

PRECAUTIONS



Please follow these precautions:

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To prevent electrical shock, do not open the cabinet. Refer to qualified personnel for service only.

Do not use the unit continuously for more than 24 hours with camera auto focus on. It may cause damage to the camera lens.

Be careful not to spill water or other liquids onto the unit, or allow combustible or metallic objects to get inside the cabinet.

Unplug the visualizer from the wall outlet when it is not being used for a long period of time.

Clean the cabinet with a soft cloth lightly moistened with a mild detergent solution.

Clean the lens carefully with an air spray or soft dry cloth to avoid scratching it.

When the lamps flash or become dark, they should be replaced with new ones.

Avoid switching arm lights and back light frequently.

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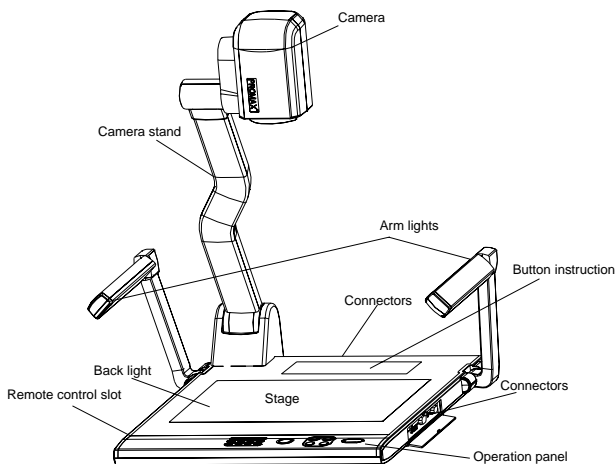
Web: www.qomo.com

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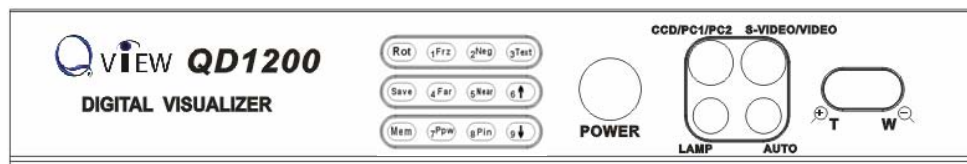
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PARTS IDENTIFICATION



CONTROL PANEL



Rot (Rotate the image)

Frz (Freeze the image)

Neg (Display film negatives)

Text (Switch between image/text mode)

Save (Save captured images)

Far/Near (Focus far or near)

Mem (Multiple Screen Display)

Ppw (Control the projector On/Standby)

Pin (Projector input signal selection)

↑/↓ (Move the image up/down)

POWER (Control the visualizer On/Off)

CCD/PC1/PC2 (CCD/RGB input signal selection)

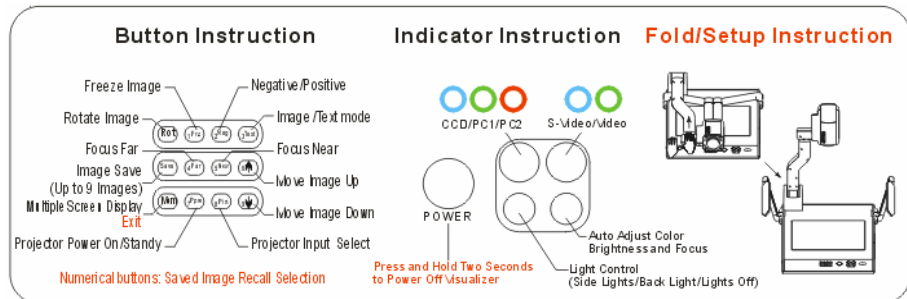
S-VIDEO/ VIDEO (S-VIDEO/ VIDEO input signal selection)

LAMP (Control the arm lights and back light)

AUTO (To auto adjust brightness, auto white balance and auto focus)

⊕T/W⊖ (Increase and decrease magnification)

BUTTON INSTRUCTION



REMOTE CONTROL



POWER (Control the visualizer power On/Off)

ROTATE (Rotate the image)

FREEZE (Freeze the image)

LAMP (Control the arm lights and back light)

SAVE (Save captured images)

NEG (Display film negatives)

MIRROR (V-reverse the image)

XGA (Switch between SVGA mode and XGA mode)

RECALL (Multiple screen display)

TEXT (Switch between image/text mode)

B&W (Switch between Color mode and Black & White mode)

SPLIT (Image split function)

PROJECTOR POWER (Control the projector On/Standby)

PROJECTOR INPUT (Projector input signal selection)

EXIT (Exit selected function)

TELE/WIDE (Increase and decrease magnification)

FAR/NEAR (Focus near or far)

AUTO (To auto adjust brightness, auto white balance and auto focus)

CCD/PC1/PC2 (CCD/RGB input signal selection)

S-VIDEO/ VIDEO (S-VIDEO/ VIDEO input signal selection)

VOLUME+/- (Increase or decrease the volume)

RED+/- (Increase or decrease the red hue)

BLUE+/- (Increase or decrease the blue hue)

BRIGHT+/- (Increase or decrease the brightness)

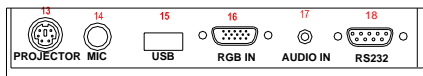
SCROLL ↑/↓ (Move the image up/down)

CONNECTIONS

Rear Panel



Side Panel



#1 AUDIO OUT

#2 VIDEO OUT

#3 S-VIDEO OUT

#4 VIDEO AUDIO IN

#5 VIDEO IN

#6 S-VIDEO AUDIO IN

#7 S-VIDEO IN

#8 PC AUDIO IN

#9 PROJECTOR Connector

#10 COMPUTER OUT

#11 COMPUTER IN

#12 POWER OUT/IN

#13 PROJECTOR RS232 Connector

#14 MIC IN

#15 USB Connector

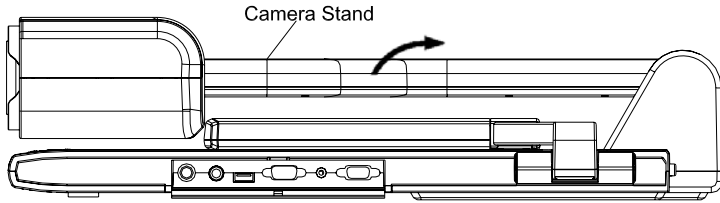
#16 RGB IN

#17 RGB AUDIO IN

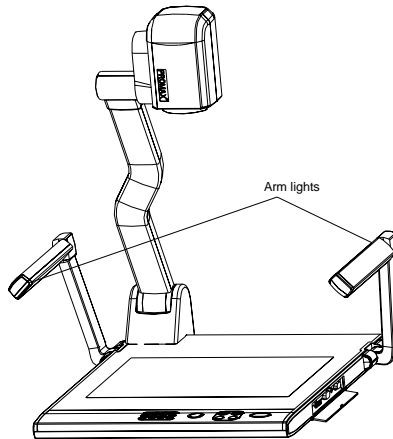
#18 COMPUTER RS-232 Connector

BASIC PREPARATIONS

1. Use one hand holds the base of the visualizer, use the other hand carefully lift up the camera stand of the unit.



2. Open the arm lights and rotate the camera head until they are in proper positions.



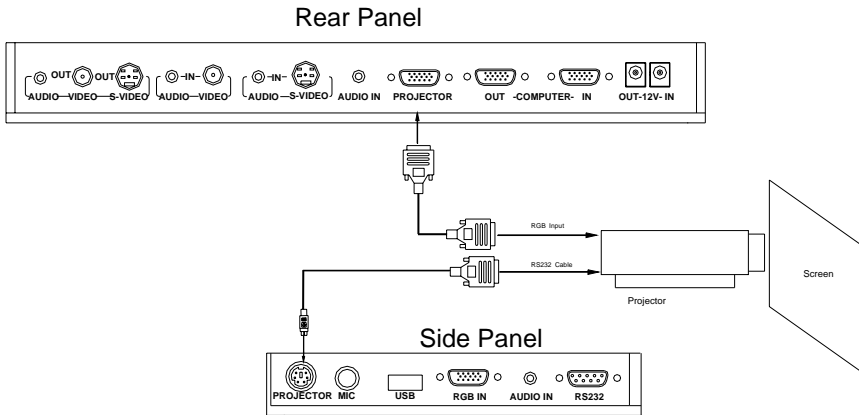
3. Making connections:

Before making any connection, **turn off all the power**, including power of the visualizer and the equipment to be connected.

Step 1: Connect power source.

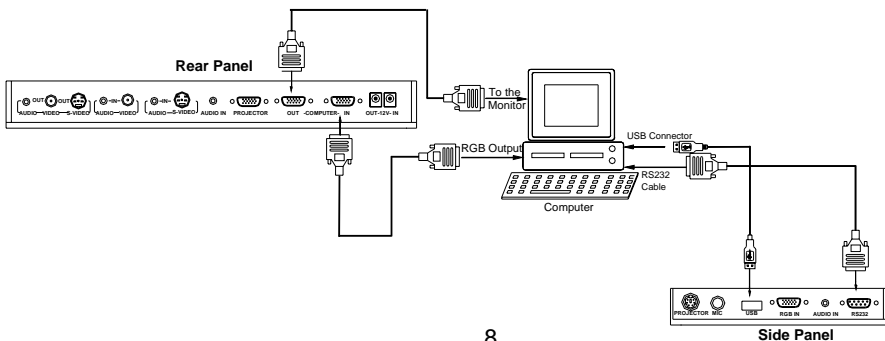
First connect the power cord to the **12V IN** connector.

Step 2: Connect to the projector.



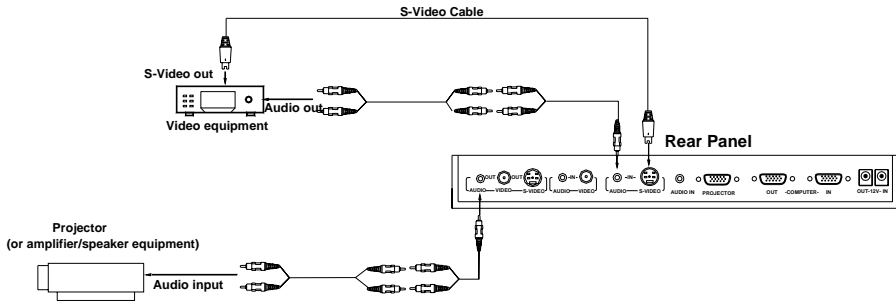
Connect visualizer's PROJECTOR port to the RGB IN port of the projector port with the RGB cable provided together the visualizer. If you need control a projector with the visualizer, please use the projector RS232 cable (6-pin to 9-pin) to make the connection between the projector and the visualizer. Some projector models may require a converter cable in addition to this standard RS232 cable to connect to the projector control port, for the pin locations and shape of some projectors' control port connector may be different from the connector of a standard RS232 cable. After the visualizer is connected to the projector, you can control projector's power on, standby and input selection with the visualizer. (For projectors other than Hitachi, the Code Writing program that comes with the visualizer is required for this function.)

Step 3: Connect to a desktop computer.



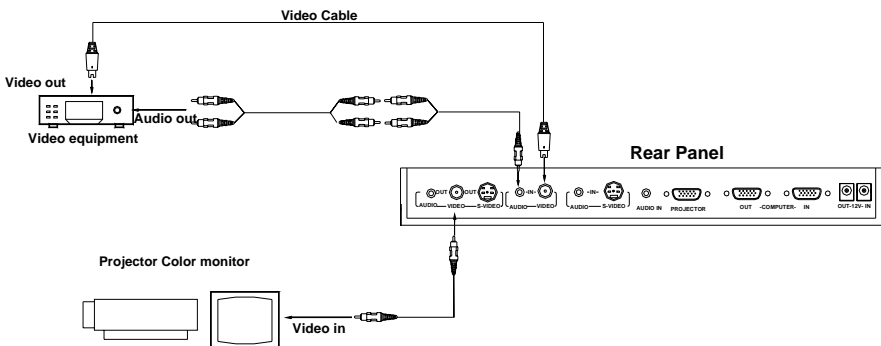
Note: You can connect a laptop computer to the RGB IN port of side panel with a RGB cable.

Step 4: Connect to the first video equipment with S-Video input.

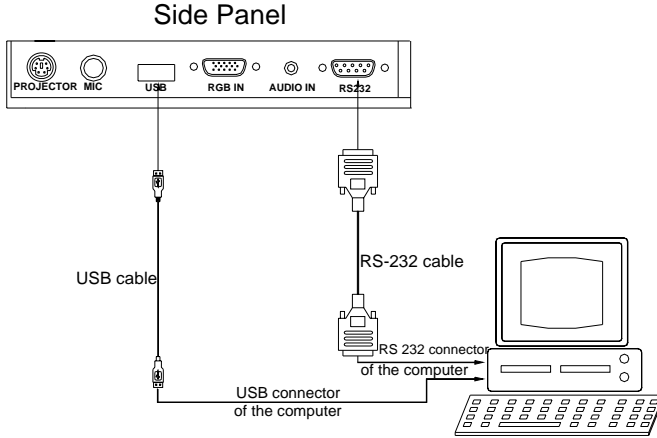


Output of the S-Video signal from the visualizer to the projector is already done in the step 2, where the RGB cable comes out from the visualizer and goes to the projector. After the connections as steps 2, 3, 4 are made, input signals from the computer, visualizer CCD and S-Video are going to the RGB1 input on the projector and will be displayed on the projector screen as RGB1. These signals can be seen in turn when pressing “CCD/PC1/PC2” and “S-VIDEO/VIDEO” on the control panel of the visualizer.

Step 5: Connect to the second video equipment with video input.



Step 6: Connections for external control from the computer.



Use the computer RS232 cable (9-pin to 9-pin) to make the connections shown below to control the visualizer from an external computer.

USB connection enables capturing still images / video streams from the visualizer to the computer. Special software is required for this operation.

4. Turn on the power by pressing the “POWER” button.

OUTPUT MODE AND VERTICAL FREQUENCY (60Hz)

The RGB output can output a signal in the SVGA /XGA format.

In order to achieve the best picture quality you must set the outputs of the Visualizer to match the native resolution of your display unit.

PAL/NTSC VIDEO OUTPUTS


The S-Video and composite video outputs are set to NTSC (PAL) during manufacturing.

INSTALLING QOMO VISUALIZER SOFTWARE


This function is to snap and display images with the USB interface, which includes displaying static and dynamic pictures, snapping dynamic images and playback the dynamic images with the media player in Windows XP.

- A. Connect the computer and visualizer with the USB cable. Insert the software CD that comes with your purchased visualizer into the CD-ROM drive. Turn on the visualizer. The setup will run automatically on your system, and then the QOMO Software Setup window will appear as below.



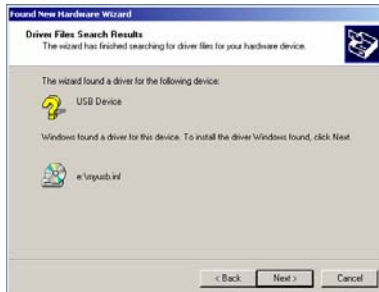
- B. Click , you will see the following setup window:



- C. Click  and select , you will see the following setup window:



D. Click Next >, then copy files



E. Click Finish to finish the setup.



F. Shut down your computer when prompted, so the changes will take effect.

*** Please pay attention to the following:**

1. Computer hardware requirement: CPU: 2.4GHz, RAM: 256M or above, Graphic card 64M, USB 2.0 port, Hard disk 40G or more, Monitor

display resolution higher than XGA (1024*768).

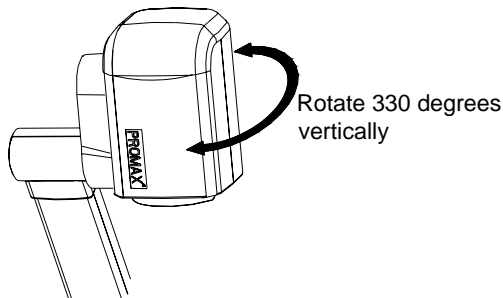
2. Operating system: Windows XP SP2 (Service Pack 2).
3. Must use the high-speed USB cable provided together with the visualizer.
4. When connect the visualizer to a desktop computer with the high-speed USB cable provided together with visualizer, we recommend using the USB port on the rear of the mainframe as the USB port on the front of the computer might have interference.
5. You need to install the USB driver again when you change a computer's USB port. If this port has installed USB2.0 driver, then no need to install USB driver again.

WORKING ON THE STAGE

1. Place your material on the working surface.
2. Select the enlargement required with the “**⊕T**” and “**W⊖**” keys.
3. Adjust the focus with the “Near” and “Far” keys or “AUTO” key.

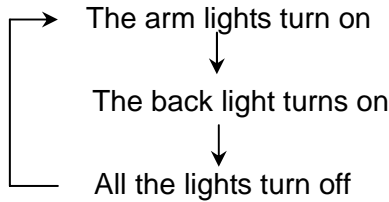
WORKING OUTSIDE THE STAGE

For showing 3-dimensional objects with the visualizer, just place them on the working surface and adjust the “**⊕T**” or “**W⊖**” and “AUTO” keys. If the object is too big for the stage or you want to show it from the side, just place it behind or in front of the unit and tilt the camera by hand (please take off the close-up lens first).



LIGHT

The arm lights are on when the power is on. Each time you press the “LAMP” buttons, the lighting changes as below.



ADJUSTING IMAGE SIZE

In order to reduce or enlarge the image size displayed on the screen, press the “⊕T” or “W⊖” button.



WIDE



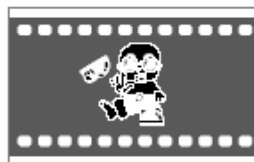
TELE

WORKING WITH NEGATIVES

The visualizer is automatically set to display normal materials on the screen when the power is on. To display negatives, turn on the backlight by pressing the “LAMP” key, and then press the “Neg” button to display the film negatives. Press the “Neg” button again to display normal materials in the color mode.



Positive



Negative

FOCUSING

When the Visualizer is turned on the focus automatically adjusts to the stage, it is not necessary to readjust the focus if you are only working with flat materials (text, photos, etc.). Only 3D objects require a focus adjustment.

Press the “AUTO” button to auto focus.

Press the “FAR” or “NEAR” button once to focus manually.

FREEZING IMAGE

Press the “Frz” button to freeze the image. When the output signal is RGB, in order to show a still image on the screen, press the “Frz” button. The frozen image can't be adjusted (Zoom in/out, color adjustment, etc.).

BRIGHTNESS ADJUSTMENT

If the image effect is not satisfactory, you can adjust the brightness to get a better image effect. Use the “BRIGHT +” or “BRIGHT -” button to adjust the brightness. To increase the brightness, press the “BRIGHT +” button. To decrease it, press the “BRIGHT -” button. To go back to the initial brightness press the “AUTO” button.

WHITE BALANCE ADJUSTMENT

Each time the lighting condition changes, the user should adjust the white balance of the CCD.

Press the “AUTO” button to adjust the white balance automatically.

AUTO ADJUSTMENT

One of the QD1200's special functions is auto adjustment. Press the “AUTO” button to auto adjust the brightness, the white balance and the focus.

TEXT/IMAGE MODE

Press the “Text” button to switch between image/text modes. To display a

text file, switch to the text mode to get a clearer text effect.

COLOR AND B&W MODE SWITCH

Press “B&W” once to enter the Black & White mode; press again to return to the Color mode. (On the remote control)

SWITCHABLE VIDEO INPUTS

Press the “S-VIDEO/VIDEO” button to switch among S-Video and Video signals.

SWITCHABLE RGB INPUTS

Use the “CCD/PC1/PC2” button to switch between CCD and different RGB signals. Each time the “CCD/PC1/PC2” button is pressed, it provides seamless transitions among different sources such as Camera (CCD)、COMPUTER(IN)、 and RGB (IN).

Notes: RGB OUT always outputs RGB IN signals.

PROJECTOR ON/STANDBY

Press the “POWER” button to turn on the QD1200’s power and press the “Ppw” button to turn the projector power on. To turn the projector standby after use, press the “Ppw” button more than 2 seconds, and then the projector enters to the standby mode. (On the remote control, press the “PROJECTOR POWER” button)

PROJECTOR INPUTS SELECTION

When the projector is connected to several input sources, use the “Pin” button to switch signal inputs of the projector. (On the remote control, press the “PROJECTOR INPUT” button)

IMAGE ROTATION

In order to rotate the image, press the “Rot” button once, the displayed image will be rotated ± 90 degrees clockwise. Press the “Rot” button again, the rotated image will be restored to the initial position.

IMAGE REVERSION

Press the “MIRROR” button once to V-reverse the image and the vertically mirrored image will be displayed. Press the “MIRROR” button again to exit.

INFRARED REMOTE CONTROL

The QD1200’s remote control can control the camera from different angles. Please note that an infrared remote control can only be used up to a certain distance to the unit. Objects situated between the visualizer and the infrared remote control and a weak battery may interfere with the reception. On the left side of the visualizer stage, there is a built-in remote control storage compartment where you can store the remote control when you not use it.

PRESET FUNCTION

Use the “SET” button to preset 8 steps of the Zoom/Focus position, when the button is pressed, it moves step by step. Press “RUN” button to the run preset. (On the remote control)

3 X 3 MULTIPLE SCREEN DISPLAY

Press “Mem” button, the stored images can be displayed in a 3 x 3 matrix. Press “Mem” once, the stored images can be displayed in a 3 x 3 matrix. Press the numeric buttons to display the corresponding images. Under this operation, the “Frz”, “Neg”, “Txt”, “Far”, “Near”, “Ppw”, “Pin”, “↓” and “↑” buttons do not function. Press “Mem” again to exit the 3 x 3 image display mode.

On the remote control, the “RECALL” and numeric buttons are the image recall and selection keys.

USB PORT

The USB port can be used to store still images from the visualizer in a computer. No additional computer hardware is required. In this way, the


visualizer can be used as a 3-D scanner for your computer. Connect the Visualizer to your computer with the supplied USB cable. The QOMO Visualizer Software is available on the supplied CD-ROM.

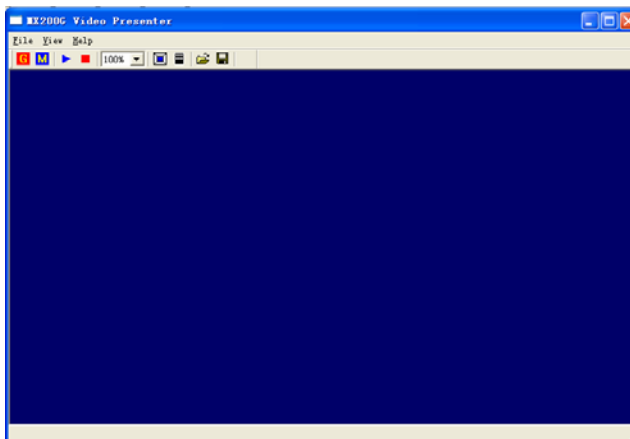
USB IMAGE CAPTURE

You can capture and control images on the visualizer from a computer connected with a USB connector.

A. Connect the computer and the visualizer with the USB cable.



B. Double click X:\ USB Capture\  (you can open this file from the CD and double click this software, or copy this file into any directory on your computer hard drive and double click it), you will see the following computer control window:



The control keys' operation is the same to the operating instruction of the "Controlling the Visualizer From a Computer" section.

C. Menu operation instructions.




Close / Open the computer control window.



Display the image in full screen.




Click  to get a present picture frame from CCD.





Download the 9 images stored in the visualizer into your desired

folder on your computer.

 Display the current visualizer images continuously (the fastest frame rate is 10 frames per second)

 Stop image continuous display

 Choose the image displaying size.

 Open an image.

 Save the captured image to computer.

CONTROLLING THE VISUALIZER FROM THE COMPUTER

You can control the visualizer from a computer connected with a RS232 connector.


- A. Connect the computer and the visualizer with the RS232 cable.
- B. Double click X:\ 232 Control\Control Panel (you can open this file from the CD and double click it, or copy this file to any directory on your computer's hard drive and double click to launch it).

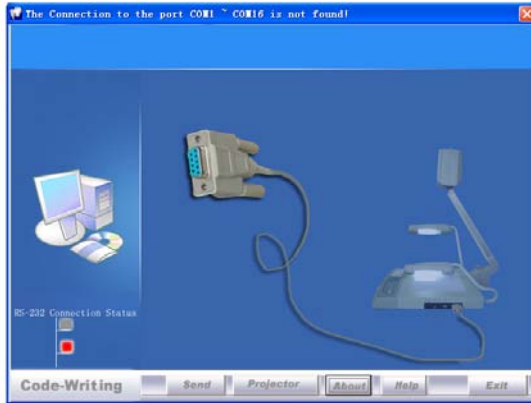
CONTROLLING PROJECTOR BY VISUALIZER

The code writing software is used to inputting projector's control code, then can control various projector with the visualizer.

1. Connect the visualizer to the projector with the RGB、VIDEO、S-VIDEO cables.

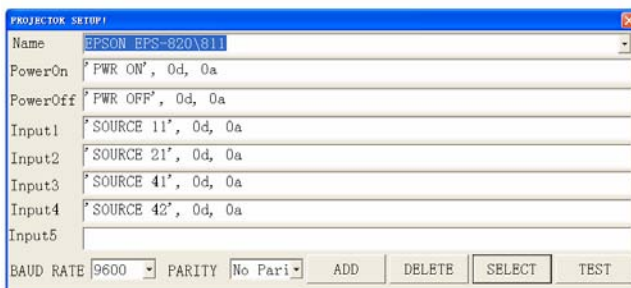
2. Connect the RS232 cable to the computer's connector. The visualizer's RS232 port is located on its right side.

3. After completion of the connection, turn on the visualizer, click [start] -> [All Programs] -> Visualizer ->  Visualizer Code-Writing and the following dialog box appears as below:



When the indicator of “Current RS-232 Connection Status” is green, that means the connection between the visualizer and the computer’s RS232 connector is good. If the indicator is red, please check if the RS232 cable is connected correctly. When all the cables are connected correctly, please click “Projector” to select your projector model under the drop-down list, then click “Send”. If you can not find your particular projector model in the “Projector”, please do the following:

1). Select “Baud rate” and “parity” and input the projector control code. (The baud rate, parity and control code is supplied by projector’s manufacturer, please refer to the projector’ manual)



The input format of projector’s control code is as follows:


a. If the data is in the numerical value format, please input data directly, block them off with comma, do not distinguish lowercase and uppercase. For example: the “POWER ON” code in Hitachi projector manual is :


BE EF	03 06 00	BA D2	01 00	00 60	01 00
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In the POWRE ON box, Input : be, ef, 03, 06, 00, ba, d2, 01, 00, 00, 60, 01, 00. Then use the same input rule to input other code.

b. If the data is in the character string format, input 'character string'.

For example: the "POWER ON" code in the SHARP C40/50 projector manual is :

P	O	W	E	-	-	-	1	
---	---	---	---	---	---	---	---	---

("-" is space,  is enter.)

In the POWER ON box, input 'POWR 1', 0d, 0a

(Remarks: There are 3 spaces after POWER, 0d, 0a is enter.)

Input other codes in the same way.

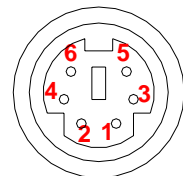
c. If the data is in the numerical value and character format, then synthesize the above-mentioned formats.

3). Once done, click "Add" to add your projector model, then Click "Send". Afterward, click "Ok". Now, you can use the visualizer to control your projector.

4. Connect the visualizer's projector control port to the RS232 port with a RS232 cable (Please disconnect the computer from the RS232 port first) . Then use buttons on the operation panel to control the projector.

The visualizer provides a 6-pin to 9-pin RS232 cable. If this cable does not match to your projector's RS232 port, an additional RS232 cable is needed. This additional RS232 cable can be made based on the pin location of the projector's RS232 control port. The pin locations of the visualizer are: the pin 1 is RXD (Received Data); the pin 5 is TXD (Transmitted Data); the pin 4 is GND (Ground). Other pins are not defined. The pin location information of the projector is provided by the projector's manufacturer. The projector's RS232 control port normally has RXD pin, TXD pin and GND pin, the name may be different. The parallelism of each data pin is shown as follows:

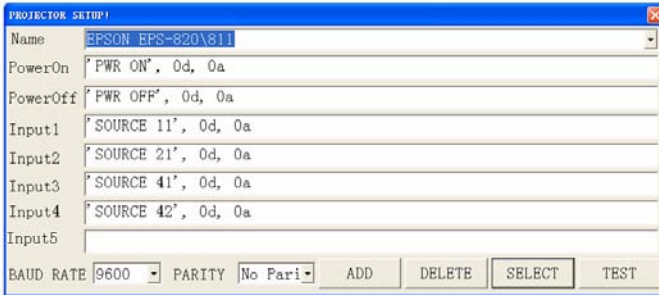
Visualizer's RXD pin-----Projector's TXD pin



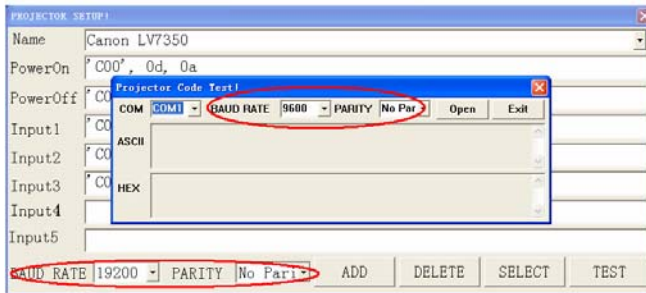
Visualizer's TXD pin-----Projector's RXD pin
Visualizer's GND pin-----Projector's GND pin

5. If you can not use buttons on the operation panel to control the projector, please use Code-Writing software's projector control code testing function to check if the control code is correct.

Click "Projector" button, the following dialog box appears as below:



Connect the visualizer to a computer with a RS232 cable (Please disconnect the projector from the RS232 port first) and select the Baud Rate and Parity based on the projector's Baud Rate, then click the "TEST" button to pop up the Projector Code Test dialog box, input the Baud Rate and Parity based on the projector's Baud rate, then click "Open".

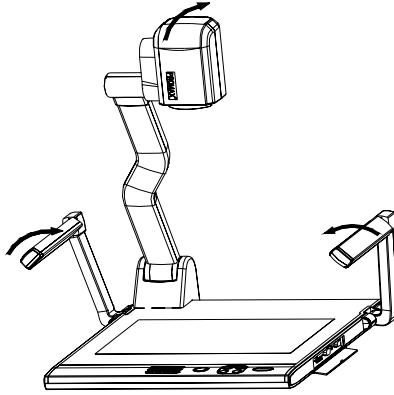


Click the projector control buttons on the visualizer's operating panel to check if the control code that the program received is the same as the sending code. If the receiving code is same to the sending code, the input codes are correct. If the visualizer can not control the projector, please do the following.

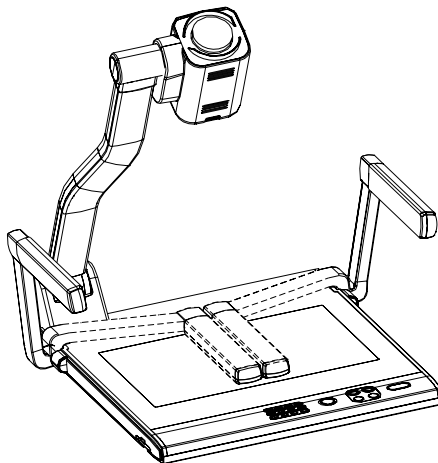
1. Check to see if the source control codes of projector are correct.
2. Check to make sure the connection between the visualizer and the projector is correct.

FOLDING THE UNIT

1. **Fold** the right arm light down first onto the base, then the left arm down. **Rotate** the camera head clockwise until the camera head is parallel to the camera stand.

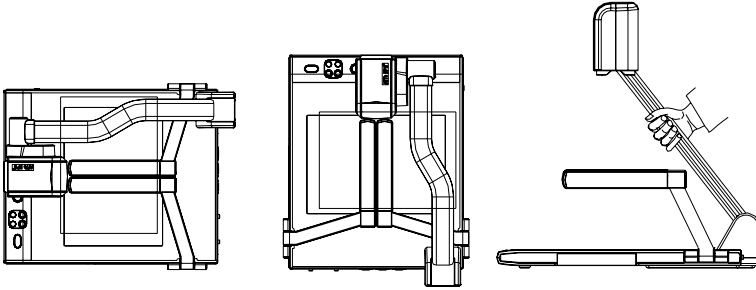


2. Carefully **Fold** the camera stand down to the front panel.



Cautions:

- a. Don't lay the unit down flat.
- b. Don't try to stand it on its rear or sides.
- c. Don't try to pick up this unit by pulling the camera stand.



NOT THIS WAY

SPECIFICATIONS

Color system	NTSC or PAL system
Pickup device	1/3" CCD
Resolution	XGA (1024 x 768)
Total Pixels	850,000
Lens	12 x optical zoom, 8 x electrical zoom F=1.8~2.7 mm / f = 5.4 ~ 64.8 mm
Zoom	Powered
Camera Rotation	Vertically 330°
Focus/Iris	Auto/manual selectable
White balance	Auto
Negative/positive conversion	Yes
Black/white and color selection	Yes

Image Freeze	Yes
Image Save & Recall	9 frames save, 3 x 3 multiple screen display
Lights	Arm light: 1.5W LED lamps x 2
	Back light: 4W LED lamps
Input connectors	C Video IN (RCA) (1)
	S Video IN (4-pin DIN) (1)
	Audio IN (Mini Jack) (2)
	MIC IN (phone jack)(1)
	PC Audio (2)
	RGB DB15FLC (2)
Output connectors	RGB DB15FLC (2)
	C Video OUT (RCA) (1)
	S Video OUT (4-pin DIN) (1)
	Audio OUT (Mini Jack) (1)
Operating system	Windows XP SP2 (Service pack 2)
Hardware Requirement	CPU higher than P2.4GHz Memory higher than 256 MB
USB connector	15~20 frames/sec
RS-232 connector	D-Sub, 9-pin, male / 6-pin PS/2
USB port	USB 2.0
Power requirements	12V/4A external AC adapter
Dimension (W x D x H)	Folded: 20.1" x 16.1" x 4.7"
	Setup: 20.1" x 20.9" x 22.4"
	Packing: 25.6" x 21.2" x 9.1"
Weight	N.W: 5.5Kg (12.1lbs)
	G.W: 9.5Kg (20.9 lbs)
Accessories	AC power cord RGB cable Audio/Video cable S-Video cable Computer RS232 cable (9-pin to 9-pin)

	Projector RS232 cable (6-pin to 9-pin) USB cable Audio convert cable AC adapter User's manual Quick Start-up guide Software CD Infrared remote control Warranty card
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* Design and specifications are subject to change without prior notice.

TECHNICAL SUPPORT

How to Reach QOMO:

By Phone

Call us at 1-866-990QOMO. Our expert personnel provide technical assistance from 9:00AM through 5:00PM Eastern Standard Time, Monday through Friday. Please gather the following information before calling:

- Product model name(s) and numbers
- Product serial number(s)
- Detailed and specific questions

Online

Technical support is also available online at QOMO's web site at www.qomo.com. You can enter your questions and concerns through our online form. Or you can email us at info@qomo.com.

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