

- Precautions
- Using
- Product Overview
- Troubleshooting
- Connections
- 6 Other Information

















(6) Troubleshooting

Other Information

X To avoid injuries or damage to property, please read the following precautions carefully and use the product accordingly.



Failure to follow the instructions marked with this symbol may cause personal injury or even fatality.



Failure to follow the instructions marked with this symbol may cause personal injury or damage to the product or property.

| Power Related | Installation Related | Cleaning and Use Related |



Power Related

[The images here are for reference only, and are not applicable in all cases (or countries).]



Warning



Insert the power plug firmly so that it does not come loose.

• When the connection is not firm, it may cause a fire.



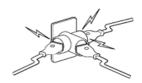
Do not use loose power outlets or damaged power cables.

• There is a danger of electric shock or fire.



Under no circumstances touch the power plug with wet hands.

• There is a danger of electric shock.



Do not plug multiple devices into a single wall outlet.

• There is a danger of fire.



Do not bend the power cord excessively or place heavy objects on it.

. There is a danger of electric shock or fire.



Before moving the product, make sure the power is off and remove the power cord from the wall outlet. In addition, make sure all connection cables are disconnected from other devices before moving it.

• Moving the product without disconnecting the power cord may damage the power cord and cause electric shock or fire.

To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily

operable.



• There is a danger of electric shock or fire.





Always unplug the unit by holding the power plug. Pulling the power cable may damage the inside of it.

• There is a danger of fire.



Unplug the power plug before cleaning the product.

• There is a danger of electric shock or fire.

| Power Related | Installation Related | Cleaning and Use Related |







TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.

There is a danger of fire.



When installing the product in a cabinet or on a shelf, make sure the front end of the base does not protrude.

• Dropping the product may damage it or cause injury.



Keep the power cord away from heaters.

• The coating of the power cord may melt and cause electric shock or fire.



Do not install the product in locations exposed to oil, smoke, moisture or water (rainwater), or in a vehicle.

• There is a danger of electric shock or fire.



Do not install the product in locations with poor ventilation such as a bookshelf, closet, etc.

An increase in the internal temperature may cause a fire.



Do not install on an unstable location, or on a stand smaller than the product.

 If the product falls it may harm children. Install on a flat and stable location as the front part is heavy.



In case of thunder/lightning, disconnect the power cord from the wall outlet.

• There is a danger of electric shock or fire.





Make sure the product's vents are not blocked by a table cloth or curtain.

• An increase in the internal temperature may cause a fire.



Place the product on the ground carefully.

Not doing so may cause damage or injury.



Do not drop the product while carrying it.

• Doing so may cause damage or injury.



Keep the product out of children's reach.

If the product falls it may cause harm to children. Install on a flat and stable location as the front part is heavy.

| Power Related | Installation Related | Cleaning and Use Related |



Cleaning and Use Related





Do not insert any metal objects such as a fork, chopsticks, wires, gimlets, or inflammable objects such as paper into the vents, the PC/COMPOSITE port, the Power port or the Battery port.

This may cause electric shock or fire.
 If water or an alien substance enters the product, turn the product off, disconnect the power cord from a wall outlet and contact a Service Center.

Do not disassemble, or attempt to fix or modify the product.

• When the product requires repairs, contact a **Service Center**.





Do not use or keep the product near flammable sprays or other such substances.

• There is a danger of fire or explosion.



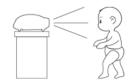
Do not place containers with water, vases, drinks, chemicals, small metal parts or heavy objects on the product.

• If water enters the product, it may cause electric shock, or fire and when heavy objects fall, they may cause injury.



Do not let children place objects such as toys or cookies on the product.

• If a child tries to reach for any of these objects, the product may fall and cause



Do not look directly at the light of the lamp nor project the picture onto eyes.

• This is dangerous; especially for children.



When you remove batteries from the remote, be careful that they are not swallowed by children. Keep batteries out of the reach of children.

. If swallowed, see a doctor immediately.



Notice



If the product emits smoke, unusual noise, or there is a burning smell, disconnect the power plug immediately, and contact a Service Center.

• There is a danger of electric shock or fire.



If the power plug pin or jack is exposed to dust, water or alien substances, clean it thoroughly.

• There is a danger of electric shock or fire.



When cleaning the product, disconnect the power cord and wipe the product using a soft dry cloth.

• Do not use any chemicals such as wax, benzene, alcohol, thinners, insecticide, air freshener, lubricant or detergent.

When not using the product for an extended period of time, disconnect the power plug.



 Otherwise, this may cause heat emission from the accumulated dirt or degraded insulation, leading to electric shock or fire.



Be sure to contact an authorized service Center, when installing your product in a location with heavy dust, high or low temperatures, high humidity, chemical substances and where it operates for 24 hours such as the airport, the train station etc.

· Failure to do so may cause serious damage to your product.



If the product is dropped or the casing is damaged, turn the product off and unplug the power cord.

• This may cause electric shock or fire. Contact a Service Center.





Use only specified standard batteries. Do not use new and used batteries together.

 Incorrect polarity may cause a battery to break or leak and could lead to fire, injury, or contamination (damage).



Make sure to place your remote control on a table or desk.

 If you step on the remote control, you may fall and hurt yourself or the product may be damaged.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment) - Europe only

(Applicable in the European Union and other European countries with separate collection systems)



This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product - Europe only

(Applicable in the European Union and other European countries with separate battery return systems.)

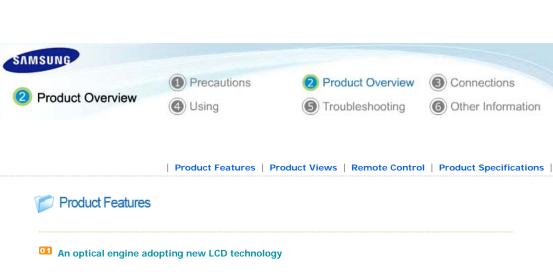
This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If



 $batteries \ are \ not \ properly \ disposed \ of, \ these \ substances \ can \ cause \ harm \ to \ human \ health \ or \ the \ environment.$

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

SP-L250 SP-L220 SP-L200



- 1024 x 768 panel has been adapted.
- Utilizes a 3P-LCD panel.
- SP-L250: Provides a bright screen of 2500 lumen.
- SP-L220: Provides a bright screen of 2200 lumen.
- SP-L200 : Provides a bright screen of 2000 lumen.
- Compact size, lightweight, and good portability

02 Minimized fan noise

- Minimizes the noise generated by the product's fan by optimizing the internal air flow and the fan installation structure.

Usarious input terminals

- Increases the connectivity to peripheral devices by providing various terminals, such as 2 D-Sub 15p (supporting DTV signal), S-Video, and Video terminals.

Mario Output

- There are two stereo speakers on the right and left and a 5-band equalizer is supported.

User adjustments

- This unit allows adjustment of each input port.
- The unit has a reference pattern that can be used for positioning and adjustment.

| Product Features | Product Views | Remote Control | Product Specifications |



Front/Upper Side



1. Indicators

- STAND BY (Blue LED)
- LAMP (Blue LED)
- TEMP (Red LED)
- * Refer to the LED Indications.

2. VOL - / + & Select and Move Button

Adjusts the volume.

Use this button to move to or select an item within a menu.

3. MENU Button

Use this button to enter or exit a menu or to move forward in a menu.

4. SOURCE Button

Used to select input signals from the external sources.

5. POWER(**(**) Button

Used to turn the projector on or off.

6. Lens

7. Remote Control Signal Receiver

8. Focus Ring

Used for Focus Adjustment.

9. Zoom Knob

Used to enlarge or reduce image size.

10.Lens cover

Unpacking



Quick Installation Guide / Safety Guide



Warranty Card/ Registration Card (Not available in all locations)



User Manual CD









D-Sub Cable

LED Indications

| STAND BY | LAMP | TEMP | Information |
|-------------|------|------|---|
| • | 0 | 0 | If you press the POWER button on the remote control or projector, the screen appears within 30 seconds. |
| • | • | 0 | The projector is in normal operating condition. |
| • | • | 0 | This state appears when the projector is preparing an operation after the POWER button on the projector or the remote control has been pressed. |
| 0 | • | 0 | The POWER button is pressed to turn off the projector, and the cooling system is in operation to cool off the inside of the projector. (Operates for about 30 seconds.) |
| • | 0 | • | Refer to Action 1 below if the cooling fan inside the projector is not in normal operation condition. |
| 0 | • | • | Refer to Action 2 below if the lamp cover protecting the lamp unit is not closed properly. |
| • | • | • | This indicates that the lens cover does not open completely. Refer to Action 3 below. |
| • | • | • | This indicates that it has changed to Cooling mode, because the internal temperature of the projector has increased beyond the maintenance limit. Refer to Action 4 below. |
| 0 | 0 | • | This indicates that the power is turned off automatically because the internal temperature of the projector has increased beyond the maintenance limit. Refer to Action 5 below |
| • | • | • | A problem has occurred with the operation of the lamp. Refer to Action 6. |

Olearing Indicator Problems

| Classification | State | Measures |
|----------------|--|--|
| Action 1 | When the cooling fan system is not in normal operating condition. | If the symptom remains even after disconnecting and then reconnecting the power cord and turning the projector on again, contact your product provider or our service center . |
| Action 2 | When the lamp cover protecting the lamp unit is not properly closed or the sensor system is not in normal operating condition. | Check if the screws on the side of the projector are correctly locked, and if they are locked normally, contact your product distributor or a service center . |
| Action 3 | The status that the lens cover is not open completely. | Open the lens cover completely. If the lens cover is not open completely while operating the projector, both the video and audio are turned off automatically. If this status persists for ten minutes, the projector is turned off automatically. |
| | This indicates that it has changed | If the internal temperature of the projector has increased beyond the maintenance limit, it is changed to Cooling mode before it is turned off automatically. |

| Action 4 | to Cooling mode, because the internal temperature of the projector has increased beyond the maintenance limit. | * Cooling mode: The fan speed has increased and the projector lamp has been changed to ECO mode. Check whether the ventilating hole of the projector is blocked. Check the air filter and clean if blocked. Check whether the surrounding temperature of the projector is higher than the standard temperature range of the projector. Cool the projector sufficiently and operate it again. |
|----------|--|--|
| Action 5 | If the internal temperature of the projector increases higher than the limit, it is turned off automatically. | Check whether the ventilating hole of the projector is blocked. Check the air filter and clean if blocked. Check whether the surrounding temperature of the projector is higher than the standard temperature range of the projector. Cool the projector sufficiently and operate it again. If the same problem occurs continually, contact your product distributor or service center. |
| Action 6 | The lamp malfunctions after power turns off abnormally or after powering on right after turning off the projector. | Turn the power off, wait for a sufficient amount of cooling time and then turn the power on to operate. If the same problem occurs continually, contact your product distributor or service center . |



This Projector uses a cooling fan system to keep the unit from overheating. Operation of the cooling fan may cause noise, which does not affect the product performance and is part of normal operation.

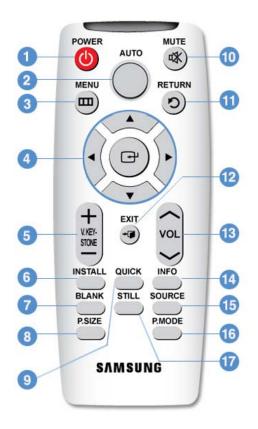




- 1. PC OUT port
- 2. AUDIO OUT port
- 3. RS-232C port (For service input terminals)
- 4. [AV IN] R-AUDIO-L Input port
- 5. [AV IN] VIDEO Input port

- 6. [AV IN] S-VIDEO Input port
- 7. [PC IN1,2] PC Input port
- 8. [PC IN1,2] AUDIO Input port
- 9. Remote Control Signal Receiver
- 10.POWER Input port





- 1. POWER (**(**)) Button
- 2. AUTO Button
- 3. MENU (III) Button
- 4. Move (▲ ▼ ◆▶)/ Button
- 5. V.KEYSTONE(+/-)
 (VERTICAL KEYSTONE)Button
- 6. INSTALL Button
- 7. BLANK Button
- 8. P.SIZE Button
- 9. QUICK utton
- 10. MUTE (W) Button
- 11. RETURN () Button
- 12. EXIT (→ D Button
- 13. VOL Button
- 14. INFO Button
- 15. SOURCE Button
- 16. P.MODE Button
- 17. STILL Button

1. power (**ம்**)

Used to turn on the projector.

2. AUTO

Adjusts the Picture automatically. (Available in PC Mode Only)

3. MENU (**III**)

Used to display Menu Screen.

4. Move (▲ ▼ ◀▶)/ (←)

Used to move to or select each menu item.

5. V.KEYSTONE(VERTICAL KEYSTONE) (+/-)

Use this when video scenes are distorted or tilted.

6. INSTALL

Used to flip or reverse the projected image.

7. BLANK

This is used to turn off the video and audio temporarily.

The video and audio will come back on when any button other than the POWER button is pressed.

8. P.SIZE

Used to adjust the size of the picture screen.

9. QUICK

This is used to quickly return to the last menu used.

10. MUTE (🗘)

This is used to temporarily mute the sound.

To hear sound again, press the MUTE button again or press the - VOL + button.

11. RETURN (🎝)

Returns to the previous menu.

12. EXIT (→ 🎒

Used to make Menu Screen disappear.

13. VOL

Adjusts the volume.

14. INFO

Used to check source signals, picture setup, PC screen adjustment and lamp lifespan.

15 SOURCE

This is used to switch between the TV and the external input.

16. P.MODE

Used to select Picture Mode.

17. STILL

Used to see still images.

| Product Features | Product Views | Remote Control | Product Specifications |



Design and specifications of the product may be modified without prior notice for better performance.

Specifications

| Model | | SP-L250, SP-L220, SP-L200 | |
|-------------------|----------------------|---|--|
| Panel | | 0.63" 3P LCD | |
| Resolution | | XGA (1024 x 768) | |
| Aspect ratio | | 4:3 | |
| Brightness | | Max 2,500 ANSI lumen (L250) Max 2,200 ANSI lumen (L220) Max 2,000 ANSI lumen (L200) | |
| Contrast | | Max 500:1 | |
| Diagonal screen s | size | 40 ~ 300" | |
| Projection Range | | 1 m ~ 10 m | |
| Zoom Adjustment | | Manual | |
| Focus Adjustmen | t | Manual | |
| Lens | | F=1.65~1.93, f=18.5mm~22.5mm | |
| Zoom Ratio | | 1:1.2 | |
| Keystone | | Vertical (±20°) | |
| Lamp | Power Consumption | 203W (Eco : 172W) | |
| | Life Time | 2,500 Hours (Eco : 3,000 Hours) | |
| | D-Sub 15p x 2 | Analog RGB, analog YPbPr | |
| Input Terminal | Mini DIN x 1 | S-Video | |
| | RCA x 1 | Composite video | |
| Speaker | | 3W x 2 (Stereo) | |
| I | | | |

Power Power Max 280 W

Voltage 100~240V AC, 50/60Hz

Noise Eco: 30dB, Bright: 32dB

291(W) x 289(D) x 127(H)
Dimensions

ensions 11.5 inches(W) x 11.4 inches(D) x 5 inches(H)

Weight 3.8 Kg / 8.4 lb

Operating Temperature : 41 °F \sim 95 °F (5 °C \sim 35 °C), Humidity : 20 % \sim 80 % ((Non-condensing))

User Humidity: 20 % ~ 80 % ((Non-condensing))

Environment Topporature: 14 ° E 140 ° E (10 ° C 40 °

nment Temperature : -14 °F \sim 140 °F (-10 °C \sim 60 °C) Storage Humidity : 10 % \sim 90 % (Non-condensing)



This Class B equipment is designed for home and office use. The equipment has been registered regarding EMI for residential use. It may be used in all areas. Class A is for office use. Class A is for business while class B emits less electromagnetic waves than class A.



The LCD panel used in the LCD projector consists of hundreds of thousands of fine pixels. Like other video display devices, the LCD panel may contain bad pixels which do not operate. When shipping a product, the conditions for identifying bad pixels and the number of bad pixels that a LCD panel is allowed to contain are strictly managed in accordance with the relevant specified standards by the LCD panel manufacturer and our company. Though a screen may have some dead pixels, this does not affect the overall screen quality and the lifetime of the product.

Supported Display Modes

PC Timing

| Format | Resolution | | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Frequency (MHz) |
|--------|------------|------|----------------------------------|-------------------------------|--------------------------|
| IBM | 640 x 350 | 70Hz | 31.469 | 70.086 | 25.175 |
| IBM | 640 x 480 | 60Hz | 31.469 | 59.940 | 25.175 |
| IBM | 720 x 400 | 70Hz | 31.469 | 70.087 | 28.322 |
| VESA | 640 x 480 | 60Hz | 31.469 | 59.940 | 25.175 |
| MAC | 640 x 480 | 67Hz | 35.000 | 66.667 | 30.240 |
| VESA | 640 x 480 | 70Hz | 35.000 | 70.000 | 28.560 |
| VESA | 640 x 480 | 72Hz | 37.861 | 72.809 | 31.500 |
| VESA | 640 x 480 | 75Hz | 37.500 | 75.000 | 31.500 |
| VESA | 720 x 576 | 60Hz | 35.910 | 59.950 | 32.750 |
| VESA | 800 x 600 | 56Hz | 35.156 | 56.250 | 36.000 |
| VESA | 800 x 600 | 60Hz | 37.879 | 60.317 | 40.000 |
| VESA | 800 x 600 | 70Hz | 43.750 | 70.000 | 45.500 |
| VESA | 800 x 600 | 72Hz | 48.077 | 72.188 | 50.000 |
| VESA | 800 x 600 | 75Hz | 46.875 | 75.000 | 49.500 |
| MAC | 832 x 624 | 75Hz | 49.726 | 74.551 | 57.284 |
| VESA | 1024 x 768 | 60Hz | 48.363 | 60.004 | 65.000 |
| VESA | 1024 x 768 | 70Hz | 56.476 | 70.069 | 75.000 |
| VESA | 1024 x 768 | 72Hz | 57.672 | 72.000 | 78.434 |
| VESA | 1024 x 768 | 75Hz | 60.023 | 75.029 | 78.750 |
| VESA | 1152 x 864 | 60Hz | 53.783 | 59.959 | 81.750 |
| VESA | 1152 x 864 | 70Hz | 63.000 | 70.000 | 96.768 |
| VESA | 1152 x 864 | 72Hz | 64.872 | 72.000 | 99.643 |
| VESA | 1152 x 864 | 75Hz | 67.500 | 75.000 | 108.000 |
| VESA | 1280 x 720 | 60Hz | 44.772 | 59.855 | 74.500 |
| VESA | 1280 x 720 | 70Hz | 52.500 | 70.000 | 89.040 |
| VESA | 1280 x 720 | 72Hz | 54.072 | 72.000 | 91.706 |
| VESA | 1280 x 720 | 75Hz | 56.456 | 74.777 | 95.750 |
| VESA | 1280 x 768 | 60Hz | 47.776 | 59.870 | 79.500 |
| VESA | 1280 x 768 | 75Hz | 60.289 | 74.893 | 102.250 |
| VESA | 1280 x 800 | 60Hz | 49.702 | 59.810 | 83.500 |
| VESA | 1280 x 800 | 75Hz | 62.795 | 74.934 | 106.500 |
| VESA | 1280 x 960 | 60Hz | 60.000 | 60.000 | 108.000 |
| VESA | 1280 x 960 | 70Hz | 69.930 | 70.000 | 120.839 |
| VESA | 1280 x 960 | 72Hz | 72.072 | 72.000 | 124.540 |
| VESA | 1280 x 960 | 75Hz | 75.231 | 74.857 | 130.000 |
| j T | | | | | |

| VESA | 1280 x 1024 | 60Hz | 63.981 | 60.020 | 108.000 |
|------|-------------|------|--------|--------|---------|
| VESA | 1280 x 1024 | 70Hz | 74.620 | 70.000 | 128.943 |
| VESA | 1280 x 1024 | 72Hz | 76.824 | 72.000 | 132.752 |
| VESA | 1280 x 1024 | 75Hz | 79.976 | 75.025 | 135.000 |
| VESA | 1400 x 1050 | 60Hz | 65.317 | 59.978 | 121.750 |
| VESA | 1440 x 900 | 60Hz | 55.935 | 59.887 | 106.500 |
| VESA | 1440 x 900 | 75Hz | 70.635 | 74.984 | 136.750 |
| VESA | 1600 x 1200 | 60Hz | 75.000 | 60.000 | 162.000 |



For the resolutions presented above, if a signal with a resolution lower or higher than 1024x768 is input, it is converted to 1024x768 by the Scaler chip inside the projector.

When the real resolution (1024x768) of the projector and the PC output resolution are the same, the screen quality is optimal.

> AV Timing (D-Sub)

| Format | | Resolution | Scan |
|-----------------------|-------|--------------|-------------|
| BT.601 SMPTE 267M | 480i | 59.94Hz | Interlaced |
| BT.1358 SMPTE 293M | 480p | 59.94Hz | Progressive |
| BT.601 | 576i | 50Hz | Interlaced |
| BT.1358 | 576p | 50Hz | Progressive |
| SMPTF 296M | 720p | 59.94Hz/60Hz | Progressive |
| SIVIPTE 290IVI | 720p | 50Hz | Progressive |
| BT.709 SMPTE 274M | 1080i | 59.94Hz/60Hz | Interlaced |
| B1.709 SIVIFTE 274IVI | 1080i | 50Hz | Interlaced |

> AV Timing (VIDEO/S-VIDEO)

NTSC, NTSC 4.43, PAL, PAL60, PAL-N, PAL-M, SECAM

SP-L250 SP-L220 SP-L200



| Basic Settings | Connecting the Power | Connecting an External Device |



Installing the Projector

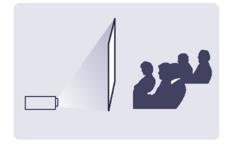
Install the projector so that the beam from the projector is perpendicular to the screen.



- If the screen is not vertically installed, the picture on the screen may not be a rectangle.
- > Do not install the screen in bright surroundings. If the screen is too bright, the picture on the screen will not be displayed clearly.
- >> When installing the screen in bright surroundings, use curtains.
- > You can install the projector in the following locations: Front-Floor / Front-Ceiling / Rear-Floor / Rear-Ceiling. (To view the installation position settings)
- 11 To view the picture when installing the projector behind the screen,

Install a semi-transparent screen.

Select Menu > Setup > Install > Rear-Floor



12 To view the picture when installing the projector in the front of the screen,

Install the projector at the side where you are watching the

Select Menu > Setup > Install > Front-Floor



Zoom and Focus Adjustment



 Zoom Knob 2 Focus Ring

- You can adjust the size of image within zoom range by manipulating the Zoom Knob.
- Focus the picture on the screen using the Focus Ring.



If your product is installed at a location out of the specified projection distance (refer to Screen Size and Projection Distance), the focus cannot be adjusted correctly.

Leveling with Adjustable Feet



For level placing of the projector, adjust the Adjustable Feet of the projector.



- The projector can be adjusted to a height of up to 30 mm (about 12°) from the reference point.
- Depending on the position of the projector, Keystone distortion of the image may appear.
 If a keystone occurs, adjust it using the V-Keystone function.

Screen Size and Projection Distance

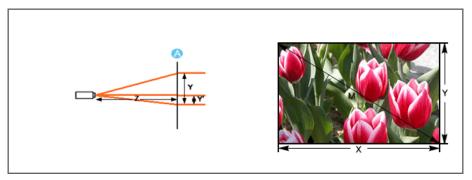
Install the projector on a flat, even surface and level the projector using the adjustable feet to realize optimal picture quality. If images are not clear, adjust them using the Zoom Knob or Focus Ring, or move the projector forward and backward.

| Screen size | Horizental | Vertical | Max | Min | Offset |
|-------------|------------|----------|--------|--------|---------|
| (M:inch) | (X:mm) | (Y:mm) | (Z:mm) | (Z:mm) | (Y':mm) |
| 40 | 812.8 | 609.6 | 1376 | 1140 | 102 |
| 50 | 1016.0 | 762.0 | 1727 | 1433 | 127 |
| 60 | 1219.2 | 914.4 | 2078 | 1726 | 152 |
| 70 | 1422.4 | 1066.8 | 2430 | 2020 | 178 |
| 80 | 1625.6 | 1219.2 | 2781 | 2313 | 203 |
| 90 | 1828.8 | 1371.6 | 3133 | 2606 | 229 |
| 100 | 2032.0 | 1524.0 | 3484 | 2899 | 254 |
| 110 | 2235.2 | 1676.4 | 3835 | 3192 | 279 |
| 120 | 2438.4 | 1828.8 | 4187 | 3485 | 305 |
| 130 | 2641.6 | 1981.2 | 4538 | 3778 | 330 |
| 140 | 2844.8 | 2133.6 | 4889 | 4071 | 356 |
| 150 | 3048.0 | 2286.0 | 5241 | 4364 | 381 |
| 160 | 3251.2 | 2438.4 | 5592 | 4657 | 406 |
| 170 | 3454.4 | 2590.8 | 5944 | 4950 | 432 |
| 180 | 3657.6 | 2743.2 | 6295 | 5243 | 457 |
| 190 | 3860.8 | 2895.6 | 6646 | 5536 | 483 |
| 200 | 4064.0 | 3048.0 | 6998 | 5829 | 508 |
| 210 | 4267.2 | 3200.4 | 7349 | 6122 | 533 |
| 220 | 4470.4 | 3352.8 | 7701 | 6415 | 559 |
| 230 | 4673.6 | 3505.2 | 8052 | 6708 | 584 |
| 240 | 4876.8 | 3657.6 | 8403 | 7001 | 610 |
| 250 | 5080.0 | 3810.0 | 8755 | 7294 | 635 |
| 260 | 5283.2 | 3962.4 | 9106 | 7587 | 660 |

| 270 | 5486.4 | 4114.8 | 9457 | 7880 | 686 |
|-----|--------|--------|-------|------|-----|
| 280 | 5689.6 | 4267.2 | 9809 | 8173 | 711 |
| 290 | 5892.8 | 4419.6 | 10160 | 8466 | 737 |
| 300 | 6096.0 | 4572.0 | 10512 | 8759 | 762 |



This projector is designed to show images optimally on a 80 ~ 120 inch sized screen.



A. Screen



- > Z: Throw Distance
- Y': Distance from Lens Center to Image Bottom
- Setting up the PC Environment Check the following items before connecting your PC to your projector.

1

- 1. Click the right mouse button on the Windows desktop and click on [Properties].
 - <Display Properties> tab will appear.

- 2. Click on [Settings] tab and set the <Screen resolution> by referring to <Resolution> as described in the display mode table supported by this projector.
 - You do not have to change <Color quality> setup.
- 3. Press the [Advanced] button. Another property window will appear.

Cancel Display: Plug and Play Monitor on S3 VIRGE DX/GX 3 OK Cancel

Save As... Delete

4. Click on [Monitor] tab and set the <Screen refresh rate> by referring to <Vertical Frequency> as described in the Supported

Resolution/Size Modes table.



 Click the [OK] button to close the window, and click the [OK] button of the <Display Properties> window to close the window

The computer may restart automatically.

6. Shut down the PC and connect to the projector.



- Process might vary depending on your type of computer or Windows versions. (For example, [Properties] appears instead of [Properties (R)] as shown in 1.)
- > This unit appliance supports up to 24 bits per pixel in Color quality when it is used as a PC monitor.
- > Projected images may differ from the monitor depending on monitor manufacturer or Windows versions.
- When connecting the projector to a PC, check that PC setup complies to display settings supported by this projector. If not, there may be signal problems.

 $| \ \, \textbf{Basic Settings} \ \, | \ \, \textbf{Connecting the Power} \ \, | \ \, \textbf{Connecting an External Device} \ \, |$





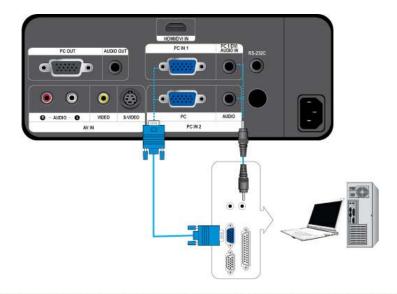
1. Rear of Projector

Plug the power cord into the power terminal on the rear side of the projector.

| Basic Settings | Connecting the Power | Connecting an External Device |

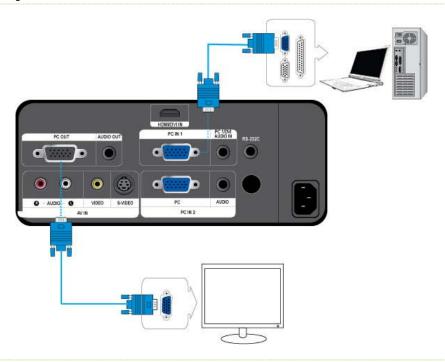


Onnecting a PC using a D-Sub cable



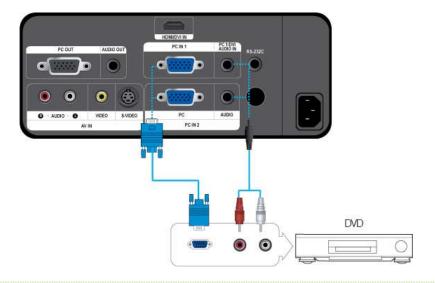
- > Check that your PC and projector are turned off.
- Connect the [PC IN (1 or 2) PC] terminal at the back of the projector to the D-Sub terminal of your PC using a D-Sub cable.
 - For the supported input signals, refer to "PC Timing".
- Connect the [PC IN (1 or 2) AUDIO] terminal at the back of the projector to the Audio out terminal of your PC using an audio cable (Not supplied).

Connecting an External Monitor



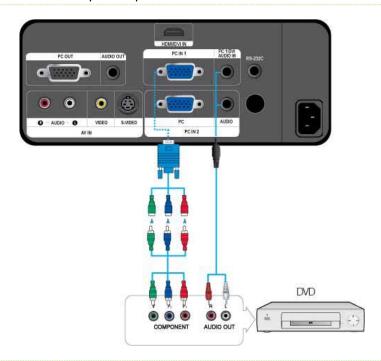
- >> You can view an image on both your projector and a separate monitor at the same time.
- > Check that your PC and projector are turned off.
- Connect the [PC IN (1) PC] terminal at the back of the projector to the D-Sub terminal of your PC using a D-Sub cable.
- Connect the [PC OUT] terminal of the projector to the D-Sub terminal of a monitor using a D-Sub cable.
 - When connecting a monitor using the [PC OUT] function, make sure to connect your PC to the [PC IN (1) PC] terminal.
 - The monitor output which is connected to the [PC OUT] terminal will be normal even if you see a blank screen on your projector.
 - The [PC OUT] function also operates in standby mode.

Onnecting an AV device using a D-Sub cable



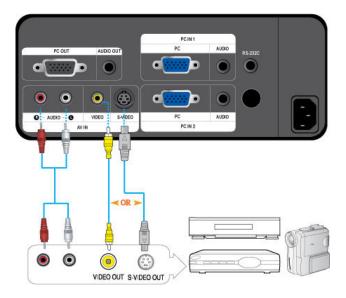
- > First, check that the AV device and your projector are turned off.
- Connect the [PC IN (1 or 2) PC] terminal at the back of the projector to the D-Sub terminal of your AV device using a D-Sub cable.
 - For supported input signals, refer to the "AV Timing (D-Sub)".
- Connect the [PC IN (1 or 2) AUDIO] terminal at the back of the projector to the Audio out terminal of your AV device using an audio cable (Not supplied).

Connecting an AV device with component output



- > First, check that the AV device and your projector are turned off.
- Connect the [PC IN (1 or 2) PC] terminal at the back of the projector to the Component terminal of your AV device using a D-Sub/Component cable (Not supplied).
 - For supported input signals, refer to the "AV Timing(D-Sub)".
- Connect the [PC IN (1 or 2) AUDIO] terminal at the back of the projector and the Audio out terminal of your AV device using an audio cable (Not supplied).

Connecting using a Video/S-Video cable



- > First, check that the AV device and your projector are turned off.
- Connect the [VIDEO] or [S-VIDEO] terminal and the AV device using a Video cable (Not supplied) or S-Video cable (Not supplied).
 - For supported input signals, refer to the "AV Timing(VIDEO/S-VIDEO)".
- Connect the [AV IN R-AUDIO-L] terminal at the back of the projector and the Audio out terminal of your AV device using an audio cable (Not supplied).

Onnecting an External Speaker



- > You can hear sound through an external speaker instead of the internal speaker embedded in the projector.
- Prepare an audio cable (Not supplied) suitable for your external speaker.
- Connect the [AUDIO OUT] terminal of the projector to the external speaker using an audio cable.
 - When using an external speaker, the internal speaker does not operate, but you can adjust the volume of the external speaker using the Volume button of the projector (or remote control).
 - The [AUDIO OUT] terminal can output all audio signals.



Using









Troubleshooting

6 Other Information

| Basic Functions | Input | Picture | Setup | Option |



Turning on the projector

- Check that the lens cover is opened completely.
- > Turn the power on.
- > Check that the STAND BY LED indicator is turned on.
- Press the Power button. While the power is turned on (with the Power button on the remote control or at the top of the projector), the blue LAMP LED indicator blinks.

When the power is turned on completely, the LAMP LED indicator remains blue.



If the projector is turned on when the lamp is not sufficiently cooled, a temporary loud noise may be heard because the fan speed increases to cool the lamp.

Turning off the projector

- Press the Power button. (With the remote control or on top of the projector) OK or Cancel is displayed. Select OK using the arrow keys (With the remote control or on top of the projector).
 Press the Enter button or press the Power button again.
- The STAND BY LED indicator is turned off and the LAMP LED indicator blinks.
 The fan speed increases to cool the lamp quickly. When the operation is finished,
 the LAMP LED indicator is turned off and the STAND BY LED indicator is turned on and remains blue.
- Remove the power cord.
- Close the lens cover.

Selecting an input source

- Press the SOURCE button (on the remote control or at the top of the projector).
- AV and S-Video modes can only be selected when an external device is connected. PC1 and PC2 modes can be selected regardless of an external device being connected.

| Basic Functions | Input | Picture | Setup | Option |







* Click the Play(3)/Stop(3) button in the table below to view the video file.

| Screen Adjustment | | Description | Play/Stop |
|----------------------|--------------------------------|----------------------------------|-----------|
| Source List | You can select a device connec | ted to the projector to display. | |
| | 1) PC 1 | 3) AV | |
| | 2) PC 2 | 4) S-Video | |
| Edit Name | You can edit the names of devi | ces connected to the projector. | |
| | 4) 1/05 | 7) DVD D | |
| | 1) VCR | 7) DVD Receiver | |
| | 2) DVD | 8) Game | |
| | 3) Cable STB | 9) Camcorder | |
| | 4) HD STB | 10) DVD Combo | |
| | 5) Satellite STB | 11) PC | |
| | 6) AV Receiver | | |

| Basic Functions | Input | Picture | Setup | Option |





* Click the Play(3)/Stop(3) button in the table below to view the video file.

| Screen Adjustment | Description | Play/Stop |
|----------------------|--|-----------|
| Mode | Select a screen state which is customized to your projector or change the screen mode as required. | |
| | 1) Mode | |
| | - Standard | |
| | This picture mode is the most general mode and works well in most situations. | |
| | - Presentation | |
| | This mode is suitable for presentations. | |
| | - Text | |
| | This mode is suitable for text work. | |
| | - Movie | Mode |
| | This mode is suitable for viewing a movie. | |
| | - Game | |
| | This picture mode is optimized for playing games. | |
| | ▶ The text in a still picture may be displayed unnaturally. | |
| | - User | |
| | This mode is a customized mode created using the Mode > Save function. | |
| | ▶ Presentation and Text modes are only enabled if the input signal is a PC | |

| | Timing signal | | |
|---------------------------------------|--|--|----------------------|
| | Timing signal. | | |
| | 2) Contrast: Used to adjust the contras3) Brightness: Used to adjust brightness | t between the object and the background. | |
| | 4) Sharpness: Used to adjust the sharp | • | |
| | ▶ When the input signal is PC Time | ning, the Sharpness cannot be | Contrast |
| | adjusted. | | Brightness |
| | 5) Color: Used to adjust color lighter or | darker. ning, the Color cannot be adjusted. | Sharpness |
| | | or of objects using Green or Red enhancement. | Color |
| | ► When the input signal is PC Tim | | Tint |
| | [S-Video] and [AV] modes, the co | olor cannot be adjusted. | |
| | 7) Color Temperature : You can select preferences. | the color temperature according to your | |
| | preferences. | | |
| | - Factory defaults: 5500K, 6500K, 80 | 000K, 9300K | Color |
| | - You can select the color temperatu | re for the items below according to your | Temperature |
| | preferences. | | |
| | | ne color temperature of the White level. | R-Gain |
| | K-Onset, G-Onset, B-Onset : Adjus | sts the color temperature of the Black level. | G-Gain |
| | 1) Color Temperature | 5) R-Offset | B-Gain |
| | 2) R-Gain | 6) G-Offset | R-Offset G-Offset |
| | 3) G-Gain | 7) B-Offset | B-Offset |
| | 4) B-Gain | | |
| | 8) Gamma : Changes the brightness cha | racteristic for each color tone of an image. | |
| | | eater the contrast of the bright and dark parts; the | |
| | smaller (-) the value, the darker | · · | |
| | - Adjustable range: -3 to +3 | | Gamma |
| | | | |
| | 9) Save :You can save the status of a scrusing the Mode > User OSD. | reen you adjusted according to your preferences | Save |
| | 10) Reset : Restores the mode settings | to the factory defaults. | |
| | | | Reset |
| Size | You can select a screen size according to | • | Reset |
| Size | You can select a screen size according to ► When the input signal is PC Timing | the type of scene. | Reset |
| Size | | the type of scene. | Reset |
| Size | ► When the input signal is PC Timing | the type of scene. | Reset |
| Size | When the input signal is PC Timing1) Normal | the type of scene. | Reset |
| Size | ➤ When the input signal is PC Timing 1) Normal 2) Zoom1 | the type of scene. | Reset |
| | When the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 | the type of scene. , Zoom1/Zoom2 is not supported. | Reset |
| Position | When the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align | the type of scene. , Zoom1/Zoom2 is not supported. | Reset |
| Position | When the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality | Reset |
| Position Digital NR | Nhen the input signal is PC Timing Normal Normal Normal Soom2 Hissan Adjust the screen position if it is not align When a dotted line is displayed or the screicture by enabling Noise Reduction. When the input signal is PC Timing You can select the signal black level according | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the | Reset |
| Position Digital NR | ► When the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align When a dotted line is displayed or the scr picture by enabling Noise Reduction. ► When the input signal is PC Timing You can select the signal black level accor input signal, the dark parts may not be sh | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], | Reset |
| Position Digital NR | Nhen the input signal is PC Timing Normal Normal | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], des. | Reset |
| Position Digital NR | Power the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align When a dotted line is displayed or the screicture by enabling Noise Reduction. ► When the input signal is PC Timing You can select the signal black level according input signal, the dark parts may not be steen the signal black level according input signal, the dark parts may not be steen the signal black level according input signal, the dark parts may not be steen the signal black level can only be set for its S-Video] and AV Timing(D-Sub) model. For [AV],[S-Video] and the 480i and | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], des. | Reset |
| Position Digital NR | Nhen the input signal is PC Timing Normal Normal | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], des. d 576i signals of AV Timing(D-Sub). | Reset |
| Position Digital NR Black Level | Normal 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align When a dotted line is displayed or the scr picture by enabling Noise Reduction. Normal You can select the signal black level accor input signal, the dark parts may not be st The Black level can only be set for it [S-Video] and AV Timing(D-Sub) mod For [AV],[S-Video] and the 480i and 1) 0 IRE : Sets the black level to 0 IRE 2) 7.5 IRE : Sets the black level to 7.5 I | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], des. d 576i signals of AV Timing(D-Sub). | Reset |
| Position Digital NR Black Level | P When the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align When a dotted line is displayed or the scr picture by enabling Noise Reduction. ► When the input signal is PC Timing You can select the signal black level accor input signal, the dark parts may not be sf ► The Black level can only be set for it [S-Video] and AV Timing(D-Sub) mod - For [AV],[S-Video] and the 480i and 1) 0 IRE: Sets the black level to 0 IRE 2) 7.5 IRE: Sets the black level to 7.5 I Using this function, you can cut the edge images appear on the edge of the picture. | the type of scene. , Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality , Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], des. d 576i signals of AV Timing(D-Sub). RE of the picture when unnecessary information, | Reset |
| Position Digital NR Black Level | Nhen the input signal is PC Timing 1) Normal 2) Zoom1 3) Zoom2 4) 16:9 Adjust the screen position if it is not align When a dotted line is displayed or the scr picture by enabling Noise Reduction. ► When the input signal is PC Timing You can select the signal black level accor input signal, the dark parts may not be st ► The Black level can only be set for to [S-Video] and AV Timing(D-Sub) mod - For [AV],[S-Video] and the 480i and 1) 0 IRE: Sets the black level to 0 IRE 2) 7.5 IRE: Sets the black level to 7.5 I Using this function, you can cut the edge | the type of scene. "Zoom1/Zoom2 is not supported. ed. een shakes, you can view a better visual quality "Digital NR does not operate. rding to the input signal. If it is unsuitable for the nown clearly or may be dim. the 480i and 576i RGB signals of [AV], des. d 576i signals of AV Timing(D-Sub). RE of the picture when unnecessary information, "-Video] modes. | Reset |

| | also be shown, though you can view more of the area. In this case, turn Overscan on. | |
|-----------|--|-----------------------------------|
| Film Mode | Using this function, you can set the display mode so it is optimized for playing movies. 1) Off 2) On | 99 |
| | ► Film Mode can only be supported for the [AV], [S-Video], 480i, and 576i of AV Timing(D-Sub) signals. | |
| PC | Eliminates or reduces noise that causes unstable screen quality, such as screen shaking. If the noise is not removed using Fine Adjustment, adjust the frequency to the maximum and then perform Fine Adjustment again. It is only enabled for the PC Timing input of the D-Sub terminal. Refer to PC Timing. 1) Auto Adjustment: Used to adjust frequency and phase of PC screen automatically. 2) Coarse: Used to adjust frequency when vertical lines appear on PC screen. 3) Fine: Used to fine tune the PC screen. 4) Reset: Using this function, you can reset the PC menu settings to the factory default settings. | Auto Adjustment Coarse Fine Reset |
| Zoom | Enlarges the PC screen to 2X, 4X, or 8X. ► This can only be adjusted when the input signal is PC Timing. | |

| Basic Functions | Input | Picture | Setup | Option |







* Click the Play()/Stop() button in the table below to view the video file.

| Screen Adjustment | Description | Play/Stop |
|----------------------|--|---------------|
| Install | To tailor the picture to the installation location, you can invert the projected images vertically/horizontally. | |
| | 1) Front-Floor: Normal Image 2) Front-Ceiling: Horizontal/Vertical Reversed Image 3) Rear-Floor: Horizontally Reversed Image 4) Rear-Ceiling: Vertically Reversed Image | |
| Lamp Mode | Used to set the image brightness by adjusting the amount of light generated by the lamp. 1) Eco: This mode is optimized for small screens smaller than 100 inches. This mode decreases the lamp brightness and power consumption in order to extend the lamp lifetime and reduce noise and power consumption. 2) Bright: This mode maximizes the lamp brightness when the ambient illumination is | Eco Bright |

bright. As the brightness of the lamp increases, the lamp lifetime can be reduced and the noise and power consumption may increase.

V-Keystone

If video scenes are distorted or tilted, you can compensate for this using the vertical Keystone function.

The sound output of your projector is temporarily stopped while the keystone is being changed.

The keystone is not compensated for in the On Screen Display (OSD).

Background

You can set the Background that is displayed when there is no signal from the external device connected to the projector. If a signal is received, the Background you set disappears and a normal screen is displayed.



1) Logo

- 2) Blue
- 3) Black

Test Pattern

Generated by the projector itself. Utilized as standard to optimize the installation of the projector.



1) Crosshatch: You can check whether the picture is distorted or not.

2) Screen Size: You can refer to picture format sizes such as 1.33:1 or 1.78:1.



Video Type

Allows you to set the type of input signal when your projector fails to determine this automatically in PC mode.

- In [PC] mode, this is only enabled if the input signal is AV Timing(D-Sub). However, for a separate H/V sync., this is only enabled for 1280 x 720p 59.94 Hz/60 Hz signals.
 - 1) Auto
 - 2) RGB(PC)
 - 3) RGB(AV)
 - 4) YPbPr(AV)

| | Usage | Color, Sharpness,Tint | PC menu and zoom |
|-----------|--|--------------------------|------------------|
| RGB(PC) | When connecting the RGB output of a PC to the D-Sub terminal | Disable | Enable |
| RGB(AV) | When connecting the RGB output of an AV device (STB, DVD, etc) to the D-Sub terminal | Enable | Enable |
| YPbPr(AV) | When connecting the YPbPr output of an AV device (STB, DVD, etc) to the D-Sub terminal | Enable | Disable |
| Auto | Auto settings | - | - |





Reset Using this function, you can reset various settings to the factory default settings.

1) Factory Default : Changes the settings to the factory defaults.

2) Reset Filter Time : Resets the filter time.



Reset Filter Time

| Basic Functions | Input | Picture | Setup | Option |





* Click the $Play(\cite{3})/Stop(\cite{3})$ button in the table below to view the video file.

| Screen Adjustment | | Description | Play/Stop |
|----------------------|--|---|--------------|
| Language | You can select the Lang | guage used for the menu screen. | |
| | 1) English 2) Deutsch 3) Nederlands 4) Español 5) Français 6) Italiano | 7) Svenska 8) Português 9) Русский 10) ใหย 11) 中国语 12) 한국어 | |
| Menu Option | 1) Position | | |
| | You can move Menu | u Position up/down/left/right. | |
| | 2) Transparency | | Position |
| | You can set the trar - Low - Medium - High | nslucency of menu. | Transparency |
| | - Opaque | | Display |
| | 3) Display Time | alay timo of the monu | Time |
| | | olay time of the menu. 30 sec / 60 sec / 90 sec / 120 sec / Stay On | |
| Sound | Adjusts the right and let the projector. | eft audio balance and equalizer of the 3W stereo speaker embedded in | |
| | 1) Balance | 4) 1kHz | |
| | 2) 100Hz | 5) 3kHz | |
| | 3) 300Hz | 6) 10kHz | |
| Filter Check Time | Sets the check period f | or the filter. (Unit: hour) | |
| | 1) Off | | |
| | 2) 100 | | |
| | 3) 200 | | |
| | 4) 400 | | |
| | message is disp | ge time is larger than the filter check period, the filter check layed for a minute whenever the projector is turned on. ssage: "Check the filter, and if necessary, clean or replace it.". | |
| Auto Power On | | d to the projector, it is turned on automatically without pressing the | |
| | 4) 055 | | |
| | 1) Off | | |
| | 2) On | | |

Sleep Timer

If there is no input signal for the specified time, the projector is turned off automatically.

(But, for the specified time, there must be no button input from the remote control or the top of the projector)

1) Off

2) 10 min

3) 20 min

4) 30 min

Information

You can check external source signals, picture setup, PC picture adjustment and lamp use time.

SP-L250 SP-L220 SP-L200

















| Before Contacting Service Personnel |



Before Contacting Service Personnel

Installation and Connection

| Symptoms | Troubleshooting |
|----------|-----------------|
| | |

No Power.

I want to install my projector on the ceiling.

External Source can not be selected.

• Check the power cable connections.

• The ceiling installation support is sold separately. Contact your local product distributor.

• Check if the menu is displayed in gray. A gray-colored menu is unavailable.

• Be sure that the connection cable(s) (video) is properly connected to the proper port. If the device is not connected properly, it can not be selected.

Menu and Remote Control

| Symptoms | Troubleshooting | |
|-------------------------------|---|--|
| Remote control does not work. | Check whether your remote control is at a right angle and at the correct distance. | |
| | Remove any obstacles between your remote control and the product. | |
| | Direct lighting of 3-way light bulbs or other lighting device on the remote sensor of | |
| | the projector may affect the sensitivity and cause the remote control to malfunction | |
| | Check if the remote control battery is empty. | |
| | Check whether the LED indicator on the top of the projector is turned on. | |

Screen is black and white or abnormal

color/ screen is too dark or bright.

I cannot select a menu.

| Screen and External Source | |
|---|---|
| Symptoms | Troubleshooting |
| Cannot see picture images. | Be sure that the power cord of the projector is connected. Be sure that the proper input source is selected. Check that the connectors are properly connected to the ports at the back of the projector. Check the Remote Control batteries. Be sure that the <color>, <brightness> settings are not at their lower limit.</brightness></color> |
| Poor color. | Adjust the <tint> and <contrast>.</contrast></tint> |
| Images are not clear. | Adjust the focus.Check that the projection distance is either too far or too near to the screen. |
| Strange noise. | If the strange sound continues, contact our service center. |
| The operating LED is lit up. | Refer to Corrective Actions According to LED Indications. |
| Lines appear on the screen. | Because noise may occur when using your PC, adjust the frequency of the screen |
| No external device screen is displayed. | Check the operating status for the external device and check whether the adjustment items, such as the Brightness and the Contrast have been changed correctly in the <mode> command screen of the Projector menu.</mode> |
| Only blue screen appears. | Be sure to properly connect the external devices. Check the connection cables again. |

 $\bullet\,$ As mentioned above, check the adjustment items such as the Brightness, Contrast

• If you want to restore various settings to their factory defaults, run <Factory

SP-L250 SP-L220 SP-L200



















| Care and Maintenance | Contact SAMSUNG WORLDWIDE | Authority |

Care and Maintenance

To clean the exterior and lens of the projector

Clean the projector using a soft, dry cloth.

- Do not clean the projector with flammable substances such as benzene, thinners or a wet cloth, as these may cause problems.
- Do not touch the projector with a nail or any other sharp objects, as this may scratch the surface.



To clean the interior of the projector

For cleaning the interior of the projector, ask your Service Center or a distributor.

Contact your distributor or a Service Center if dust or other substances are inside the projector.



Lamp Replacement

Cautions on Lamp Replacement

- The projector lamp is an expendable item. For best operating performance, replace the lamp according to the usage time. You can view the lamp usage time in the Information Display (INFO button).
- - Lamp Model Name: NSHA230SS
 - Lamp Manufacturer : Ushio
 - For inquiries on lamp purchase, please refer to 'Contact SAMSUNG WORLDWIDE'.
- Check that the power cord is unplugged before replacing the lamp.
- Since the lamp is a high temperature and high voltage product, wait at least one hour from the time that the power cord is disconnected before replacing it.
- Do not leave the old lamp near inflammables or in reach of children. There is a danger of burn or injury.
- > Remove dirts or foreign materials around or inside the lamp unit using a proper vacuum device.
- When handling the lamp, avoid touching any part of it except for the handles. If you handle the lamp incorrectly, it may affect the screen quality and shorten its lifetime.
- >> Before you turn the projector over to change the lamp, cover the projector with a soft cloth on a flat surface.
- > The projector has been designed so that the projector does not work if the lamp cover is not completely assembled

after a lamp replacement. If the projector does not work properly, please check the operating status of the indicator LED.

Contains Mercury, Dispose According to Local, State or Federal Laws

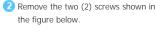
Lamp Replacement Procedure



Since the lamp is a high temperature and high voltage product, wait at least one hour from the time that the power cord is disconnected before replacing it.

The lamp is located on the left side of the projector (when looking from the front).

 Remove the screw shown in the figure below and than open the cover



2 Remove the two (2) screws shown in 3 Hold and pull the lamp handle out of the projector, as shown in the figure below.









Assembling a new lamp is in the reverse order of the disassembly.

Replacing and Cleaning the Filter

Precautions when replacing the projector filter

- > The filter is located at the bottom of the projector.
- > Turn off the power of the projector, and then disconnect the power cord after the heat of the projector is cooled sufficiently.
 - Otherwise, its parts may be damaged due to internal heat.
- When replacing the filter, dust may occur.
- > For inquiries on filter purchase, please refer to 'Contact SAMSUNG WORLDWIDE'.

The sequence for replacing or cleaning the filter of the projector.

- and then disconnect the power cord after the heat of the projector has cooled sufficiently.
- 1 Turn off the power of the projector, 2 Place the product so that its bottom looks upward, then push and remove the filter cover in the direction of the arrow.
 - * When placing the product with the bottom upwards, make sure to place a soft cloth on the floor to prevent scratches







Replace or clean the filter.

- > When cleaning the filter, use a small vacuum cleaner for computers and small electronics products, or wash it under running water.
- > When washing the filter under running water, make sure to dry it completely. The moisture may cause the filter to

corrode.

- $\$ If dust cannot be separated from the filter or the filter is torn, it must be replaced.
- Make sure to select the Reset Filter Time option after replacing or cleaning the filter of the projector

Ventilating openings

The location of the ventilation openings

> The ventilation openings are located on the right and left sides and at the bottom of the projector.







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