over the playback loop is done more images are offset from one to another. What to do to remedy this problem?"

Basics:

On the triggering of a video, a little delay can occur. This delay is due to the various processes performed by the player to start a video. This delay is not perfectly constant. A very small part of the delay varies from one trigger to another. If the videos are played in a loop and synchronously, this variation is repeated until to create an undesirable gap between the images.

The delay between the triggering command to start the video and the display of the first image on the screen can be divided as follows:

1. Processing of the triggering command.
2. Searching for the video file on the USB stick.
3. Opening the file.
4. Loading the appropriate video/audio Codec.
5. HDMI acknowledgment between the player and the screens.

If the duration of some operations is fixed and controllable, a small part of this process is variable and unquantifiable.

VP200HD, VP200HDi, VP250HD or VP250HDi devices do not have a dedicated synchronization system between players. It is recommended to apply the following instructions to minimize the gaps that may exist between multiple videos displayed simultaneously.

Method:

1) Managing the process of triggering videos files at each step

To a better control of video triggering and the associated offsets of the different steps of the triggering, follow these recommendations:

1.1) Selection of the USB Flash Memory

A) Use identical USB Flash Memory, same brands, same references, same models.

<u>Advantage</u>: to provide the same response time between the players during the reading on the flash memory.

B) Use fast and efficient USB Flash Memory like USB 3.0.

<u>Advantage</u>: save time in the files researches and opening, and on the processing of the triggering command.

C) Select a well established manufacturers of USB flash memory like SanDisk or Corsair.

<u>Advantage</u>: to certify the reliability of the USB flash memory's response time, and ensure a better product's warranty and a better product's lifetime.

D) Select the USB flash memory that guarantee a minimum rate of reading of 15 to 20 Mbit/s.

<u>Advantage</u>: to certify that the USB flash memory provide the flow required to play your audio/video streams at any time.

1.2) Select the audio and video encoding

A) Select the same audio and video encoding for all your video files.

<u>Advantage</u>: to ensure that the Codecs loading time is the same for all the players.

B) Choose an encoding with a constant bit rate (CBR - Constant Bit Rate).

<u>Advantage</u>: to certify that the loading time of the first audio/video frame is the same for all the video players. (Example: 15 Mbit/s).

Note: This parameter is often associated to the quality of the encoding, it defines the number of used data to encode one second of a video.

1.3) Selection of the screens

For the HDMI displays and the HDMI projectors, the responsiveness and the operational processes may vary from one model to another. If you use the HDMI connection, please select display or projectors of the same brand, the same reference and the same model.

Advantage: to provide the same response time to the HDMI screens or to the HDMI projectors during transmission of the audio/video data coming from the player.

2) Implementation

Once external processes are controlled, it is necessary to select the most effective procedure, to ensure the smallest and the most regular triggering times.

Here is the best procedure to follow:

2.1) Choose of the equipment and the wiring plan

The operating principle of the synchronization means that a player will be the "Master" player and the others will be the "Slave" players.

The "Master" player commands the triggering of the "Slave" players every time it performs a playback loop. To ensure a triggering time as smaller as possible and the most regular as possible, you must use the logical inputs and outputs of your players. A logical output of the "Master" player will together command the main inputs of all the "Slave" players. This means that you must use a VP200HDi or VP250HDi player as "Master".

Note: The "Slave" players can be indifferently a model VP200HD, VP200HDi, VP250HD or VP250HDi.

A) Wire the output (1) of the "Master" player (8 outputs extended connector - top of the case) to the main input (In) of the "Slave" players (main input connector - down of the unit).

B) Wire the output (1) of the "Master" player (8 outputs extended connector - top of the case) to the main input (In) of the "Master" players (main input connector - down of the unit).

C) Wire the ground (G) of the "Master" player (8 outputs extended extended - top of the case) to the ground (G) of the "Slave" players (main input connector - down of the unit).

D) Wire the ground (G) of the "Master" player (8 outputs extended extended - top of the case) to the ground (G) of the "Master" player (main input connector - down of the unit).

Note: If you use the model VP200DHi or VP250DHi as a slave player, do not use the extended inputs (1-8).

Wiring Diagram:
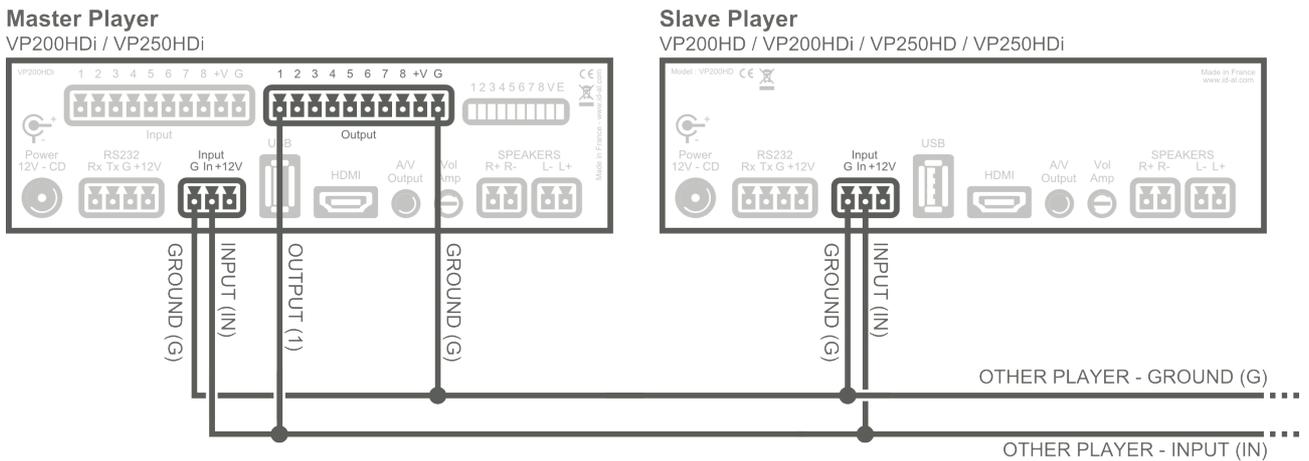
Note: If you need to synchronize other "Slave" players, connect the "Master" player to other "Slave" players in the same way as the first "Slave" player. You can connect up to 10 "Slave" players to the same output of the "Master" player.

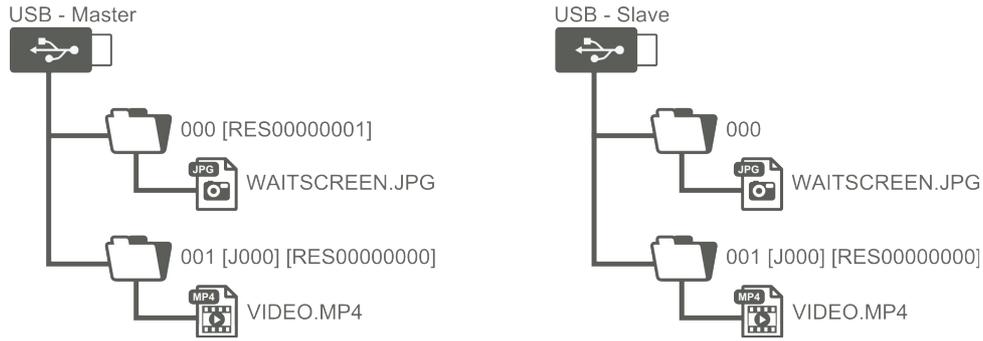### 2.2) Preparing the USB Flash Memory

A) For the "Master" player, you need to create two folders in the root of the USB flash memory:

- An "Autoplay" folder named "000 [RES00000001]". In this folder, you need to add a JPEG (jpg) or PNG (png) type image* file.
- A triggered folder on the input 1, named "001 [J000] [RES00000000]". In this folder, you need to add the video file of the "Master" player.

B) For the "Slave" player(s), create two folders in the root of the USB flash memory:

- An "Autoplay" folder named "000". In this folder, you need to add an JPEG (jpg) or PNG (png) type image* file.
- A triggered folder on the input 1, named "001 [J000] [RES00000000]". In this folder, you need to add the video file of the "Slave" player.

*Note : The image file is the same for all the players, preferably a black image file. By default, choose an image whose size is identical to your display resolution. If you do not know what size to use, create a picture in Full HD 1920x1080.

USB - Master

000 [RES00000001]

WAITSCREEN.JPG

001 [J000] [RES00000000]

VIDEO.MP4

USB - Slave

000

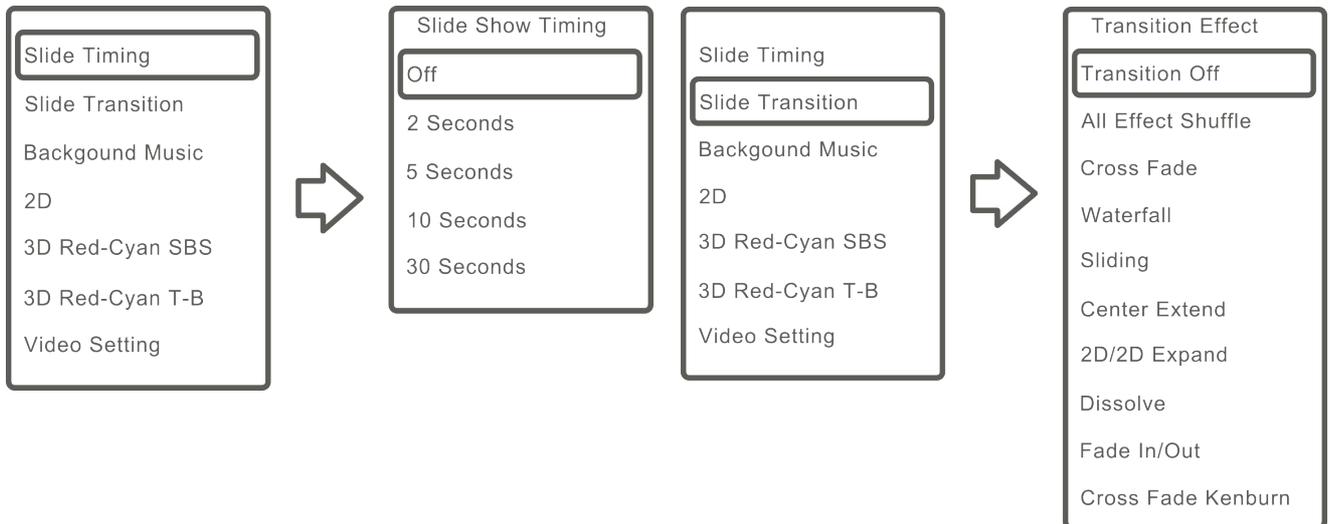WAITSCREEN.JPG

001 [J000] [RES00000000]

VIDEO.MP4

2.3) Player's Settings

You must configure the "Slide Show" mode for each player. The setting of the slide show is done in a menu that is accessible only when you play a folder containing one or more images. During image playback, press the **Menu** button of the remote control to display the contextual menu "Setting Parameters Image Playback".
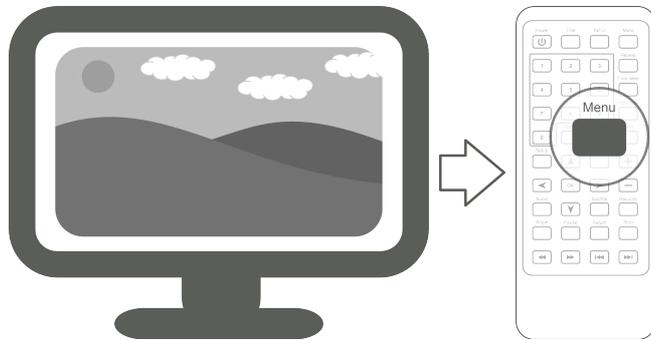
For each player:
. Slide Show Timing = Off
. Slide Transition = Off

Slide Timing
Slide Transition
Backgound Music
2D
3D Red-Cyan SBS
3D Red-Cyan T-B
Video Setting

Slide Show Timing
Off
2 Seconds
5 Seconds
10 Seconds
30 Seconds

Slide Timing
Slide Transition
Backgound Music
2D
3D Red-Cyan SBS
3D Red-Cyan T-B
Video Setting

Transition Effect
Transition Off
All Effect Shuffle
Cross Fade
Waterfall
Sliding
Center Extend
2D/2D Expand
Dissolve
Fade In/Out
Cross Fade Kenburn

3) Principle

On the start, all players launch their "Autoplay" folders named "000" (playing a still image).

When the folder "000" of the "Master" player is launched, the [RES00000001] command activates the output relay 1 (extended output connector) of the "Master" player.

As the output 1 of the "Master" player is connected to the main input of all players ("Master" and "Slave"), all the video files in the folders "001" of each player will be played simultaneously.

When the folder "001" of the "Master" player is launched, the [RES00000000] command releases the output relay 1 of the "Master" player for the next loop of triggering.

At the end of the playing of each video, the [J000] command jumps into the folder "000" of each players. The loop cycle can be repeated indefinitely, providing a resynchronization "Start Sync" type on each loop.

Note: the [RES00000000] command of the folder "001" of the "Slave" players does not add any logic of triggering, but it ensures absolutely identical offset of command between the players.

4) Conclusion

By strictly applying this method, the players will be systematically and simultaneously re-triggered on each playback loop. Although there are other ways, this method provides better triggering time, shorter and more regular. With this implementation, the offsets between each video can be between 0 and 130 ms.

For more information
visit our website
www.id-al.com