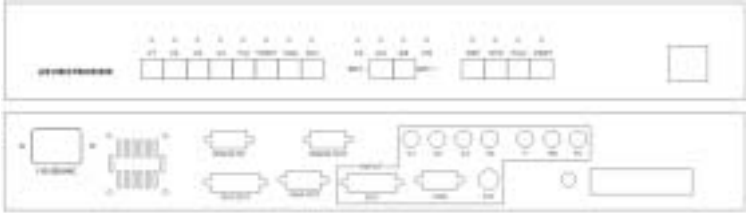


LedSync820B

LED Video Image Processor

USER'S MANUAL



I. Safety Precautions

Danger!

There is high voltage in the processor, to prevent any unexpected hazard, unless you are a maintenance, please do not open the cover of the device.

Warning!

1. This device shall not encounter water sprinkle or splash, please do not place anything containing water on this device.
2. To prevent fire, keep this device far from any fire source.
3. To keep good ventilation, there shall be at least 20cm interval between frontal and rear panel of the device.
4. If this device gives out any strange noise, smoke or smell, please immediately unplug the power cord from receptacle, and contact local dealer.
5. **Please do not plug or unplug any signal cable when the device on power.**

Caution!

1. Please thoroughly read this manual before using this device, and keep it well for future reference.
2. In the event of lighting or when you are not going to use the device for a long time, please pull the power plug out of receptacle.
3. Nobody other than professional technicians can operate the device, unless they have been appropriately trained or under guidance of technicians.
4. To prevent equipment damage or electric shock, please don't fill in anything in the vent of the device.
5. Do not place the device near any water source or anywhere damp.
6. Do not place the device near any radiator or anywhere under high temperature.
7. To prevent rupture or damage of power cords, please handle and keep them well.
8. Please immediately unplug power cord and have the device repaired, when
 - 1) Liquid splashes to the device.
 - 2) The device is dropped down or cabinet is damaged.
 - 3) Obvious malpractice is found or performance degrades.

II. Connections of hardware

1. Rear view

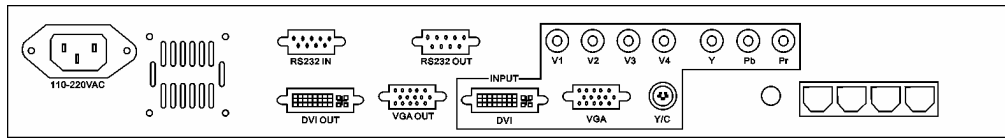


Figure 1

2. Port description

1) Signal input (INPUT column)

LedSync820B supports 8-channel signal input, including:

V1~V4: 4-channel PAL/NTSC system compound video input

Y/C: 1-channel PAL/NTSC system s-video input

VGA: 1-channel computer analog signal input

DVI: 1-channel computer digital signal input

YPbPr: 1-channel high-definition component signal input

2) Signal output

VGA OUT: 1-channel computer analog signal output, it can be connected to a local display device and used as monitor

Notes: with the default "SyncMode" of **LedSync820B** output as "Force", some VGA monitor maybe display flickerlingly or display nothing. To get a steady image on these VGA monitor, you must change the "SyncMode" from "Force" to "Free" by RS232 software.

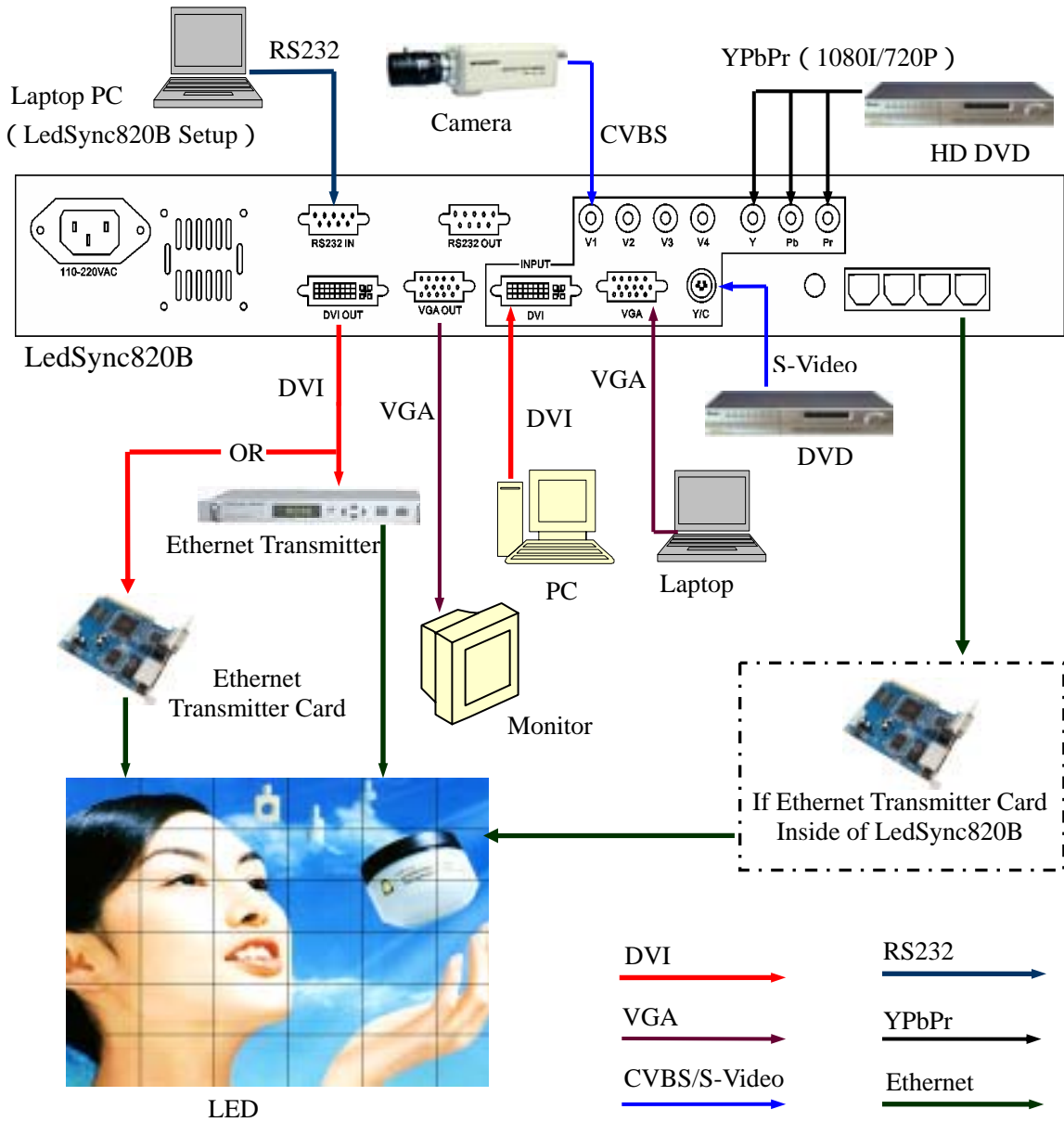
DVI OUT: 1-channel computer digital signal output, to drive the LED transmission card

3) Control signal

RS232 IN: RS232 serial communication input

RS232 OUT: RS232 serial communication output, connected to the next device with RS232

3. Connectivity Diagram:



LedSync820B Connectivity Diagram

III. Frontal panel operations

1. Diagram of frontal panel



Figure 2

2. Button operations:

1) Select input video source

V1~V4: switch to V1~V4 CVBS input

Y/C: switch to s-video input

VGA: switch to computer analog signal input

Notes: to get clarity computer image, you can click the “VGA” button 6 times continuously, and then you can click “VGA” button again and again to change the computer image sampling phase, when the computer image be displayed clarity, the adjustment is ok

DVI: switch to computer digital signal input

YPbPr: switch to high-definition component video signal input

Notes: to get clarity HDTV image, you can click the “YPbPr” button 6 times continuously, and then you can click “YPbPr” button again and again to change the HDTV image sampling phase, when the HDTV image be displayed clarity, the adjustment is ok

Notes: when user has selected input signal, if there are signal input in corresponding signal input ports and are in **LedSync820B** formats, the indicator above corresponding button will be illumed. However, when there are no signal input in corresponding input ports or are not in the format that **LedSync820B** supports, the indicator above corresponding button will blink, and black will be displayed on the LED screen.

2) Select Brightness (BRT-, BRT+)

LedSync820B supports 8 levels Brightness, 1 corresponds to the lowest brightness, 8 corresponds to the highest brightness. Click the button “Brt-“ will decrease the brightness, and “Brt+” will increase the brightness.

3) Select GAMMA / Video Chrom (DEF, STD)

DEF select user-defined image parameters,including GAMMA value, Video Chrom and Hue,which can be set through RS232 control port.

STD select a standard image status as GAMMA fixed at GAMMA =1,Video Chrom=32 and Video Hue=32.

4) Select FULL/PART display (FULL, PART)

FULL means that LED will display a full picture.

PART means that LED only display a part of a picture.

IV. User operations through control software

1. Interfaces of user control software

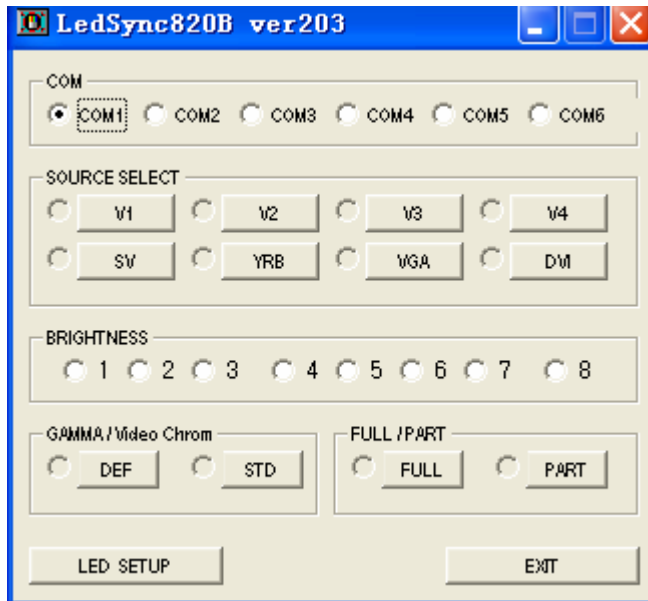


Figure 3

2. Operation Instructions

Run **LedSync820Bv203en.exe**, the software will enter into user control interface as shown in figure 3. First of all, select the COM port through which PC connect to **LedSync820B**, as shown in figure 3, COM1 is selected.

“SOURCE_SELECT” is the column for selecting input signal, 8 buttons in this column act in the same operations with the corresponding buttons on **LedSync820B** frontal panel; “BRIGHTNESS” is the column for selecting output image brightness. 1 corresponds to the lowest brightness, 8 corresponds to the highest brightness; The operation of “DEF” in the column “GAMMA / Video Chrom” is the same with “DEF” on **LedSync820B** frontal panel; “STD” in the column “GAMMA / Video Chrom” corresponds to “STD” on the panel. “FULL” in the column “PART/FULL” corresponds to “FULL” on the panel, “PART” in the column “PART/FULL” corresponds to “PART” on the panel.

V. Operations of engineering setup

1. Interfaces of engineering setup

Click the button “LED SETUP” on the user interface, enter the password “123456” in the dialog box, enter into the interface of engineering setup interface as shown in figure 4 below:

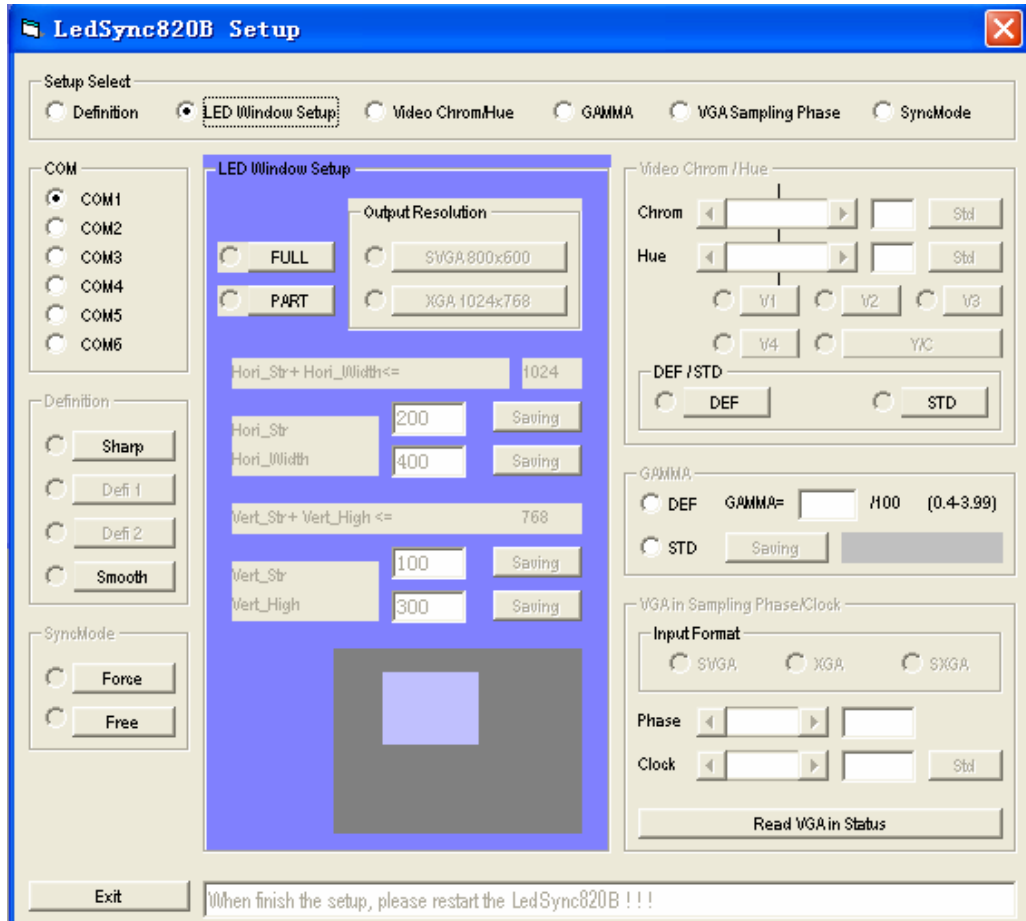


Figure 4

2. Select COM port

Select the COM port through which the PC connected to the **LedSync820B**, as shown in figure 4, COM1 is selected.

3. LED window setup

To scale all the input video image just onto the the LED display screen,engineering user should customize the size and the location of **LedSync820B**'s output image.

- 1) Select the “LED Window Setup” in the column “Setup Select” to enable the “LED Window Setup” column.
- 2) Press “FULL” button in the column “LED window setup”, shift output image of **LedSync820B** to be displayed in “FULL” mode.
- 3) Select current output format of **LedSync820B** in the column

“ Output Resolution” , as shown in figure 4, “XGA” is selected. At the same time, this operation read back the LED window's size and location.

- 4) Enter the horizontal start location of the output image in the column “Hori_Str” , as shown in figure 4, the value is set to be “200”, press the button “saving” in its right to save the value.
- 5) Enter the horizontal width value of the output image in the column “Hori_Width”. Generally ,this value equal to the horizontal pixels of the LED screen. as shown in figure 4, the value is set to be “400”. press the button “saving” in its right to save the value.
- 6) Enter the vertical start location of the output image in the column “Vert_Str” , as shown in figure 4, the value is set to be “100”, press the button “saving” in its right to save the value.
- 7) Enter the vertical heigh of the output image in the column “Vert_Heigh”. Generally ,this value equal to the vertical lines of the LED screen, as shown in figure 4, the value is set to be “300”. press the button “saving” in its right to save the value.

4. GAMMA value setup

LedSync820B has been set with default GAMMA values at factory, as GAMMA=1, unless otherwise set by engineering users, no need to change the default setup!

Engineering users can define GAMMA values within 0.4~3.99 following the procedures below:

- 1) Select the “GAMMA” in the column “Setup Select” to enable the “GAMMA” column.
- 2) Select “DEF” in the column “GAMMA Setup”, the moment the previous GAMMA vlaue in the **LedSync820B** will be read back. After the reading, we can enter a new desired GAMMA value in the column “GAMMA Value”, If the value entered is 120 , it means that actual GAMMA value is $120/100=1.2$.
- 3) Click the button “Saving”, the prompt column will show “Please waiting...”, the moment control software is writing the new GAMMA value into **LedSync820B**, when it is completed, the prompt column will show “ok”.
- 4) STD is fixed at GAMMA=1, no one can change it.

5. Video Chrom/Hue Adjustment

LedSync820B has been set to be exfactory standard video status, generally, it is unnecessary to make the following adjustment!

Engineering users can adjust video chrom and hue following the procedures below:

- 1) Select the “Video Chrom/Hue” in the column “Setup Select” to

enable the "Video Chrom/Hue " column.

- 2) Click the button "DEF" in the column "DEF/STD" to enable the video input selection button.
- 3) Select a valid video input to read the user_defined datas stored in the **LedSync820B** and enable the adjustment scroll bar.
- 4) Adjust the chrom and hue by clicking the corresponding scroll bar;
- 5) Clicking "Std" button to recover the **LedSync820B** into the standard video chrom or hue value.

6. VGA Sampling Phase/Clock Adjustment

To get a clarity VGA image, sometimes, you should adjust the VGA sampling phase following the procedures below:

- 1) Select the "VGA Sampling Phase" in the column "Setup Select" to enable the "VGA iN Sampling Clock/Phase " column .
- 2) Click the button "Read VGA iN status" in the column "VGA iN Sampling Clock/Phase" to read the current VGA input status.
- 3) Click the "Phase" scroll bar to change the VGA sampling phase, when the VGA image be displayed claritily, the adjustment is ok.
- 4) Generally, the VGA sampling clock is unnecessary to change !!

7. Sync Mode select

There are two output sync modes of **LedSync820B** ,and the default sync mode is "Force" when **LedSync820B** at factory.

With the default "SyncMode" of **LedSync820B** output as "Force ",some VGA monitor maybe display flickerlingly or display nothing. To get a steady image on these VGA monitor,you must change the "SyncMode" from "Force" to "Free" following the procedures below:

- 1) Select the "SyncMode" in the column "Setup Select" to enable the "SyncMode" column .
- 2) Click the button "Free" in the column "SyncMode" to make the **LedSync820B** output as free sync mode.

Notes: With the output sync mode as "Free", some flickering line maybe occur on the image.To avoid this,you must set the vertical start location of the output image in the column "LED window setup" as Vert_Str=0 .

8. Initialize the LedSync820B

When the adjustment datas of **LedSync820B** be lost or be in confusion unfortunately, the **LedSync820B** will not work ok and some adjustments can not be executed, at the moment, you must initialize the **LedSync820B** following the procedures below:

Click the button "LED SETUP" on the user interface, enter the password "654898" in the dialog box, enter into the interface as shown in figure 5 below:

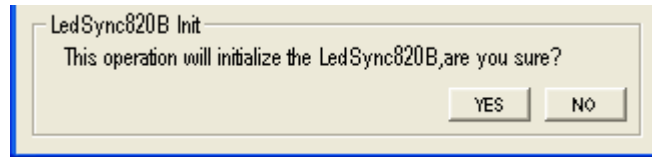


Figure 5

Click "YES" to initialize the **LedSync820B** ,and then shut off the power of the **LedSync820B**. When power on **LedSync820B** again, the **LedSync820B** will work with the default values at factory.

Specs

| Inputs | |
|-----------------------------------|--|
| Nums/Type | 1 × RGBHV 1 × DVI 1 × YPbPr(HDTV) 4 × CVBS 1 × Y/C(S-Video) |
| Video system | PAL/NTSC |
| CVBS Scope/Impedence | 1V (p_p) / 75 |
| Y/C Scope/Impedence | Y : 0.7V (p_p) / 75 , C : 0.35V (p_p) / 75 |
| RGB/DVI resolution | 1280 × 1024@60Hz , 1024 × 768@60Hz , 800 × 600@60Hz |
| RGB Scope/Impedence | 0.7 V (p_p) / 75 |
| YPbPr (HDTV) System | 1280 × 720p@60Hz , 1920 × 1080i@60Hz |
| YPbPr (HDTV) Scope/Impedence | Y : -0.3V ~ +0.7V (p_p) / 75 Pb: -0.35V ~ +0.35V (p_p) / 75 Pr: -0.35V ~ +0.35V (p_p) / 75 |
| Connectors | RGBHV : 15pin D_Sub(female) DVI : 24+1 DVI_D YPbPr(HDTV): BNC × 3 CVBS : BNC Y/C : 4pin mini DIN(female) |
| Outputs | |
| Nums/Type | 1 × RGBHV 1 × DVI |
| RGB/DVI resolution | 1024 × 768@60Hz |
| RGB Scope/Impedence | 0.7 V (p_p) / 75 |
| Connectors | RGBHV : 15pin D_Sub(female) DVI : 24+1 DVI_D |
| Others | |
| Control | RS 232、 Panel Button |
| Power | 100-240VAC 50/60Hz 60W max |
| Operating Temp | 5-40 |
| Humidity | 15-85% |
| Size | 60 mm(high) × 425mm(wide) × 280mm(deep) |
| Weight | 4.5 Kg |