Chapter1 Summary

HDPlayer Software we promoting for Full Color door head display. It can remote display by long distance, play high definition video, picture and text etc. It is Asynchronous model system. The system include two main parts: HD-D10/D20/D30and software.

The core part it is controller HD-D10/D20/D30, it is responsible for setting up parameter and sending program. It play program Asynchronous.

The controller connected the display, it is responsible for receiving data and sending the date and showing program on the display
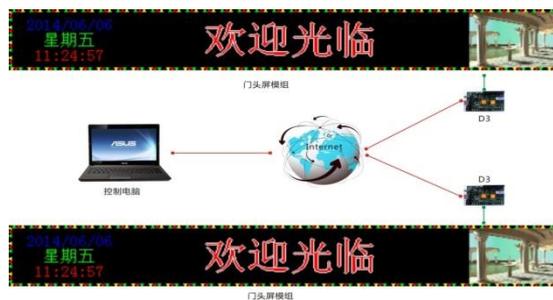
1. Hardware structure

Part Name	Part No	Function
Full color controller	HD-D10/D20/D30	Asynchronous controller and store program
Software	HDPlayer	Screen set、create program、send program
Accessories	--	Hub、network cable、u disk

2. Controller working system

1) Cluster management

Note: The Network cable made by 568B

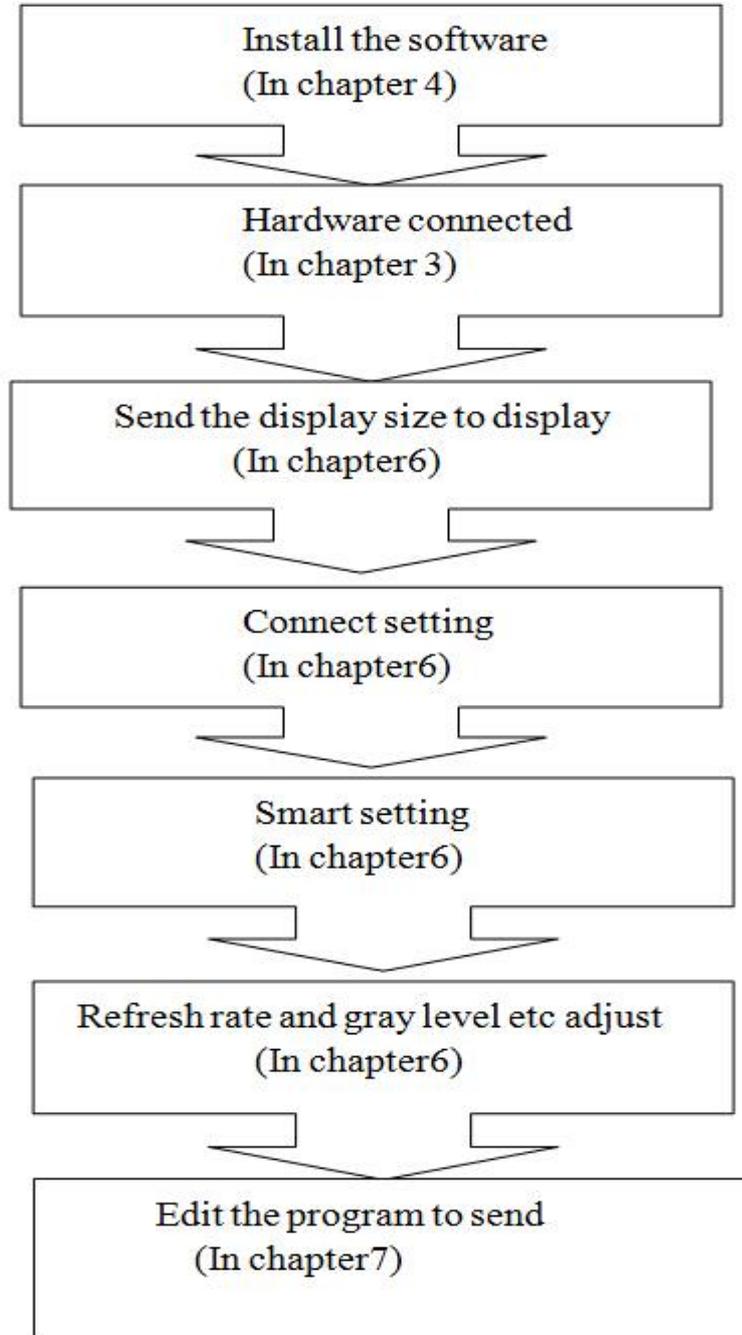**2)** Direct management

Note: The Network cable made by 568B

Chapter 2 Adjust the display procedure

When first time use Sending controller HD-D10/D20/D30, it need use Network cable connect the display. When found the controller ID automatically, then set up the display parameter. Show as below

```
┌─────────────────────────┐
│   Install the software   │
│     (In chapter 4)       │
└─────────────────────────┘
            ↓
┌─────────────────────────┐
│   Hardware connected     │
│     (In chapter 3)       │
└─────────────────────────┘
            ↓
┌─────────────────────────┐
│ Send the display size to │
│        display           │
│     (In chapter6)        │
└─────────────────────────┘
            ↓
┌─────────────────────────┐
│     Connect setting      │
│     (In chapter6)        │
└─────────────────────────┘
            ↓
┌─────────────────────────┐
│      Smart setting       │
│     (In chapter6)        │
└─────────────────────────┘
            ↓
┌─────────────────────────┐
│ Refresh rate and gray    │
│   level etc adjust       │
│     (In chapter6)        │
└─────────────────────────┘
            ↓
┌─────────────────────────┐
│  Edit the program to     │
│        send              │
│     (In chapter7)        │
└─────────────────────────┘
```

Chapter 3 Hardware connect

1. The Controller HD-D10/D20/D30 connect Hub

Using the HUB connected with HD-D3, like HUB08 etc

2. Network connected

◆Direct to the pc by the network cable

◆ Also can connect with Router, then via Router connected PC

◆Network cable use the 568B

The 2 network port can be change of Receiving card

4. The power charger

◆The power charger voltage it is 4V-5.5V

◆ when power on, the "POWER" is bright, "RUN" and "DISPLAY" is flicker.

Chapter 4 Network setting

The controller HD-D10/D20/D30 series can connect computer directly, also can via Router connected computer.

When connected with computer, the network port(The Green light always flicker, the green light bright),-----then wait for few seconds (Windows XP more than 10Seconds, Window7 less than 10Seconds).--------When the right corner of computer show Network normal (see below), it means it have been connected of network, ------then open the software HDPlayer, it will find the controller ID automatically.
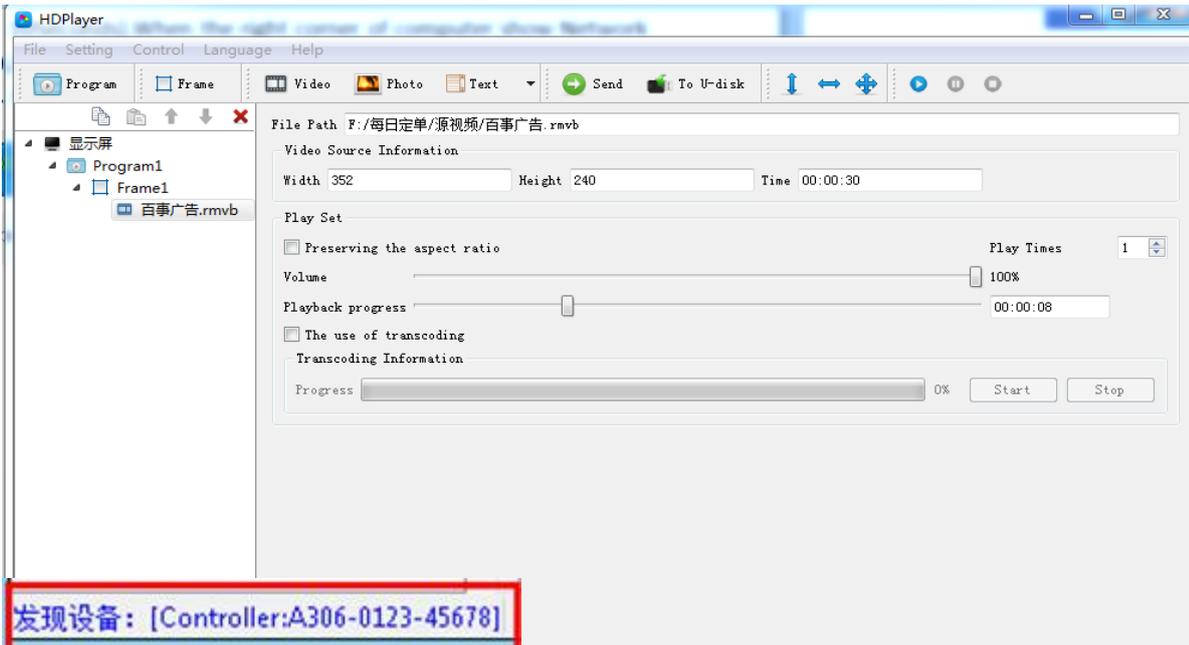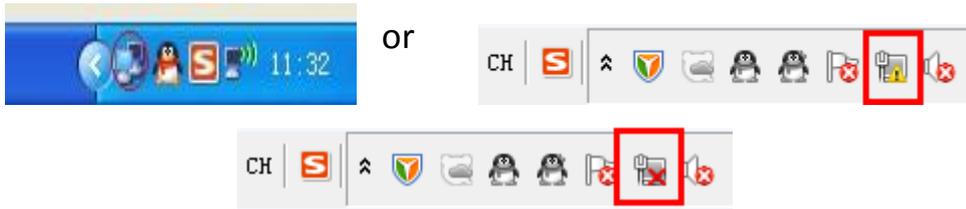
Chapter 5 The Hardware setting

1. **Connection setting. Setting-Hardware setting- Connection setting**

   1) **Select the controller ID**
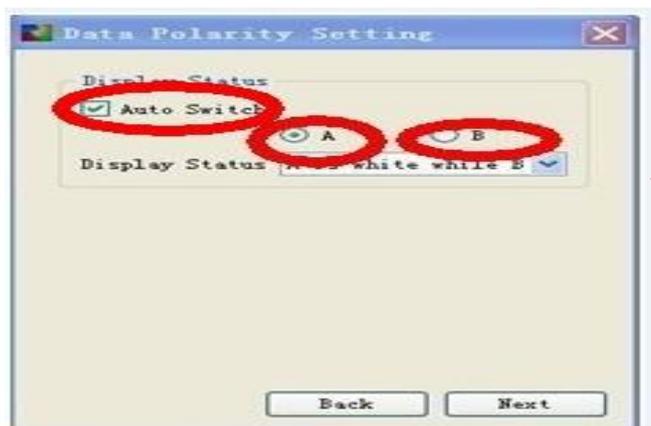

2) **Receive card parameter: Click Smart setting.**

First time using this controller HD-D10/D20/D30series, it need Smart setting at first.
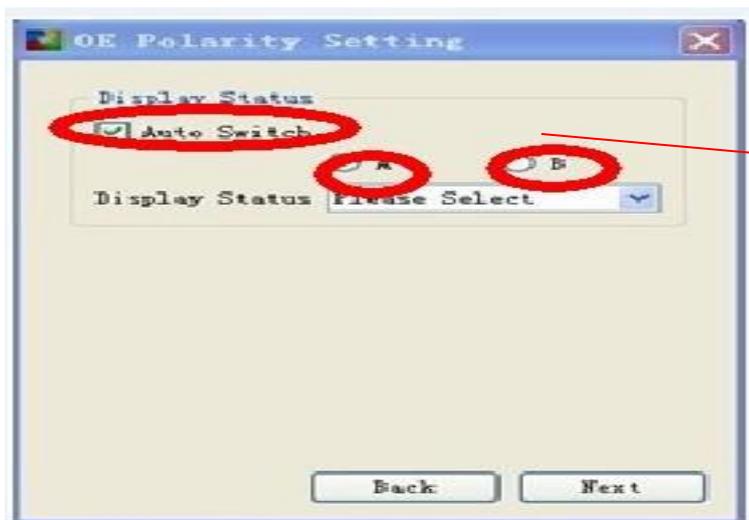
1). **Click Smart setting, then into basic information.**
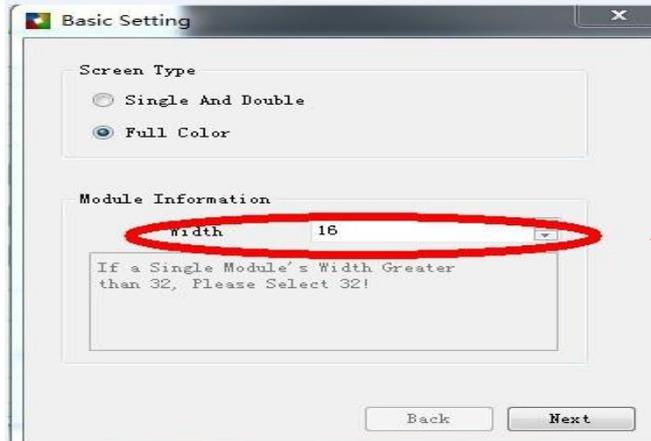
One led module pixel of width

2) **Click Next, then into Data Polarity setting**

Click A, what is the display status of display
Click B, what is the display status of display
Result: A is Black or B is black

**3) Click Next , then into Data Polarity setting**

Click A, what is the display status of display
Click B, what is the display status of display
Result: A is Brighter than B
        Or B is Brighter than A

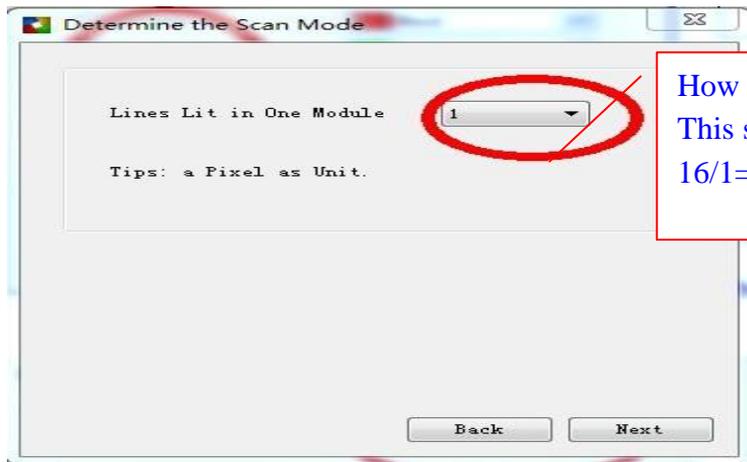**4) Click Next, then into Color channel setting.**
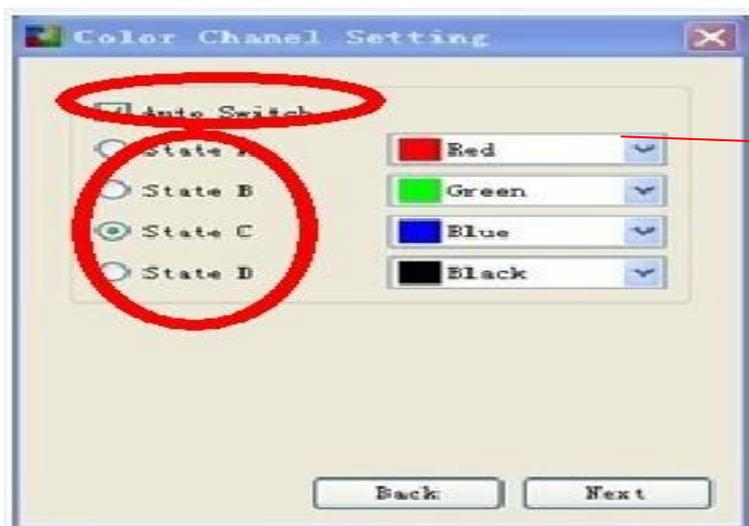
Click A, what is the display color
Click B what is the display color
Click C, what is the display color
Click D, what is the display color

5) Click Next, then into Line controlled by One RGB Data
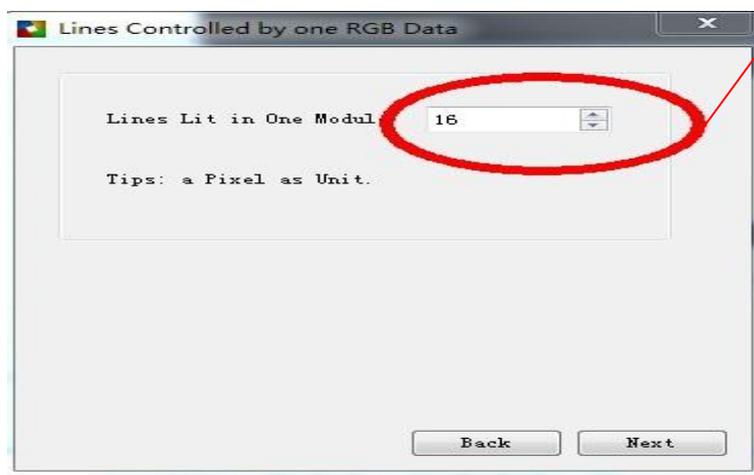
How many lines lighting in display
This step for scan type

6) Click Next, then it into display scan types

How many lines lighting in display
This step for scan type (the ways:
16/1=16, so it is 16 scan)

Like this led module from right corner of first module

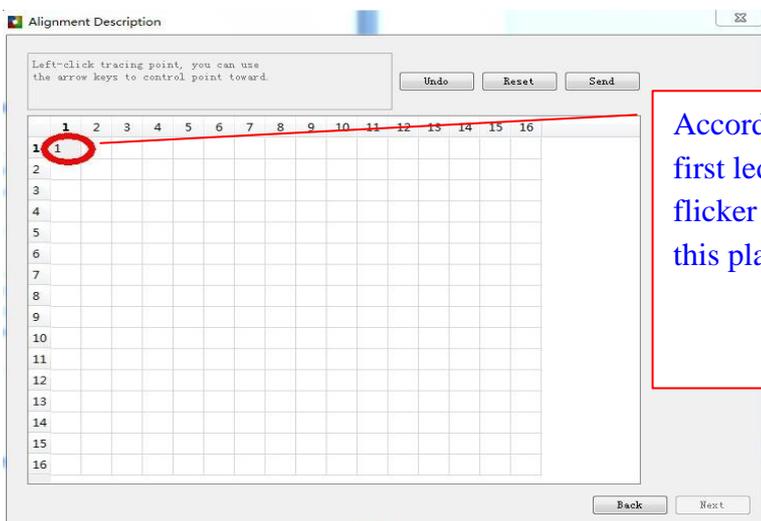(First flicker led from 16th lines of first light)

User can use key ← → to move

该闪点为第16行第1个点，对应软件描点界面表格中的第16行第1个单元格

单个模组大小为32*32

7) The last step, Into Alignment description

According to the Top Right corner of the first led display module, the bright light flicker (in the first led module), then click this place on the Alignment description

The last step display showing
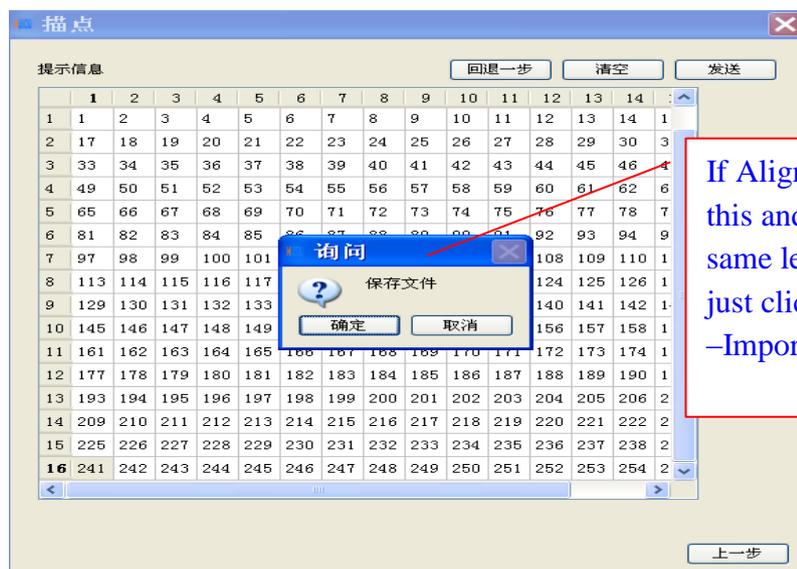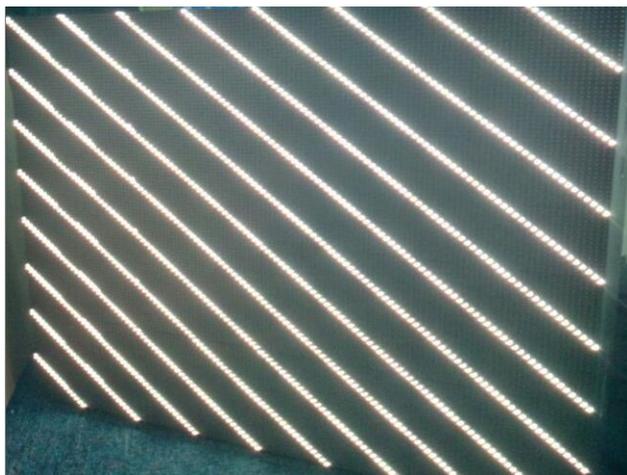
If Alignment successfully, it show like this and saved file.(Next time if have same led display, do not need set again, just click Setting –Hardware setting –Import, importing this .doo file

4. Basic parameter

1) Refresh rate: The more highly refresh rate, the led display play more fluently. If lower

Than 100MHZ, the showing photo shake clearly. The Refresh rate calculate by computer, no need write by hand.

1) **Refresh acceleration:** It according to Refresh rate and add it by proportional.

For example, the fresh rate 120, the acceleration it is 2; if change to 4,the fresh rate 240MHZ.

2) **Gray Level**

The Gray Level is used to represent the color richness. More higher more better. Gray level256、512、1024、2048、4096、8192、16384、32768、65536 etc. Usually set 4096 or 8092

The gray level is inversely proportional to the longest width of led display
The gray level is proportional to luminance efficiency

3) **Brightness level** : Usually Low light, normal and high light.

5) **Frequency:** It means the shift frequency of the scan program. Its range 3.125MHz-31.25MHz.

it is better to set the frequency lower than 25MHz.Because most LED screen driver ICs is lower than 25MHz.

4) Priority Mode

◆Brightness Priority: Protecting the brightness lost less, then do refresh acceleration, usually used for outdoor display require high brightness.

◆Refresh Priority: In this mode, it will sacrifice about20% brightness efficiency. It can update Frequency clearly. Usually used for indoor display.

◆Gray level Priority : If for lower brightness requirement, it can select this mode. Usually used for indoor led display.

5) Output mode

◆Normal output: For ordinary HUB type.

◆Two separate output: For sacrifice half control height to increase 1 times control width (Refresh rate and brightness no change)

◆Four separate output: For sacrifice 3/4 control height to increase 4 times control width (Refresh rate and brightness no change)

Note: Two separate output and Four separate output can not use together with Extension board

6) Gamma: The Gamma represent the contrast degree between light and dark. The higher data the higher contrast. The range 1.0-6.0 and usually set 2.8

7) Display calibration: For color correction (Red,Green,Blue)

8) Use Expansion board: For sacrifice half control height to increase 1 times control width (Refresh rate and brightness no change)

9) Use20 Groups of RGB: Just used for specified HUB, Like HUB75(20 Height)

10) 138 Decoder: According to led module, whether use 138 decoder.

11) Data Polarity: Two types of High effective and low effective .If in high effective, the LED light will be lighten up, and shut down with low effective

12) OE Polarity: The OE Polarity with same features as Data Polarity.

13) Phase: The relative time relationship between moving clock and moving data.

If showing photo have flicker or dislocation, adjust this parameter it can eliminate

14) Duty cycle: The moving clock of duty cycle. If change this data, it can increase the scanning moving clock, usually set 50%

15) Blank lines: When refresh rate high, it could result showing afterglow, adjust this data it can decrease affect, but can not eliminate. It used for scan modules, for static module it is useless

16) Luminance efficiency: The higher and the more brighter, usually set 85%

The Chapter 6 Edit program

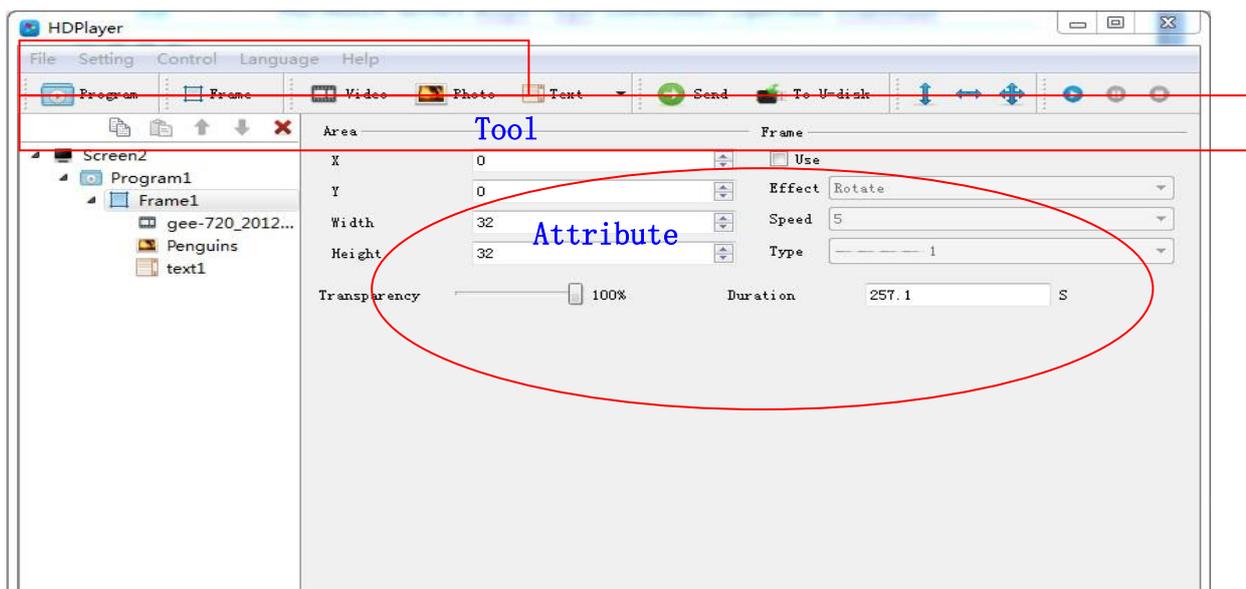The software interface have 2 parts: Play window and edit program window

For Program window: Click File-New(screen)-Program-Frame-add video, photo etc

1. Software interface.

1) Play window (the program showing in the display) : User show programvideo, Pictures, Text, etc
   in the display

2) Edit program window: Menu ,Tool ,Structure and attribute

Edit program window

2. Screen structure

◆Screen: In first sequence. Decide the play contents in display. Each Screen relationship it is equal. In screen, it can add more Programs

◆Program: In second sequence, and playing By sequence

◆Frame: In Third sequence, and it can add more frame in one program

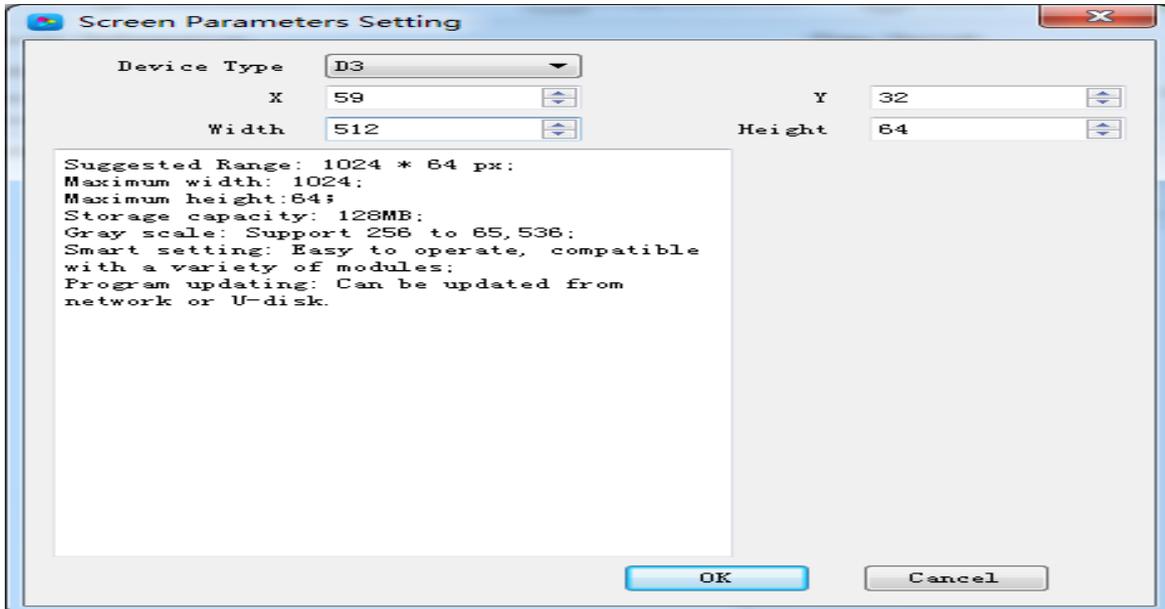◆Play content: Last sequence. It can add Pro Video, Picture,Text,Etc
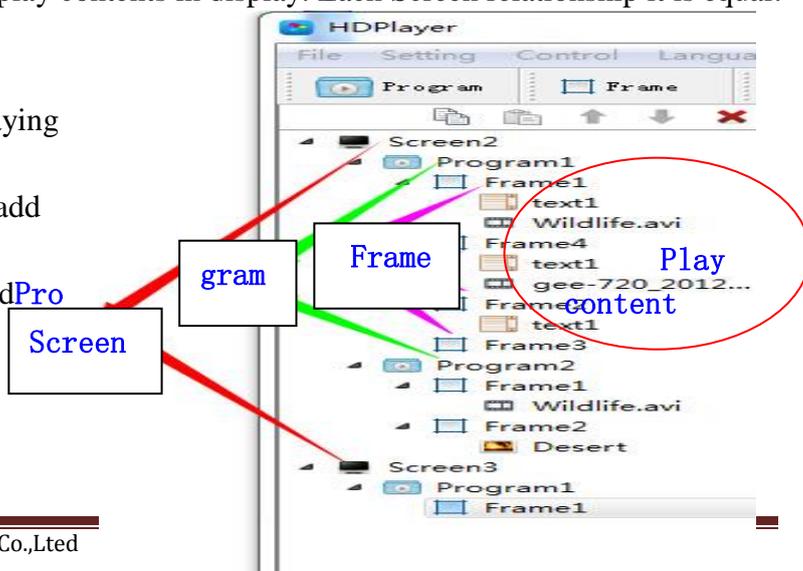
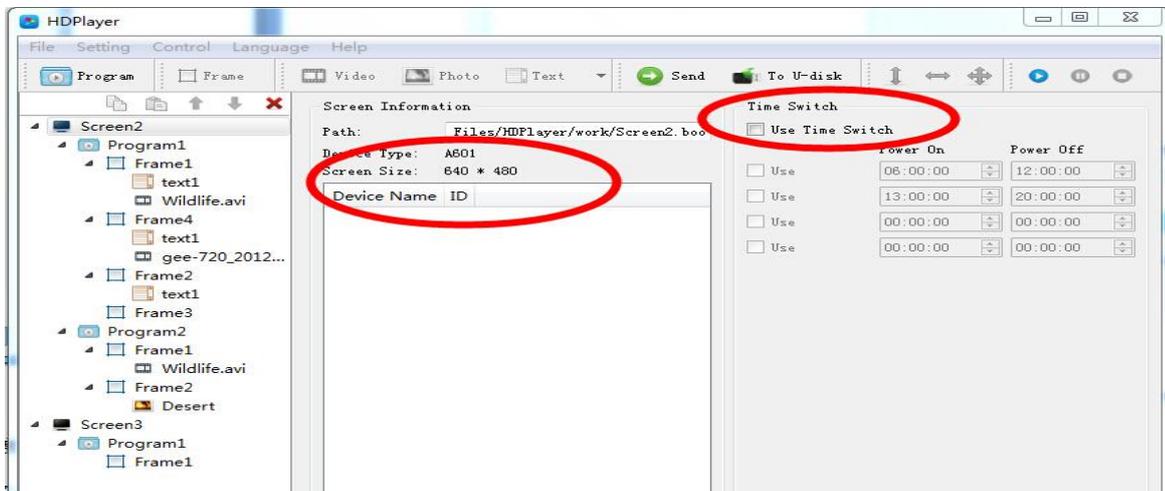## 3. Set up New screen

Ways: Click File-New or use Ctrl+N

It can add more Screens in the structure;
if delete the screen, just right- click

1) Set Play Window

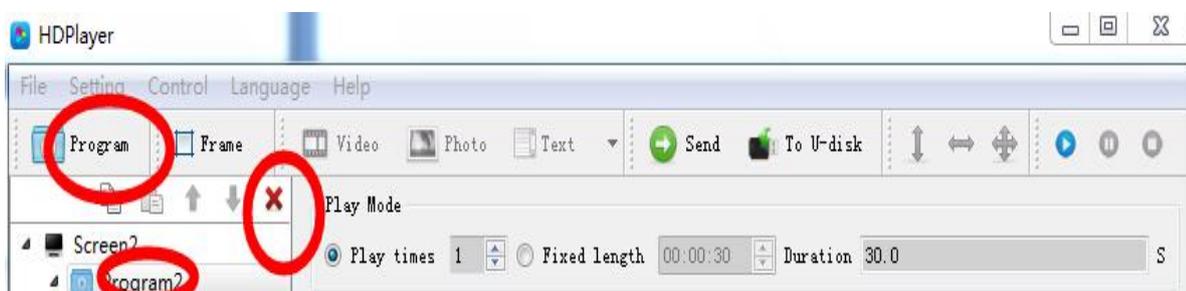Ways: Click Setting –screen setting (The width and Height it is led display size)

2) Screen attribute: Set screen play time and all controller connected
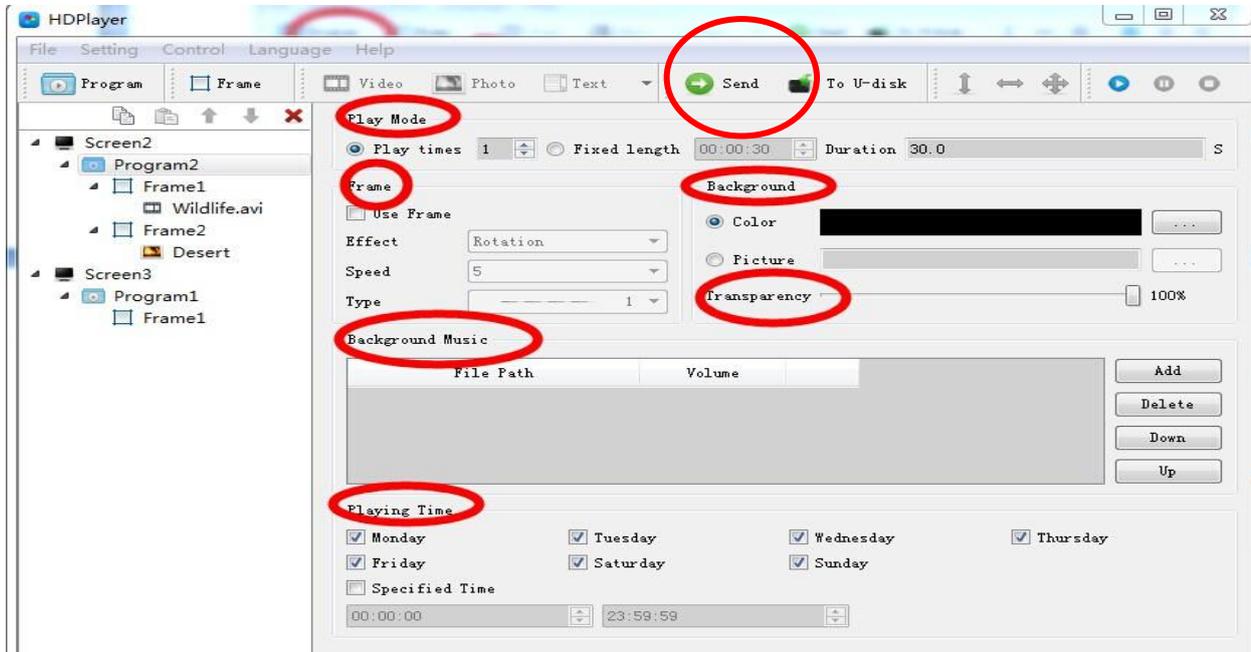

3) Add program

Ways: Click file –screen -Program (First it need set up Screen file first)

◆If delete program, click red"X" or right–click program

◆For program, when right –Click, it can rename, delete, add program, add frame, copy.

◆For use frame(different meaning), it can add screen boarder effects

◆For program attribute, user can add play mode and play time, background music, Effects

It can set more background music.

3) Add Frame

Ways: File –Screen-Program-Frame (It need add Program first).In one program, it can add more frame
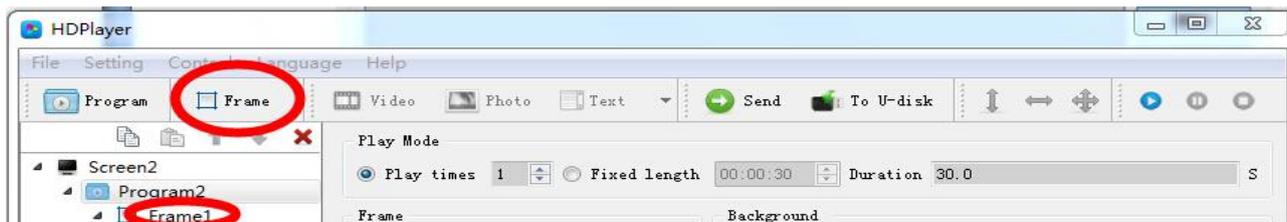
◆If delete Frame, click red"X" or right–click Frame

◆For Frame, when right –Click, it can rename, delete, add program, add frame, copy

◆For change Frame size, can use below ways

① Set up X and Y coordinate

② In Play window, moving the mouse to adjust

③ In the Tool, using
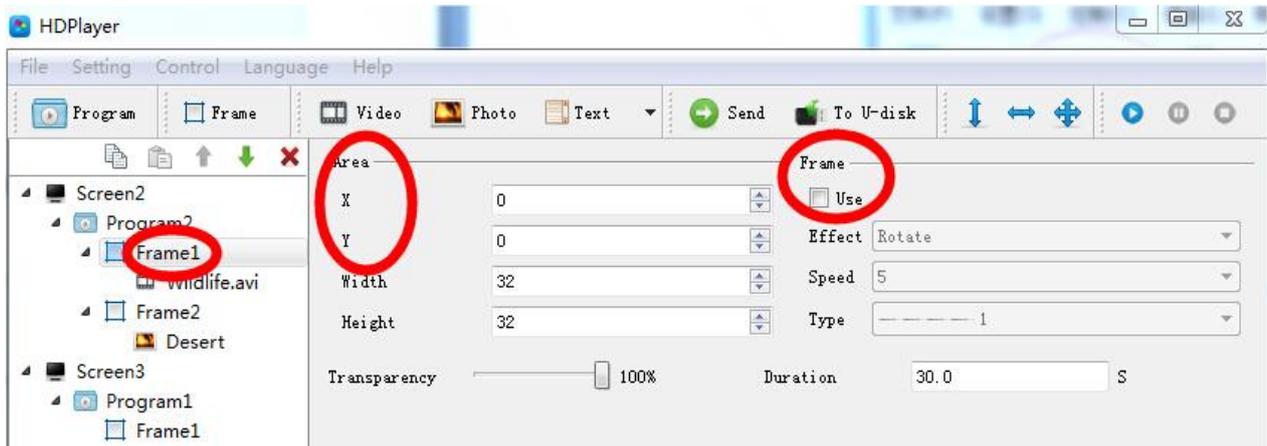
4) Add video

Ways: Click File-Screen-Program-Frame-Video
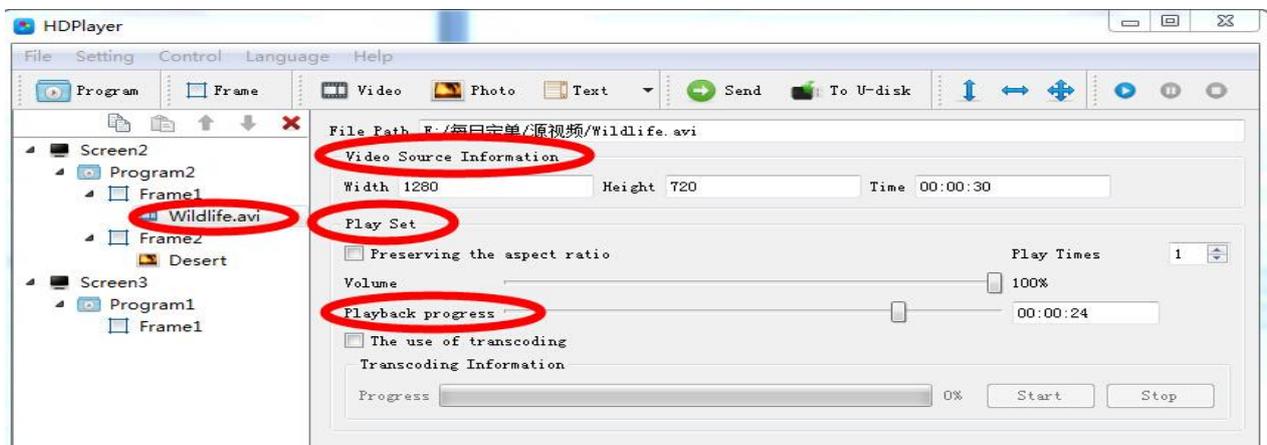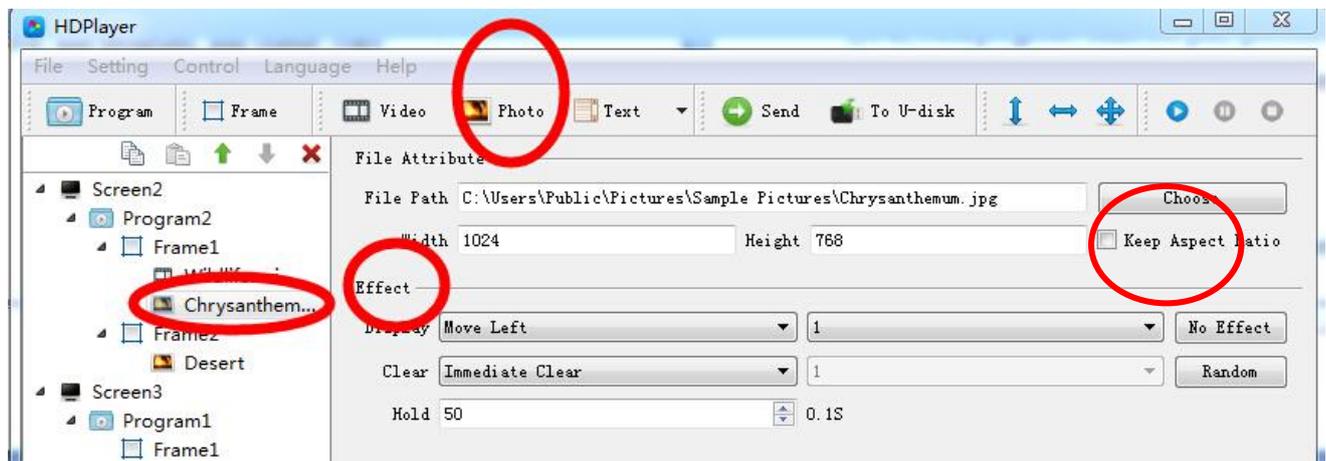

◆If delete video, click red"X" or right–click Frame

◆For video, when right –Click, it can rename, delete, add video, add photo, add text, add Gif,add office, add clock, add time ,move down, copy.

◆For video attribute,

①Play set(Preserving the aspect ratio): it meaning keep original video source width and height

②Playback progress: Time for play process

③The use of Transcoding: Whether use transcoder

5) Add Photo

Ways: Click File-Screen-Program-Frame-photo. (It need add Frame first).In one frame

it can add more photos.

◆If delete Photo, click red"X" or right–click photo

◆For photo, when right –Click, it can rename, delete, add video, add photo, add text, add Gif, add office, add clock, add time ,move down, copy.

◆For photo attribute,

①Keep Aspect ratio: it meaning keep original photo source width and height

②Effect: it can add showing effects, like move left, right etc.

③Clear: when effect showing over, then showing the quit effects

Chapter 7 Program update

After below steps, we finished to edit the program, and send the program to display.

The controller HD-D10/D20/D30 series support 2 types to send program (one by network , another by U-disk), also it support U-disk to expand memory limitless.
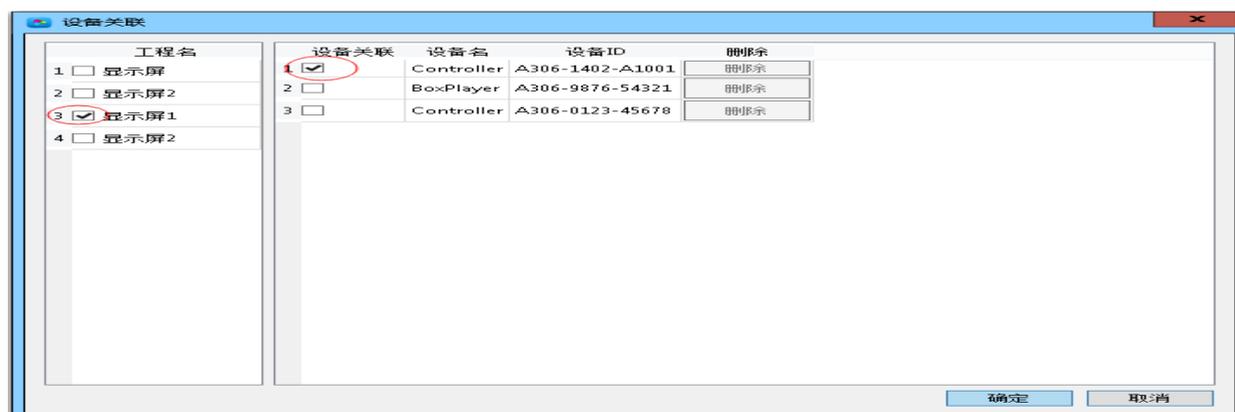
1 .Program by Sending and Cluster sending

1) When just one led display and one HD-D3 sending card, just click" Send" to

send program. Ways: Click Send.

2）When one screen file related to more sending cards, the screen file can send

to all controller(it meaning cluster sending)

When more screen files related to one sending card, the last screen file program can be instead before sending program.
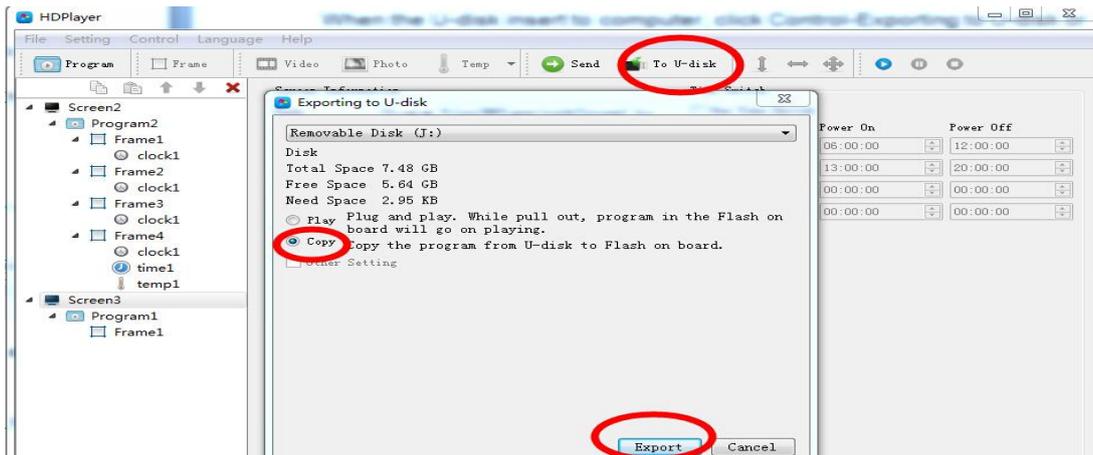

Ways: Click Control –Cluster sending or Click Send.


1. **Program by U-disk to update(Copy)**

Ways: When the U-disk insert to computer, click Control-Exporting to U-disk or Click To U-disk. Select Copy.

① When Export the file by U-disk, then insert the U-disk to sending controller HD-A60X series, the controller will copy the U-disk program to the itself   of Flash IC, the led display will show the process

②After Copy finished, then pull out the U-disk, and the display showing the new program

② The sending controller HD-A60X series support more than 5m extension lines

2. U-Disk expand memory Limitless by Play

Ways: When the U-disk insert to computer, click Control-Exporting to U-disk or Click To U-disk. Select Play.
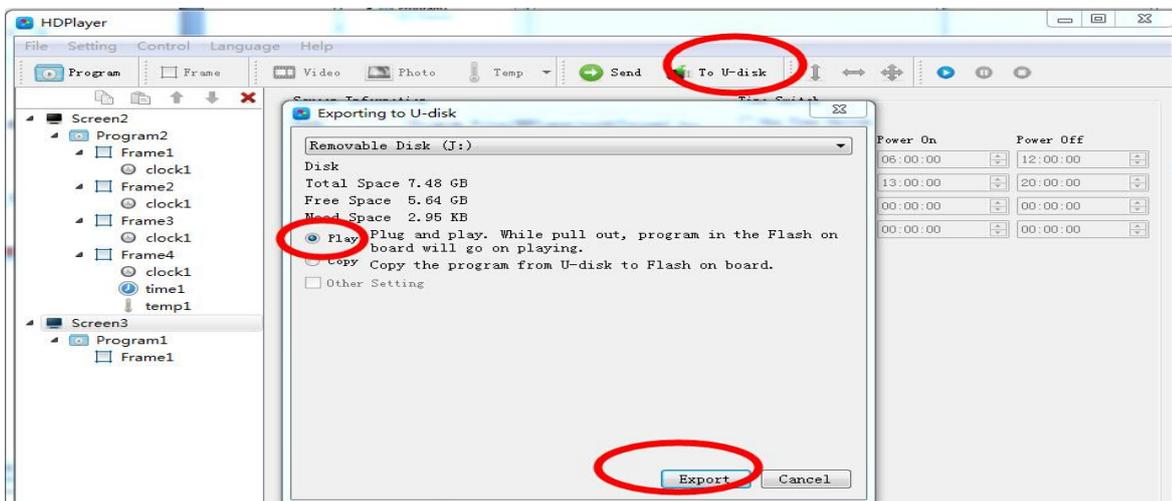
①When Export the file by U-disk, then insert the U-disk to sending controller HD-A60X series, the controller play the U-disk program(no need restart, plug and play). Using this wayIt can expand memory limitless.

②When sending program by network, it is sending to U-disk(it meaning can limitless expand according to your U-disk size)

③ The sending controller HD-A60X series support more than 5m extension lines