

SDC-15 1080p D-ILA 3D Front Projector 2012 Addendum

2012 NEW FEATURES ADDENDUM



WOLF
CINEMA

SDC-15 1080p D-ILA 3D Front Projector 2012 Addendum

Preface

ABOUT THIS MANUAL ADDENDUM

This 2012 Manual Addendum is designed for use with the Wolf Cinema SDC-15 Home Cinema Projector. This document is intended to accompany and augment the original User's Manual for this product.

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information and specifications in this document are subject to change without notice.

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TRADEMARKS

All trademarks and registered trademarks are the property of their respective owners.



The lightning flash with arrow head within an equilateral triangle is intended to alert the user to the presence of “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.



WARNING! To meet FCC requirements, a shielded power cord is recommended in order to prevent interference. It is essential that only the supplied power cord is to be used. Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not approved by the party responsible for compliance could void your authority to operate the equipment.



WARNING! High-brightness light source. Do not stare into the beam of light, or view directly. Be especially careful and ensure that children do not stare directly into the beam of light.



WARNING! To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.



CAUTION! For minimal servicing and to maintain high image quality, we recommend that you use the projector in an environment that is smoke and dust free. When used in areas where there is a lot of smoke or dust, the filter and lens should be cleaned often to lengthen the service life of the projector.



WARNING! IC chips or other technologies in the product include confidential and/or trade secret property belonging to either Wolf Cinema or the Victor Company of Japan (JVC). Therefore you may not copy, modify, adapt, translate, distribute, reverse engineer, reverse assemble or decompile the contents thereof.



WARNING! The ventilation slots and objects next to them may get extremely hot during operation. Do not touch these areas until they have sufficiently cooled down.



DISPOSAL Do not use household or municipal waste collection services for disposal of electrical and electronic equipment. EU countries require the use of separate recycling collection services.

CAUTION – Review all important safeguards, operating and installation instructions as provided in the accompanying “WOLF CINEMA USER’S GUIDE” prior to using this product.

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2012 New Features

Thank you for purchasing the Wolf Cinema SDC-15 – a next-generation stereoscopic (3D) home cinema projector.

Starting in January, 2012 the SDC-15 projector will incorporate the following new features and upgrades, which are described in further detail in this User's Manual Addendum:

- **V4K™ technology** – a unique 4K imaging process that converts standard HD sources into 3840 x 2160 on-screen resolution
- **2D->3D adaptive imaging** – new video processing algorithms that can render, in real time, 3D imaging from 2D sources
- **Adjustable 3D parallax and crosstalk cancellation** – provides for improved stereoscopic [3D] imaging, reduced “ghosting” artifacts and results in a more natural 3D image
- **VariScope™ lens memories** – three primary optics presets so that 1.78:1, 1.85:1 and 2.35:1 aspect ratios can be instantly recalled without the need for an external anamorphic lens. [Full anamorphic lens support is also included]
- **Advanced multi-zone pixel convergence** – 1/16th pixel, 121 zone adjustment.
- **Advanced screen surface compensation driver** – 255 memories.

Please review this document to discover the details regarding these important feature enhancements, and contact your local Wolf Cinema dealer for further information [or contact Wolf Cinema directly at 1.510.843.4500].

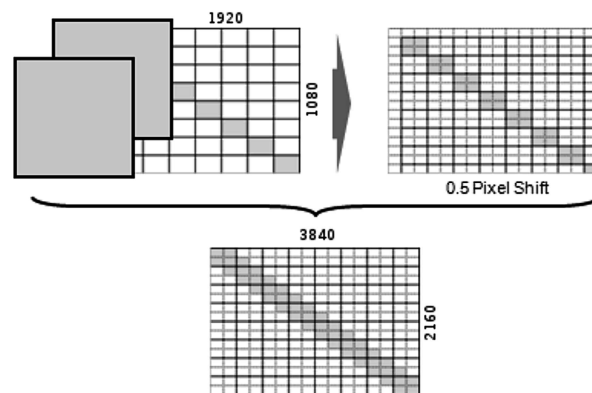
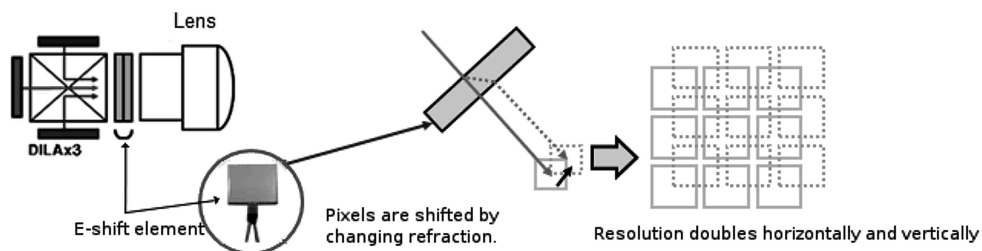
We hope you enjoy your Wolf Cinema home theater experience.

V4K™ Enhanced Resolution [3840 x 2160]

Wolf Cinema's V4K™ Technology

Originally developed by Japan's NHK Engineering and the Victor Company of Japan [JVC] and also called “e-shift” in other devices, this unique technology implementation by Wolf Cinema delivers an HD image with **4 times the pixel density** of standard 1920 x 1080 sources.

The original 1080p signal is first processed with an advanced imaging algorithm to improve edge transitions, eliminate aliasing and stair-stepping, and increase contrast within each video frame. Each frame is then temporally separated into two sub-frames [at 1920 x 1080 pixels each] and projected through the D-ILA engine and the V4K™ processing panel. This panel utilizes a property of liquid crystals called bi-refringence and can rapidly switch between straight light and refracted light by 0.5 pixel, shifted both vertically and horizontally. New “sub pixels” are thus generated based on this process and a true 3840 x 2160 video frame is created. Amazingly this process has no moving parts and results in a smooth, film-like image with minimal visible pixel structure.



To see the benefits of this remarkable V4K light engine, you can turn the processor on and off via the following remote control commands: Press the [OK] key, then in sequence [RIGHT] / [LEFT] / [RIGHT] / [LEFT]. A small window will appear in the upper right hand corner of the screen, indicating the V4K processor is ON. Simply depress the [RIGHT] key to turn the V4K processor to the OFF mode. Depress the [RIGHT] key again to turn it back on. Insure that you have the V4K engine turned ON, then select the [BACK] or [MENU] button to end this demonstration.

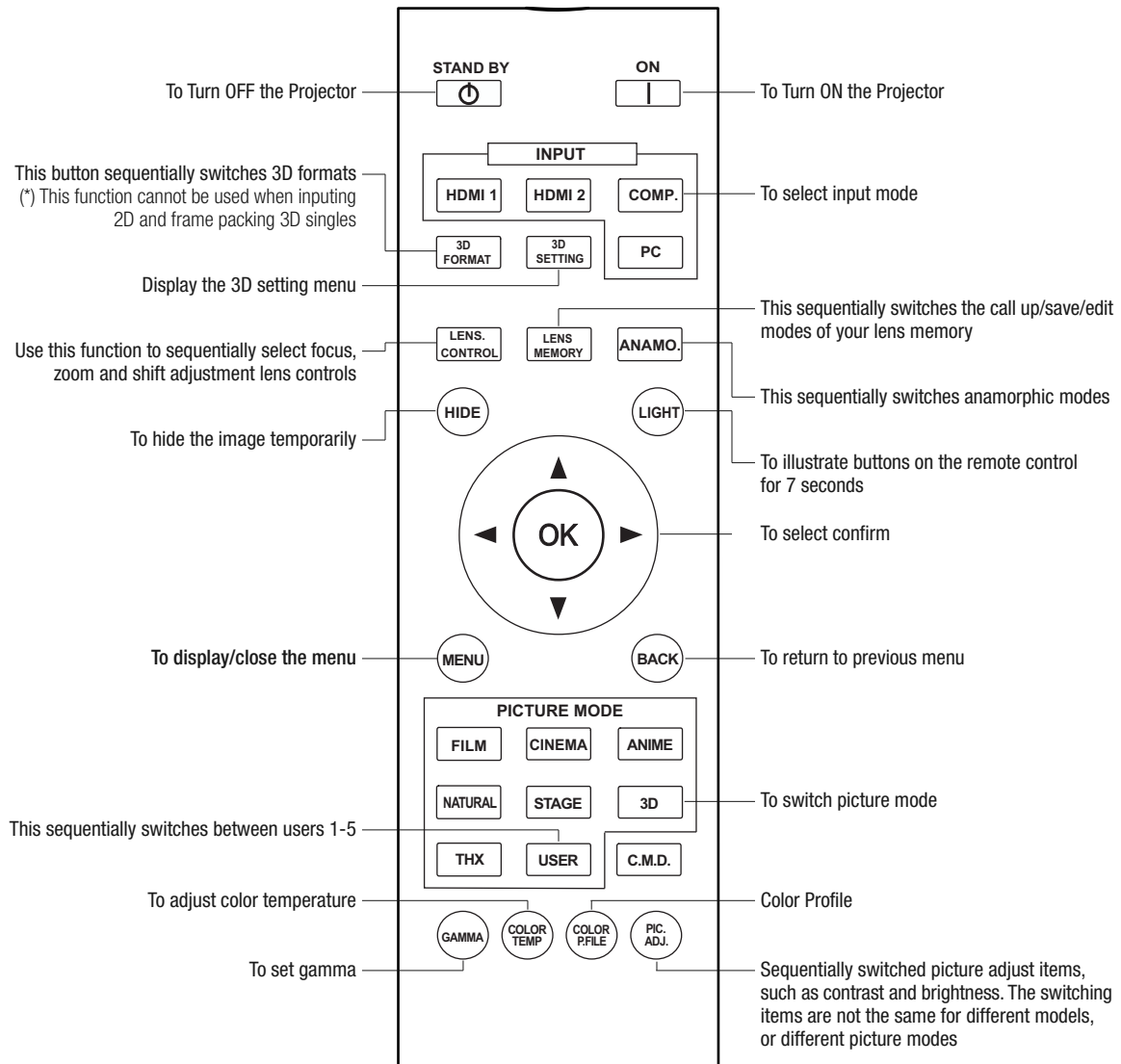
Note: This V4K demonstration feature is only possible when watching 2D content.

Images and technology descriptions courtesy of the Victor Company of Japan [JVC]

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Remote Control

Your SDC-15 projector remote control has been modified to incorporate the following features:



3D Format and Settings

For additional information about 3D viewing refer to page 54 and pages 59-61 of the SDC-15 User's Manual.

3D Format This control selects the 3D input signal format. Use the [LEFT] and [RIGHT] keys to configure the desired settings. Press the [OK] key to display the available settings list, then use the [UP]/[DOWN] keys to make your selection. The [BACK] key returns you to the previous screen.

(*) Some signals may not be embedded with 3D information, thus the image projected may revert to 2D. Reconfigure such selections manually.

(*) It is recommended to read "On 3D" (reference pages: 59-61) of the User's Manual before watching 3D video images.

Settings: Auto, Side by Side, Top & Bottom, 2D

Auto 3D formats are determined automatically.

Side by Side Select this if the 3D input signal is the side by side method.

Top and Bottom Select this if the 3D signal is the top and bottom method.

2D Projected as a 2D signal.

2D/3D This feature converts current 2D images into a quasi-3D video image. This effect may not be visible with certain content.

On Select to convert 2D video images to 3D

Off Select to NOT convert 2D images into 3D

Parallax This function enables fine adjustment of any misalignment of the left and right 3D video images. Adjust these settings to your preference by using the [LEFT]/[RIGHT] keys. Press the [OK] key to display the adjustment window. The [BACK] key returns you to the previous screen.

(*) Cannot be adjusted when the "2D/3D" feature is ON.

Settings: -15~15

Crosstalk Cancel This reduces cross-talk within 3D image content. Adjust these settings to your preference by using the [LEFT]/[RIGHT] keys. Press the [OK] key to display the adjustment window. The [BACK] key returns you to the previous screen.

(*) May be adjusted during 3D playback but not when the "2D/3D" feature is ON.

White *Settings: -8~8*

Red *Settings: -8~8*

Green *Settings: -8~8*

Blue *Settings: -8~8*

Intensity This function adjust for image depth perception. Adjust these settings to your preference by using the [LEFT]/[RIGHT] keys. Press the [OK] key to display the adjustment window. The [BACK] key returns you to the previous screen.

(*) May be adjusted when the "2D/3D" feature is ON.

Settings: 1~5

Sub Title Adjust Select this to automatically identify subtitles and set 3D conversion to On or OFF. Adjust settings to your preference.

(*) May be adjusted when the "2D/3D" feature is ON.

(*) There may be instances where automatic identification does not work, or certain images are identified as subtitles. Use the [LEFT]/[RIGHT] keys to configure your desired settings. Press the [OK] key to display the settings list, then use the [UP]/[DOWN] keys to make your selections. The [BACK] key returns you to the previous screen.

Settings: On, Off

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Setting the Screen Size

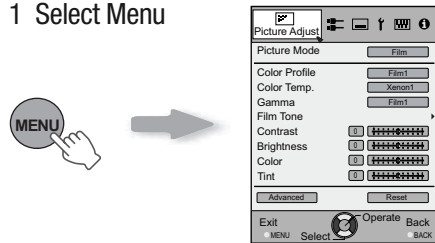
Image Sizing and Aspect Ratio [Refer also to page 36 of the SDC-15 User's Manual]

You can quickly change the screen size (aspect ratio) of the projected image, or mask image borders as desired if the surrounding edges of the image area are distorted.

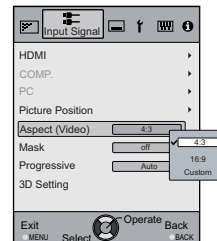
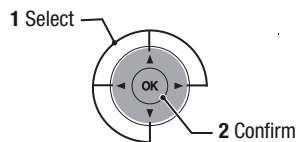
Setting the Screen Size (Aspect Ratio)

The projected image can be set to a desired screen size and aspect ratio.

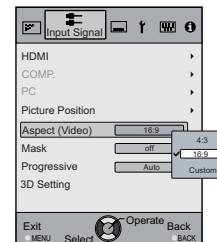
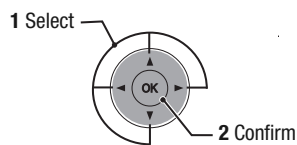
1 Select Menu



2 Select "Input Signal" → "Aspect [Video]"



3 Set a Aspect Value



Lens Control and Lens Memory

Lens Control

Use this remote button to adjust focus, zoom and shift. You can also turn the test pattern display ON and OFF and then save your lens position settings during adjustment. Use the UP/DOWN keys to select an item to adjust. Press the [BACK] key to return to the previous screen.

- Focus** This selection adjusts the image focus.
- Zoom** This selection adjusts the image overall size.
- Shift** This selection enables you to move the image UP/DOWN/LEFT or RIGHT, using the center rosette.

Image Pattern A test pattern for your use when adjusting focus, zoom and shift.

- On** During adjustment, the test pattern is displayed.
- Off** During adjustment, the external input signal is displayed [without the test pattern].

Lock This locks out or enables use of the lens controls.

- On** This effectively locks out the “LENS” functions on the remote control.
- Off** This enables the “LENS” functions on the remote control.

VariScope™ Lens Memory

Select This menu function [and via direct IR remote control button] recalls previously saved lens adjustment memories. This is used to toggle between the primary lens VariScope™ aspect ratio memories, i.e. 1.78:1, 1.85:1, 2.35:1 and so forth [as created by you or your custom installer].

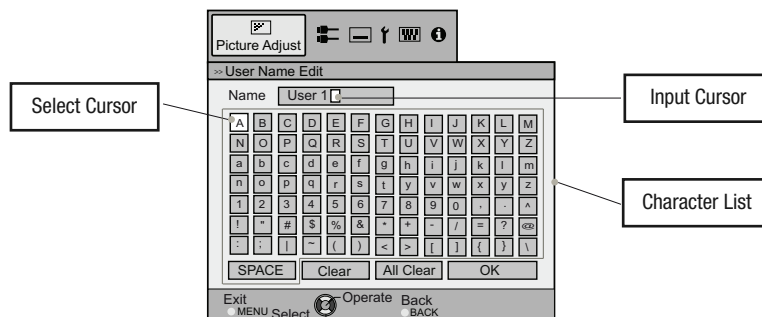
Save This saves all focus, zoom and shift settings work into one of three available memories [the user memories can be renamed].

Name Edit Edit and change the lens memory / aspect ratio names.
(* Number of characters is limited to 10, and may include capital and lower case letters, numbers and symbols.

Memory 1, 2 or 3 Select the user memory name you wish to edit.
Press the [OK] button on the main unit or the remote control to confirm and enter the edit mode.
(* A “-“ is displayed if the information is not saved.
(* Press the [BACK] key on the main unit or remote control at anytime to exit the edit mode. Doing this will delete your modifications.

Input Cursor This highlights the edit area. The cursor will move automatically as you enter characters.

Select Cursor Move the cursor using the [UP], [DOWN], [LEFT] and [RIGHT] keys on the projector or on the remote control. Select the letter to enter and press the [OK] button. Make the next letter, number or symbol selection and press [OK].



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- Clear** Use this to delete a character. Move the select cursor to the desired location and press the [OK] button. This will delete the character in the Name field.
- All Clear** Use this to delete ALL characters. Move the select cursor to the desired location and press the [OK] button. A delete confirmation message will appear.
- OK** Use this function to save the entered name information. Select [OK] and a saved confirmation message will appear.

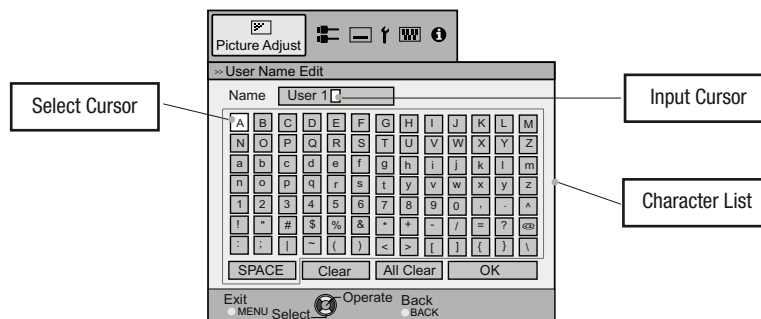
Picture Modes and User Name Edit

Picture Modes [Refer also to page 47 of the SDC-15 User's Manual]

Note: The major change from last year's remote control is that the USER 1 and USER 2 direct access buttons are now combined into the one USER button, which toggles through the FIVE available user setting memories: User 1 [WOLF FACTORY CALIBRATIONS], User 2, User 3, User 4 and User 5. Adjust and save your image quality as desired. Last adjustments are saved automatically. You may change the user names anytime using the USER NAME EDIT feature.

User Name Edit

You can rename any Picture Mode memory bank, as below. The total number of characters is limited to 10, and may include capital and lower case letters, numbers and symbols.



- User 1-5** Select the user memory name you wish to edit.
Press the [OK] button on the main unit or the remote control to confirm and enter the edit mode.
(* Press the [BACK] key on the main unit or remote control at anytime to exit the edit mode. Doing this will delete your modifications.)
- Input Cursor** This highlights the edit area. The cursor will move automatically as you enter characters.
- Select Cursor** Select and move the cursor using the [UP], [DOWN], [LEFT] and [RIGHT] keys on the projector or on the remote control. Select the letter to enter and press the [OK] button. Make the next letter, number or symbol selection and press [OK].
- Clear** Use this to delete a character. Move the select cursor to the desired location and press the [OK] button. This will delete the character in the Name field.
- All Clear** Use this to delete ALL characters. Move the select cursor to the desired location and press the [OK] button. A delete confirmation message will appear.
- OK** Use this function to save the entered name information. Select [OK] and a saved confirmation message will appear.

Pixel Alignment and Fine Adjustment

Use this section to adjust, fine tune any slight errors in the horizontal/vertical pixel alignment. It is found under the [INSTALLATION] menu tab.

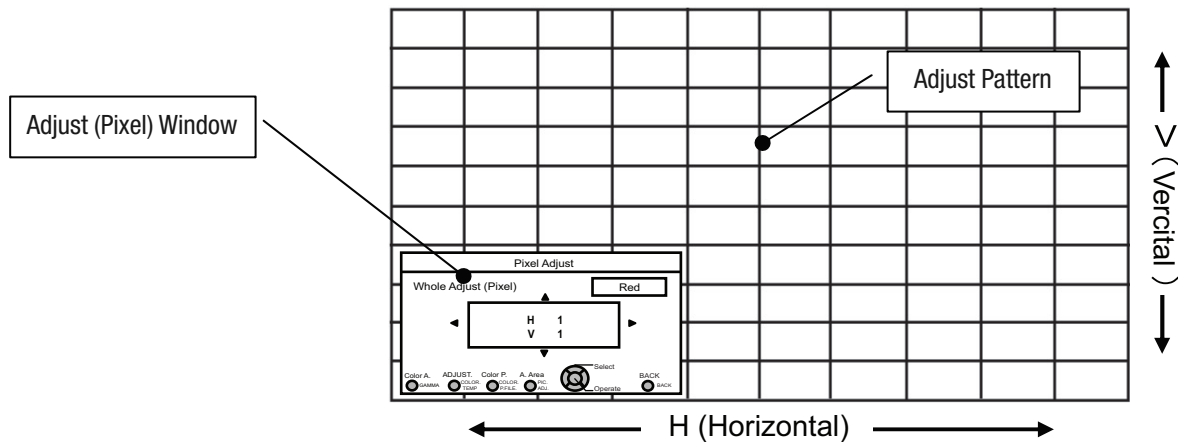
- Adjust** Select this function to turn the pixel alignment function ON and OFF.
Settings: Off, On
- Adjust Area** Use this function to set the overall pixel adjustment range.
Settings: Whole, Zone
Whole Selects the entire screen as the adjustment area.
Zone The screen is divided into 11 x 11 sections for fine adjustment
(* Note the size of the individual zones cannot be changed)
- Adjust Color** This function selects the color of the pixels you want to adjust.
Settings: Red, Blue
- Adjust Pattern Color** This function sets the pattern color.
Settings: White, Green + [Adjust Color]
White Sets the adjustment pattern to white.
Green + Sets the pattern to green and the color set using the [Adjust Color] items.
[Adjust Color]
- Adjust [Pixel]** Use this to move the color selected previously [Adjust Color], pixel by pixel in the vertical and horizontal directions.
(* This function is disabled with the [Adjust Area] is set to [Zone]
H (Horizontal) Settings: -2~2
V (Vertical) Settings: -2~2
- Adjust [Fine]** Use this to move the color selected previously [Adjust Color], pixel by pixel in the vertical and horizontal directions.
H (Horizontal) Settings: -31~31
V (Vertical) Settings: -31~31
- Reset** Returns all settings to the original default factory settings.

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Pixel Alignment and Fine Adjustment *Continued*

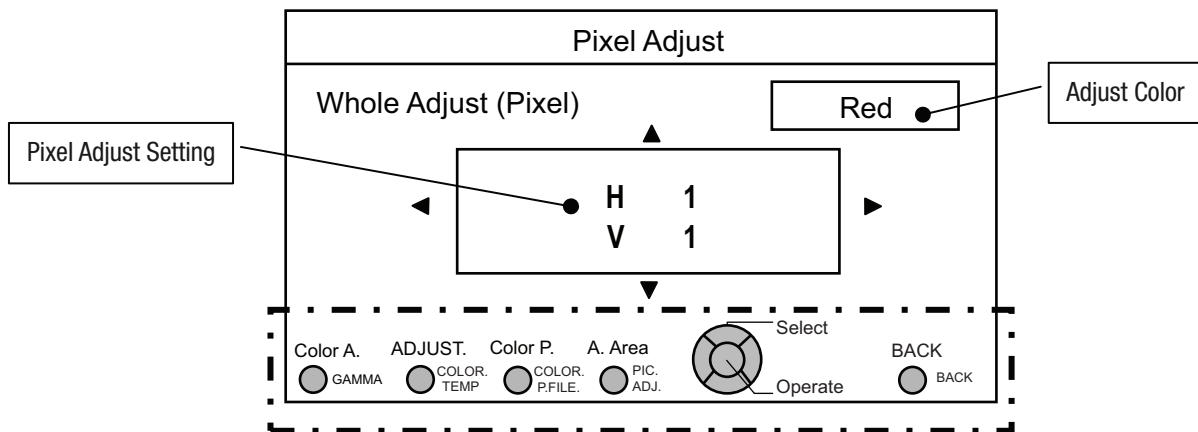
The following steps are useful when re-aligning the projector's visible pixel structure:

Enter the [PIXEL ADJUST] menu off the [INSTALLATION] tab. First set the [ADJUST AREA] to [WHOLE] and make your initial general wholesale adjustments to the image alignment. Select [ADJUST COLOR] and [ADJUST PATTERN]. Move the cursor to [Adjust (Pixel)] then press the [OK] button to display the pattern and adjustment window.



Press the [OK] button to enter the adjustment mode. Use the [UP], [DOWN], [LEFT] and [RIGHT] keys to align the pixels in both the horizontal and vertical directions. Select the [BACK] key to exit this adjustment mode.

Note: The operational window and the small remote control indicators, when you are in the pixel adjustment mode, certain remote control buttons serve as dual use/dual function buttons.



Pixel Alignment and Fine Adjustment *Continued*

REMOTE CONTROL DUAL USE BUTTONS

Use the [GAMMA] button to select [ADJUST COLOR], i.e. red or blue pixels

Use the [COLOR TEMP] button to change from the [ADJUST PIXEL] to the [ADJUST FINE] operational windows.

Use the [COLOR P.FILE] button to select [ADJUST PATTERN COLOR], i.e. white, green +.

Use the [PIC ADJUST] button to change from [ADJUST WHOLE AREA] to [ADJUST ZONE]

Use the [BACK] button to stop pixel alignment and exit this mode.

After making overall large scale window adjustments, proceed to fine-tuning. Press the [COLOR TEMP] button on the remote to change from [ADJUST (PIXEL)] to [ADJUST (FINE)] operational windows. Or from the main menu, set the [ADJUST AREA] to [ALL] and select [ADJUST COLOR] and [ADJUST PATTERN], then move the cursor to [ADJUST (FINE)] and press the [OK] button, which will display the pattern and fine tuning operational window. Adjust the horizontal/vertical pixel structure as required. Maximum deviation here is -31~31.

Next, set the [ADJUST AREA] to [ZONE] to make independent zone fine adjustments. There will be 11x11 smaller sections that can be independently adjusted. For quick access to this menu press the [PIC ADJUST] button on the remote.

Use the [UP], [DOWN], [LEFT] and [RIGHT] keys to move the cursor to the position you want to adjust. Press the [OK] button to enter the operation mode. Then use the [UP], [DOWN], [LEFT] and [RIGHT] keys to move and adjust the pixels within that zone, in the horizontal and vertical directions. Press the [BACK] key to return to the previous screen or exit the alignment window.

Notes on pixel alignment:

- (*) It is impossible to match all image pixels on the screen. Due to properties inherent to D-ILA technology, there will always be some gaps and overlapping structure. Color errors may also result from screen type used and on-axis/off-axis viewing positions.
- (*) In case the image is reversed, or upside-down, the horizontal and vertical directions are reversed.
- (*) Please perform adjustments on a clear, still image.
- (*) When fine tuning, the effects of adjustments may be limited and perhaps difficult to see on certain image types.

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Remote Control Code

Hexadecimal code is sent during communication.

Remote Control Button Name	Hexadecimal Code
▲	37 33 30 31
▼	37 33 30 32
BACK	37 33 30 33
ON	37 33 30 35
STAND BY	37 33 30 36
HIDE	37 33 31 44
LENS.AP.	37 33 32 30
MENU	37 33 32 45
OK	37 33 32 46
LENS CONTROL	37 33 33 30
▶	37 33 33 34
◀	37 33 33 36
PC	37 33 34 36
COMP.	37 33 34 44
ANIME	37 33 36 36
STAGE	37 33 36 37
CINEMA	37 33 36 38
FILM	37 33 36 39

Remote Control Button Name	Hexadecimal Code
NATURAL	37 33 36 41
USER	37 33 44 37
THX	37 33 36 46
HDMI 1	37 33 37 30
HDMI 2	37 33 37 31
PIC.ADJ.	37 33 37 32
INFO.	37 33 37 34
GAMMA	37 33 37 35
C.TEMP	37 33 37 36
3D	37 33 38 37
COLOR PROFILE	37 33 38 38
C.M.D	37 33 38 41
ANAMO	37 33 43 35
COLOR SPACE	37 33 43 44
LENS MEMORY	37 33 44 34
3D SETTING	37 33 44 35
3D FORMAT	37 33 44 46

Product Name	Wolf Cinema SDC-15, 3D D-ILA Home Cinema Projector
Model Name	SDC-15
Display Panel/Size	D-ILA device * 2 *3 0.7" (1920 pixels x 1080 pixels) x 3 (total no. of pixels: approx. 6.22 million)
Projection Lens	2.0 x power zoom lens (1.45:1 to 2.78:1) (zoom/focus: power)
VariScope™	Three user-adjustable lens presets - 1.78:1, 1.85:1 and 2.35:1 aspect ratios [NOTE: projector throw distance when utilizing the internal VariScope feature is appx. 1.45:1 to 2.1:1 x SW] [external VariScope FX™ anamorphic lens support also provided]
Light-source Lamp	220 W Ultra-high pressure mercury lamp [Part No.WC-LPU220]
Average Lifespan	2000-3000 hours (normal mode)
Screen Size	Approx. 60" to 200" (aspect ratio: 16:9)
Performance	1300 ANSI, ~100,000:1 CR performance
Resolution	1920 dots x 1080 dots
V4K™ Resolution	3840 dots x 2160 dots
2D->3D Algorithm	Real time conversion of standard 2D images into 3D
Projection Distance	Approx. 1.8m to 12m
Analog Video Input Format	480i, 480p, 576i, 576p, 720p/50 Hz, 720p/60 Hz, 1080i/50 Hz, 1080i/60 Hz
Digital Video Input Format	480i, 480p, 576i, 576p, 720p/50 Hz, 720p/60 Hz, 1080i/50 Hz, 1080i/60 Hz, 1080p/24 Hz, 1080p/50 Hz, 1080p/60 Hz PC compatible signals (Reference page: 26)
Input terminals	
Video Input	1 system, RCA pin jack x3 Y:1.0Vp-p, 75Ω Pb/Cb, Pr/Cr:0.7Vp-p, 75Ω * Also supports R / G / B Sync on G
HDMI Input	2 system, HDMI 19 pin × 2 (HDCP compliant) * 4 Compatible with the HDMI v1.4a standard * 5
PC Input	1 system, D-Sub 15 pin VGA
Output Terminal	
Trigger terminal	1 system, 3.5mm DC power jack (⊖ ⊕) DC OUT 12V, 0.1A
3D Synchro	3D synchro emitter dedicated terminal (1 system, mini DIN 3pin)
Control Terminal	RS-232C terminal 1 system, D-sub 9-pin (male) x1 (external control)
Remote Terminal	1 system, stereo mini jack x1 (remote control)
LAN Terminal	1 system, RJ-45 plug x1

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Power Requirements	AC 110V-240V 50/60Hz
Power Consumption	350W (3.4A) (standby mode: 0.9W)
Operation Environment	Temperature: 5°C to 35°C Humidity: 20% to 80% (no condensation) (storage temperature: -10 C to 60 C)
Installation Height	Recommended below 5000 ft (1524 m). (high altitude operating mode available)
Dimensions (WxHxD)	19.5 x 8.8 x 22.5 in., 496 x 224 x 572 mm
Weight	60 lbs., 28 kg. net / 75 lbs., 34 kg. shipping
Accessories	(Please see page 14 of the full User's Manual)

Notes:

- * 2 D-ILA is the abbreviation for Direct-Drive Image Light Amplifier.
- * 3 D-ILA devices are manufactured using extremely high-precision technology. Pixel effectiveness is 99.99%. Only 0.01% or less of the pixels may be off or permanently lit and still be within spec.
- * 4 HDCP is the abbreviation for High-bandwidth Digital Content Protection system.
- * 5 Ethernet is not supported.

- Design and specifications are subject to change without prior notice.
- Please note that some of the pictures and illustrations may have been abridged, enlarged or contextualized in order to aid comprehension. Images may differ from the actual product.

Wolf Cinema – The New Standard of Excellence

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