

DP Tuner 70 Remote Control Software User Manual

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1 What is DP Tuner

1.1. Introduction to DP Tuner

DP Tuner is a set of control software specially designed for adjusting video wall. This adjustment tool makes it easier for users to operate than remote control. This software can be connected with video wall by RS232 communication in a Windows environment.

Adjustment engineers can set color and brightness of each video wall to make them consistent through DP Tuner. In addition, the input signal parameters and memory data setting can be adjusted to facilitate the operation.

DP Tuner, with clear and easy-to-operate functions, can improve distance limitation of remote control. The parameter setting can be saved as files for future modification or reuse.

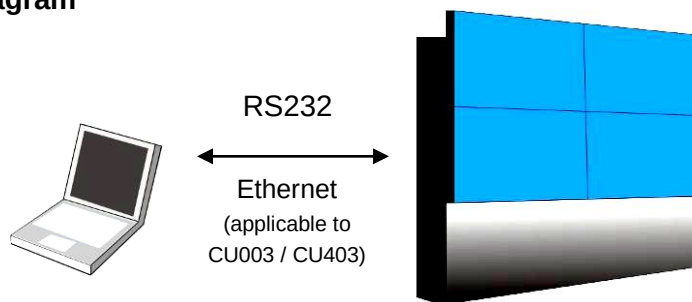
1.2. Applicable to: CU003 / CU103 / CU403 / LE models

2 Connections and Installation

2.1 System requirements

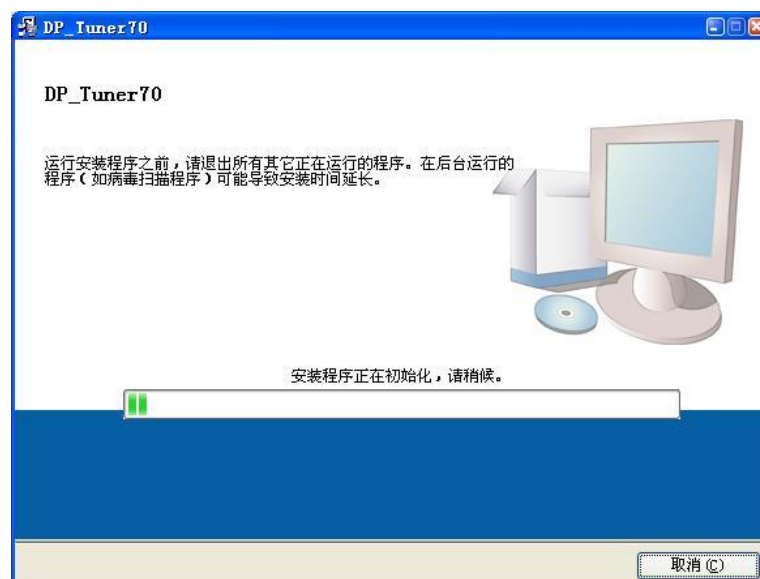
- OS: Windows XP, Vista, Windows 7 or above
- Display adapter: XGA and above
- CPU: Pentium or above
- Memory: 256 MB and above
- HD: 30 MB and above
- RS232 port or compatible equipment (USB to RS232 or Ethernet to RS232)
- Ethernet or compatible equipment (USB to Ethernet) (applicable to CU003 / CU403)

2.2 System diagram



2.3 Installing DP Tuner 70

2.3.1 Click [setup.exe], and then enter the installation page.



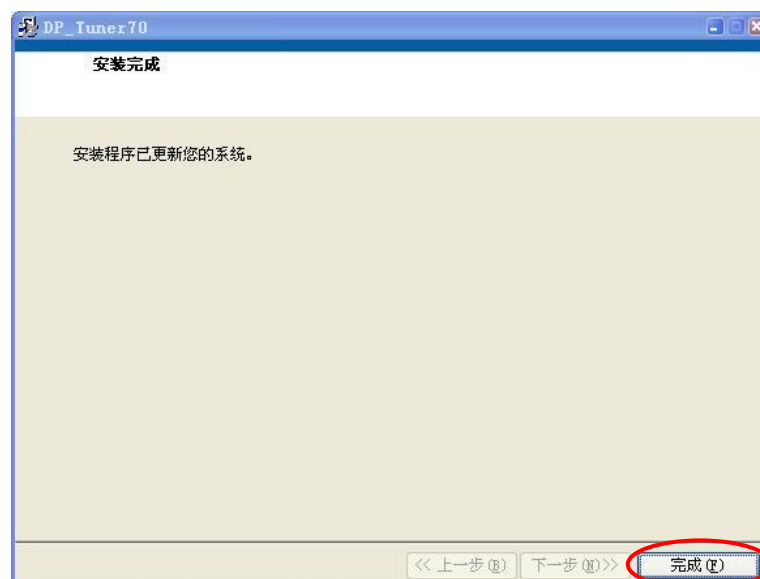
2.3.2 Select the installation directory, and then click **[Next]**



2.3.3 Click **[Next]** to continue or **[Cancel]** to exit



2.3.4 Click **[Finish]** when the installation completes



2.3.5 Please **[Restart]** the computer to complete the installation

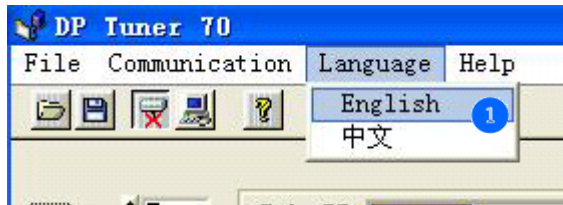
3 Start Using

3.1 Check DIP Switch setting

3.1.1 Please refer to [DIP Switch Setting in CU003 / CU103 / CU403 User Manual](#)

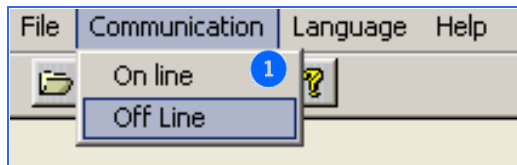
3.2 Initial setting

3.2.1 Set text interface



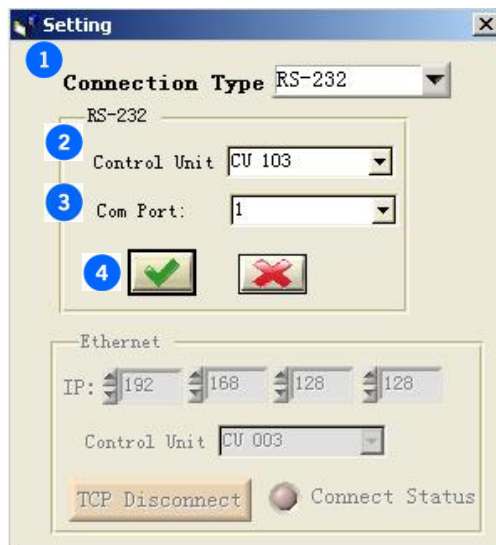
1. Click **[Language]** to change to English interface.

3.2.2 Set control port



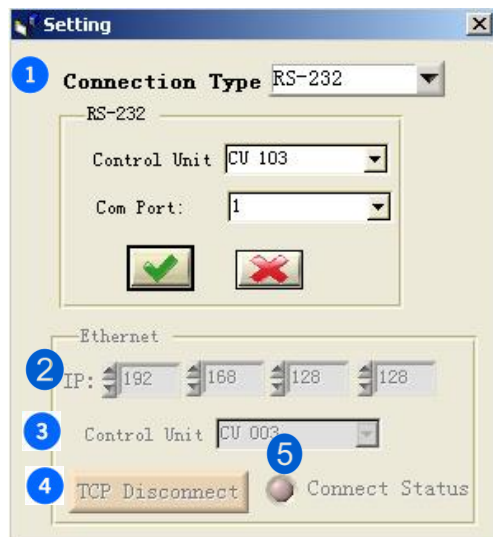
1. Click **[Communication]/[On line]**, then **[Setting]** window pops up

3.2.2.1 CU103 model



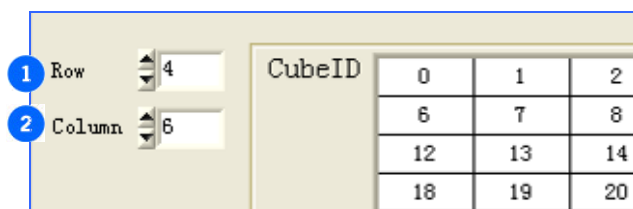
1. Control signal input: Select connection type depending on the actual use
2. Control Unit: Select control model depending on the actual model in use
<Remark> The information on CU model can be obtained from the label on the machine
3. Control Port: Select RS232 port depending on the actual number in use
4. Click **[✓]** to complete the connection between PC and video wall

3.2.2.2 CU003 / CU403 models



1. Control signal input: Select connection type depending on the actual use; If RS232 is used, please refer to [3.2.2.1 CU103 model](#).
<Note> To activate the RJ-45 function with CU403, you must slide SWITCH 5 downward before power-on.
2. IP: Input the IP value that must be obtained from the CU003 / CU403 OSD before connection.
<Remark> The IP can be obtained by opening the CU003 / CU403 OSD, entering MISC and then entering ethernet setting.
3. Control Unit: Select control model depending on the actual model in use.
4. Click **[TCP Disconnect]** to complete the connection between PC and video wall.
5. Connect Status: G Lamp indicates connection is successful, while R Lamp indicates connection is disabled.

3.2.3 Set the arrangement of video walls



1. Column: Set the quantity for the vertical column
2. Row: Set the quantity for the horizontal row

3.2.4 Set the corresponding ID for control unit



1. Select the cube ID to be modified
2. Insert the actual CU No. Refer to [DIP Switch ID Setting in CU003/CU103/CU403 User Manual](#)
3. Click **[Edit ID]** to finish modification

4 Function Description

<Remark> Depending on available functions on different models, several options may not appear or may appear in grey.

4.1 Source selection and adjustment

The screenshot shows the 'Source' menu with 'Source Select' set to 'DVI-1' and 'AUX' set to 'Off'. The menu is divided into two main sections: 'VGA/DVI' and 'VIDEO'.

VGA/DVI Section:

- Brightness: 0
- Contrast: 0
- R Offset: 0
- B Offset: 0
- R Gain: 0
- B Gain: 0
- DVI-EQ: 11
- DVI-ST: 3
- Frequency: 0
- Phase: 0
- H-Start: 0
- V-Start: 0
- Buttons: Auto Gain, Auto Tracking

VIDEO Section:

- Brightness: 10
- Contrast: -10
- R Offset: 0
- B Offset: 0
- R Gain: 0
- B Gain: 0
- Saturation: 0
- Hue: 0
- H-Start: 0
- V-Start: 0
- Buttons: Auto Gain
- Noise Reduction: 0
- Video Standard: Auto

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	Source Select	Select the source type
2.	AUX	Enable/Disable the AUX function
3.	Brightness	Adjust the brightness of the source
4.	Contrast	Adjust the contrast of the source
5.	R Offset	Adjust the offset for deep R, G area of source
6.	B Offset	Adjust the offset for deep B, G area of source
7.	R Gain	Adjust the offset for light R, G area of source
8.	B Gain	Adjust the offset for light B, G area of source
9.	DVI-EQ	DVI source with wiring length parameter 1
10.	DVI-ST	DVI source with wiring length parameter 2
11.	Frequency	Adjust RGB/VGA signal sampling frequency
12.	Phase	Adjust RGB/VGA signal sampling phase
13.	H-Start	Adjust H-Start position of the signal
14.	V-Start	Adjust V-Start position of the signal
15.	Auto Gain	Automatically adjust the gain value
16.	Auto Tracking	Automatically adjust the screen to optimum position
17.	Saturation	Adjust the saturation of the source color
18.	Hue	Adjust the hue of the source
19.	Noise Reduction	Adjust the noise reduction ratio of the source
20.	Video Standard	Adjust the signal standard for the source video

4.2 Internal color adjustment for output engine

The screenshot shows a control panel with tabs: Source, **Output**, Input, Memory, System, Host, All, Information, Service. The 'Output' tab is active. Settings include:

- Orientation: H Flip
- Gamma: Model
- Color Mode: Brilliant
- Color Temp: 6500K
- ECO: Off, Target Temp: 7500
- Lamp Power: 5, Lum Adj: 100
- Layout Mode: Auto
- H Position: 0, H Size: 1
- V Position: 0, V Size: 1
- Center Lum: 0, R-R: 0, W-W: 512, B-M-R: 512
- Hor. Lum: 0, R+G: 0, W-R: 0, Y-Y: 512
- Ver. Lum: 0, R+B: 0, W-G: 0, Y+B: 0
- Hor. Color: 0, G-G: 0, W-B: 0, R-Y-G: 512
- Ver. Color: 0, G+R: 0, C-C: 512, R Curve: 0
- LU Color: 0, G+B: 0, C+R: 0, G Curve: 0
- RU Color: 0, B-B: 0, G-C-B: 512, B Curve: 0
- LD Color: 0, B+R: 0, M-M: 512
- RD Color: 0, B+G: 0, M+G: 0

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	Orientation	Flip the image on the display
2.	Gamma	Adjust the Gamma mode
3.	Color Mode	Set the Color Mode
4.	Color Temp	Set the Color Temperature
5.	ECO	Reduce LED output power (Only apply to LE9X3 models)
6.	Target Temp	Modifiable only when the Color Temp is set to User
7.	Lamp Power	Adjust the power consumption
8.	Adjust the brightness	Adjust the brightness
9.	Layout Mode	Fine tuning or coarse tuning for the screen size
10.	H Position	H Segment
11.	V Position	V Segment
12.	H Size	H coordinate position
13.	V Size	V coordinate position
14.	Center Lum	Adjust brightness uniformity of center and border
15.	Hor. Lum	Adjust the brightness uniformity horizontally
16.	Ver. Lum	Adjust the brightness uniformity vertically
17.	Hor. Color	Adjust the color uniformity horizontally
18.	Ver. Color	Adjust the color uniformity vertically
19.	LU Color	Adjust LU color difference
20.	RU Color	Adjust RU color difference
21.	LD Color	Adjust LD color difference
22.	RD Color	Adjust RD color difference
23.	R-R/R+G/R+B/G-G/ G+R/G+B/B-B/B+R/ B+G/W-W/R-W-G/ W-B/C-C/C+R/G-C-B/ M-M/M+G/B-M-R/Y-Y/ Y+B / R-Y-G	The color temperature is adjusted by “addition of one color element to another”. For example, “R+G” indicates “addition of G element to pure R”
24.	R Curve	Adjust R element in gradation
25.	G Curve	Adjust G element in gradation
26.	B Curve	Adjust B element in gradation

4.3 External signal adjustment for input control unit

4.3.1 Applicable to CU103

The screenshot shows the 'Input' menu of the CU103 control unit. The menu bar at the top includes 'Source', 'Output', 'Input' (highlighted), 'Memory', 'System', 'Host', 'All', 'Information', and 'Service'. The main area is divided into two sections. The left section contains 'Active' and 'Sub Win' settings. Under 'Active', there is a 'Source Select' dropdown menu currently set to 'DVI-1'. Under 'Sub Win', there is a 'Source Select' dropdown menu currently set to 'OFF'. Below these settings is a 'Window Tuning' button. The right section is empty.

4.3.2 Applicable to CU403

The screenshot shows the 'Input' menu of the CU403 control unit. The menu bar at the top includes 'Source', 'Output', 'Input' (highlighted), 'Memory', 'System', 'Host', 'All', 'Information', and 'Service'. The main area is divided into four sections. The left column contains 'MainWin1' and 'MainWin2' settings. Under 'MainWin1', there is a 'Source Select' dropdown menu currently set to 'VGA-4'. Under 'MainWin2', there is a 'Source Select' dropdown menu currently set to 'OFF'. Below these settings is a 'Window Tuning' button. The right column contains 'OpWin1' and 'OpWin2' settings. Under 'OpWin1', there is a 'Source Select' dropdown menu currently set to 'HDMI-6'. Below this is a 'Window Tuning' button. Under 'OpWin2', there is a 'Source Select' dropdown menu currently set to 'OFF'. Below this is a 'Window Tuning' button.

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	Active/Sub Win/ MainWin1/MainWin2/ OpWin1/OpWin2	Source of different windows and adjustment of each source and each setting
2.	Source Select	Select source of individual window
3.	Window Tuning	Adjust size/position/zoom/shift/transmissive display of individual window

4.4 Display parameter setting

The screenshot shows the 'Memory' tab with the following sections:

- All Cube:** A dropdown menu set to 'No'.
- Input Memory:** Index slider at 0, Load and Save buttons.
- Output Memory:** Index slider at 0, Load and Save buttons.
- Layout Memory:** Index slider at 0, Load and Save buttons.
- Display Memory:** Index slider at 0, Load and Save buttons. Also includes Input Index, Output Index, and Layout Index sliders, all set to 0.
- Image Memory:** Index slider at 0, Load and Save buttons. Also includes Input Index and Layout Index sliders, both set to 0.

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	All Cube	Set for all Cubes or a single Cube.
2.	Input Memory	Input the parameter setting
3.	Output Memory	Output the parameter setting
4.	Layout Memory	Layout parameter setting
5.	Display Memory	Save and read the parameter setting; input/output/layout parameter setting
6.	Image Memory	Save and read the parameter setting; input/layout parameter setting
7.	Index	Display the type of parameter setting <Note> [Load] needs to be clicked to enable the index change
8.	Load	Load the display of parameter setting
9.	Save	Save the display of parameter setting
10.	Input Index	Input the type of parameter setting
11.	Output Index	Output the type of parameter setting
12.	Layout Index	Set the type of layout parameter setting

4.5 System parameter adjustment

4.5.1 Applicable to CU103

The screenshot shows the 'System' tab with the following sections:

- Pattern Index:** Slider at 0.
- Index Delay:** Slider at 12.
- Phosphor IndexDly:** Slider at 12.
- AUX:** Dropdown menu set to 'Off'.
- Source Prompt:** Dropdown menu set to 'Info.'.
- Lamp S/W:** Dropdown menu set to 'Lamp A'.
- Step Tune:** Slider at 0.
- Lamp Power:** Slider at 5. Internal DVI EQ slider at 5.
- Lamp Status:** Text field.
- Auto position:** Dropdown menu set to 'Off'. Buttons: Load Factory, Clear Error Code, Get Error Code.
- Cooling Mode:** Height (Normal), Orientation (V-Mode), Cube Fan (0).
- History:** Lamp Life, Turn On Times, Color Wheel Life, Engine Life.
- Input Mode Set:** Mode 1 (1400x1050 60Hz), Mode 2 (1920x1080 60Hz STD).
- Overscan:** Dropdown menu set to 'On'.
- Dynamic Mode:** Dropdown menu set to 'On'.
- Source Status:** Active, MainWin2.
- Cube Version:** CU Master FW Ver., CU Slave FW Ver., Engine Master FW Ver., DLP FW Ver.

4.5.2 Applicable to CU403

The screenshot displays the 'System' tab of the CU403 control interface. The top navigation bar includes tabs for Source, Output, Input, Memory, System (selected), Host, All, Information, and Service. The interface is divided into several sections:

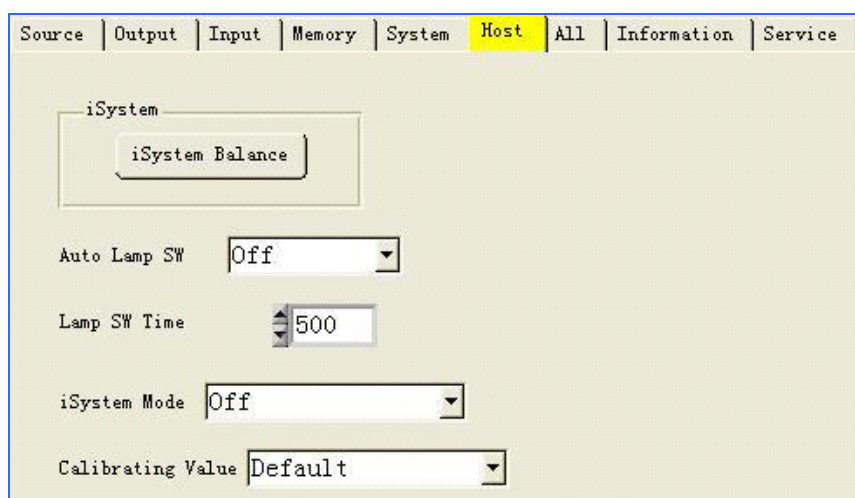
- Left Panel:** Contains controls for Pattern Index (0), Index Delay (12), Phosphor IndexDly (12), AUX (Off), Source Prompt (Info.), Lamp S/W (Lamp A), Step Tune (0), Lamp Power (5), Internal DVI EQ (5), Lamp Status, and Auto position (Off). It also features 'Load Factory' and 'Clear Error Code' buttons.
- Top Right Panel:** Includes Cooling Mode (Normal), Height (Normal), Orientation (V-Mode), and Cube Fan (0).
- Bottom Right Panel:** Contains a History section with Lamp Life, Turn On Times, Color Wheel Life, and Engine Life. Below this is the Input Mode Set section with Mode 1 (1400x1050 60Hz) and Mode 2 (1920x1080 60Hz STD). It also includes Overscan (On) and Dynamic Mode (On) settings.
- Far Right Panel:** Displays Source Status with Active (DVI-1, No Signal, 0 Hz), MainWin2 (OFF, No Signal, 0 Hz), OpWin1 (CV-8, PAL_60, 60 Hz), and OpWin2 (OFF, No Signal, 0 Hz). Below this is the Cube Version section with fields for CU Master FW Ver., CU Slave FW Ver., Engine Master FW Ver., and DLP FW Ver.

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	Pattern Index	Adjust the test pattern index
2.	Index Delay	Adjust the delay time
3.	AUX	Enable/Disable the AUX function
4.	Source Prompt	Enable the input source prompt
5.	Lamp S/W	Switch the lamp function
6.	Step Tune	BRN step tune
7.	Lamp Power	Adjust the power consumption
8.	Internal DVI EQ	Adjust the capability of DVI receiver of Light Engine; When the CU-AC01 connect to Light Engine, the value should be adjusted once no signal between them.
9.	Lamp Status	Lamp Status (Read Only)
10.	Auto position	Automatically adjust the position
11.	Load Factory	Return to the initial setting
12.	Get Error Code	Obtain the error code
13.	Clear Error Code	Delete the error code
14.	Cooling Mode	Heat dissipation mode
15.	Height	Normal/High
16.	Orientation	Set the H-Mode/V-Mode
17.	Cube Fan	Adjust the speed of cube fan
18.	History	History records
19.	Lamp Life	Lamp service life
20.	Turn On Times	Power on time
21.	Color Wheel Life	Color wheel service life
22.	Engine Life	Engine service life
23.	Input Mode Set	Select the input mode that needs to be identified
24.	Mode 1	Select input resolution
25.	Mode 2	Select input resolution
26.	Overscan	Perform overscan for Video signal
27.	Dynamic Mode	Enable the dynamic mode
28.	Source Status	Source status

29.	Active	Display the source information on the video played
30.	Sub Win	Display the source information on the video of sub window
31.	Cube Version	Firmware version
32.	CU Master FW Ver.	Firmware version of main control unit
33.	CU Slave FW Ver.	Firmware version of slave control unit
34.	Engine Master FW Ver.	Firmware version of the engine
35.	DLP FW Ver.	DLP FW Ver.
36.	MainWin	Display the source information on the video of the second main board
37.	OpWin1	Display the source information on the video of the first option board
38.	OpWin2	Display the source information on the video of the second option board

4.6 Host parameter adjustment



<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	iSystem Balance	Touch system
2.	Auto Lamp SW	Enable the auto lamp SW
3.	Lamp SW Time	Lamp SW time
4.	iSystem Mode	Enable the iSystem Mode
5.	Calibrating Value	Set to the default or on-screen calibration parameter

4.7 Adjustment of all video wall parameters

The screenshot shows the 'All' tab selected in the top navigation bar. The settings are organized into two columns. The left column contains: Pattern Index (0), Source Select (DVI-1), AUX (Off), Lamp S/W (Lamp A), Source Prompt (Info.), and Debug (Off). The right column contains: Orientation (V-Mode), Gamma (Model), Color Mode (Normal), ECO (Off), Color Temp. (6500K), Target Temp (7500), Output Lock (Default), and Auto position (Off). A 'Load factory' button is located at the bottom left of the settings area.

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	Pattern Index	Adjust the test pattern index
2.	Source Select	Select the source type
3.	AUX	Enable/Disable the AUX function
4.	Lamp S/W	Switch the lamp function
5.	Source Prompt	Enable the input source prompt
6.	Debug	Display the debug information
7.	Load Factory	Return to the initial setting
8.	Orientation	Select whether the device will be placed vertically or horizontally
9.	Gamma	Adjust the Gamma mode
10.	Color Mode	Set the Color Mode
11.	ECO	Reduce LED output power (Only apply to LE9X3 models)
12.	Color Temp	Set the Color Temperature
13.	Target Temp	Modifiable only when the Color Temp is set to User
14.	Output Lock	Set the output time
15.	Auto position	Automatically adjust the position

4.8 Status messages

Source	Output	Input	Memory	System	Host	All	Information	Service
Thermal (UHP) BRN Fan PWR Fan LP Fan DMD Fan BLA Fan BLB Fan								

ADP Temp
ENV Temp
Thermal (LED1 LE912/LE922)

DMD Fan

A2D1 Fan
A2D2 Fan
D2D1 Fan
DRV1 Fan
DMD Temp
Thermal (LED2 LE913/LE923/LE933)

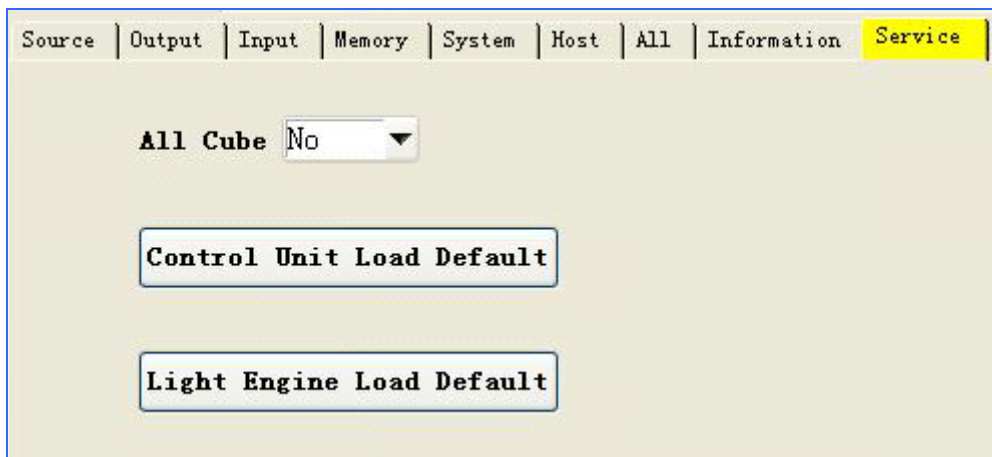
DMD Fan

DLP Fan
PWR Fan
DMD Temp

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	Thermal (UHP)	Display information on the fan and the temperature of UHP model
2.	BRN Fan	BRN Fan
3.	PWR Fan	PWR Fan
4.	LP Fan	LP Fan
5.	DMD Fan	DMD Fan
6.	BLA Fan	BLA Fan
7.	BLB Fan	BLB Fan
8.	ADP Temp	ADP Temp
9.	DMD Temp	DMD Temp
10.	ENV Temp	ENV Temp
11.	Thermal (LED1 LE912/LE922)	Display information on the fan and the temperature of LE912/LE922
12.	A2D1 Fan	A2D1 Fan
13.	A2D2 Fan	A2D2 Fan
14.	HP Fan	HP Fan
15.	D2D1 Fan	D2D1 Fan
16.	D2D2 Fan	D2D2 Fan
17.	DRV1 Fan	DRV1 Fan
18.	DRV2 Fan	DRV2 Fan
19.	ENV Temp	ENV Temp
20.	A2D Temp	A2D Temp
21.	D2D Temp	D2D Temp
22.	Thermal (LED2 LE913/LE923/LE933)	Display information on the fan and the temperature of LE913/LE923/LE933
23.	DLP Fan	DLP Fan
24.	PWR Fan	PWR Fan

4.9 Service parameter adjustment



Source | Output | Input | Memory | System | Host | All | Information | **Service**

All Cube

Control Unit Load Default

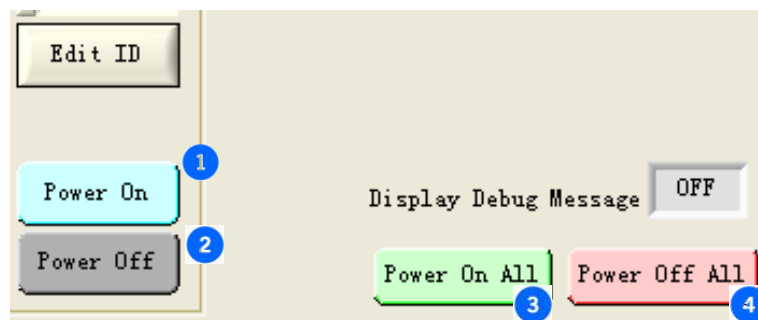
Light Engine Load Default

<Remark> The following descriptions are in the order of left to right and top to bottom as indicated in the figure

No.	Function	Description
1.	All Cube	Set for all Cubes or a single Cube.
2.	Control Unit Load Default	Reset the control unit to default
3.	Light Engine Load Default	Reset the light engine to default

5 I would like to perform...

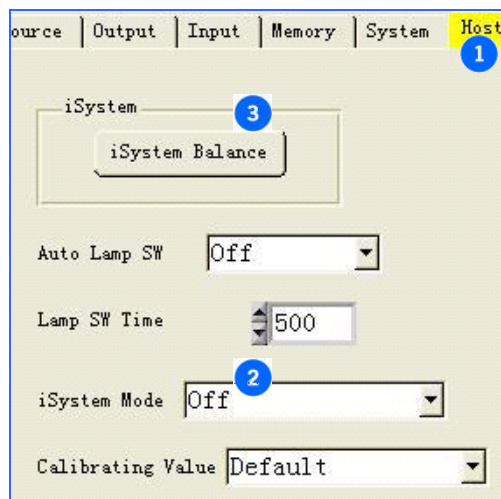
5.1 I would like to turn on/off video wall



1. Power On: Turn on a single device
2. Power Off: Turn off a single device
3. Power On All: Turn on all the devices at the same time
4. Power Off All: Turn off all the devices at the same time

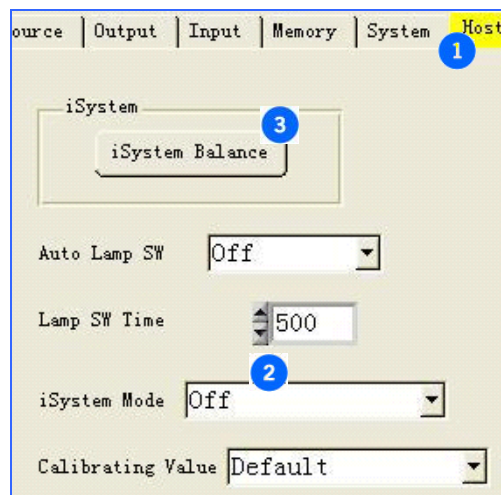
5.2 I would like to adjust the brightness and color uniformity

5.2.1 Automatically adjust the brightness and color of the first video wall



1. Enter **[Host]** menu
2. Set **[iSystem Mode]** to **[Auto]**
3. **iSystem Balance**

5.2.2 Manually adjust the brightness and color of the first video wall



1. Enter **[Host]** menu
2. Set **[iSystem Mode]** to **[Manual]**
3. **iSystem Balance**

5.2.3 Manually fine tune each video wall

<Note> If a lamp SW is performed, please tune the corresponding video wall

1. Fine tune each parameter value
2. Fine tune each parameter value

5.3 I would like to set the input/output parameter

5.3.1 Set input memory

1. Enter **[Memory]** menu
2. Enter an index value (as required)
3. Click **[Load]**

5.3.2 Set output memory

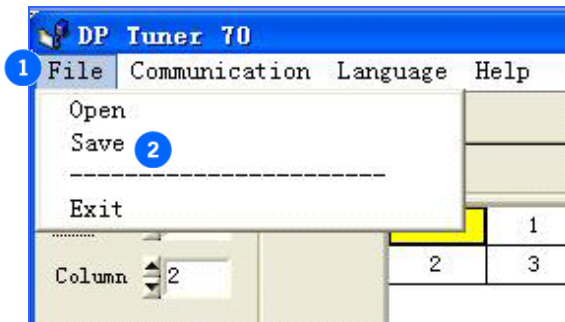
1. Enter **[Memory]** menu
2. Enter an index value (as required)
3. Click **[Load]**

5.3.3 Set layout memory

1. Enter **[Memory]** menu
2. Enter an index value (as required)
3. Click **[Load]**

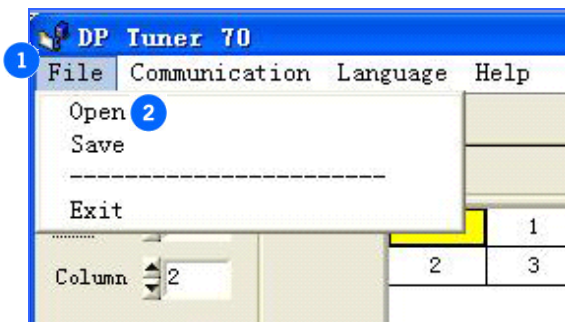
5.4 I would like to save/open the parameter setting

5.4.1 I would like to save the parameter setting



1. Click **[File]/[Save]**
2. Select a save location
3. Insert the file name and click “OK” to save it.

5.4.2 I would like to open the parameter setting



1. Click **[File]/[Open]**
2. Select a save location
3. Insert the file name and click “OK” to open it