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## **USER'S MANUAL**

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# **DLC-2000HD**

## **Projection System**

Liquid Crystal Projector &  
Pixel-For-Pixel™ Controller with Vivix™ Technology



**THE WORLD'S FINEST HOME THEATER PRODUCTS™**



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# Limited Warranty

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## LIMITED WARRANTY

Congratulations on your purchase of a Runco video product and welcome to the Runco family! We believe Runco produces "The World's Finest Home Theater Products". With proper installation, setup and care, you should enjoy many years of unparalleled video performance. Please read this consumer protection plan carefully and retain it with your other important documents.

This is a LIMITED WARRANTY as defined by the U.S. Consumer Product Warranty and Federal Trade Commission Improvement Act.

### **WHAT IS COVERED UNDER THE TERMS OF THIS WARRANTY:**

**SERVICE LABOR:** Runco will pay for service labor by an approved Runco service center when needed as a result of manufacturing defect for a period of two (2) years from the effective date of delivery to the end user.

**PARTS (Not including projector lamp):** Runco will provide new or rebuilt replacement parts for the parts that fail due to defects in materials or workmanship for a period of two (2) years from the effective date of the warranty. Such replacement parts are then subsequently warranted for the remaining portion (if any) of the original warranty period.

**LAMP:** Six months or 1000 hours (which ever comes first).

### **WHAT IS NOT COVERED UNDER THE TERMS OF THIS WARRANTY:**

This warranty only covers failure due to defects in materials and workmanship that occur during normal use and does not cover normal maintenance. This warranty does not cover cabinets or any appearance item; any damage to laser discs; failure resulting from accident, misuse, abuse, neglect, mishandling, misapplication, faulty or improper installation or setup adjustments; improper maintenance, alteration, improper use of any input signal; damage due to lightning or power line surges, spikes and brownouts; damage that occurs during shipping or transit; or damage that is attributed to acts of God. In the case of remote control units, damage resulting from leaking, old, damaged or improper batteries is also excluded from coverage under this warranty.

**CAUTION:** DAMAGE RESULTING DIRECTLY OR INDIRECTLY FROM IMPROPER INSTALLATION OR SETUP IS SPECIFICALLY EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. IT IS IMPERATIVE THAT INSTALLATION AND SETUP WORK BE PERFORMED ONLY BY AN AUTHORIZED RUNCO DEALER TO PROTECT YOUR RIGHTS UNDER THIS WARRANTY. THIS WILL ALSO ENSURE THAT YOU ENJOY THE FINE PERFORMANCE YOUR RUNCO PRODUCT IS CAPABLE OF PROVIDING WHEN INSTALLED AND CALIBRATED BY RUNCO AUTHORIZED PERSONNEL.

### **RIGHTS, LIMITS AND EXCLUSIONS:**

Runco limits its obligations under any implied warranties under state laws to a period not to exceed the warranty period. There are no express warranties. Runco also excludes any obligation on its part for incidental or consequential damages related to the failure of this product to function properly. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. So the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

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**EFFECTIVE WARRANTY DATE:**

This warranty begins on the effective date of delivery to the end user. For your convenience, keep the original bill of sale as evidence of the purchase date.

**IMPORTANT: WARRANTY REGISTRATION:**

Please fill out and mail your warranty registration card. It is imperative that Runco knows how to reach you promptly if we should discover a safety problem or product update for which you must be notified.

**TO OBTAIN SERVICE, CONTACT YOUR RUNCO DEALER:**

Repairs made under the terms of the Limited Warranty covering your Runco International video product will be performed at the location of the product, during usual working hours, providing location of product is within normal operating distance from a Runco Authorized Service Center. If, solely in Runco's judgement, location of product to be repaired is beyond normal operating distance of the closest Runco Authorized Service Center, it is the owner's responsibility to arrange for shipment of the product for repair. These arrangements must be made through the selling Runco dealer. If this is not possible, contact Runco directly for a return authorization number and shipping instructions. Runco will return product transportation prepaid in the United States, unless no product defect is discovered. In that instance, shipping costs will be the responsibility of the owner.

**ADDITIONAL INFORMATION:**

To locate the name and address of the nearest Runco Authorized Service location, or for additional information about this warranty, please call, write or visit our website:

CUSTOMER SERVICE DEPARTMENT  
RUNCO INTERNATIONAL  
2900 Faber Street  
Union City, CA 94587  
Ph: (510) 324-7777 / Fax: (510) 324-9300  
[www.runco.com](http://www.runco.com)

# Introduction

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**Congratulations** on your purchase of the **DLC-2000HD** system! This system was designed to be a fully integrated system, which includes the **DLC-2000HD** Projector and the unique **PFP™ Controller**. This system is extremely easy to use, as all of the controls for the Projector have been integrated into the PFP Controller for ease of operation and control. Not only does the Controller control all aspects of the Projector, but it also performs all of the NTSC or PAL video scaling for the Projector not to mention aspect ratio control.

The Projector itself is a bright, reliable LCD Projector with 2000 ANSI lumens of light output and a native resolution of 1366 x 768.

Please be sure to read this manual before operating this system. While it is quite easy to operate and understand, it is unique in the way it is designed, since all of the video Controller and Projector functions are now in the PFP Controller itself. You'll find that there is no 'Projector remote', just one simple remote to operate all aspects of the system.

# Warnings and Safety Precautions \_\_\_\_\_

## **CAUTION:**

To turn off main power, be sure to remove the plugs from power outlets. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.

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## **REMARQUE:**

Pour mettre l'appareil hors circuit, s'assurer de retirer la fiche de la prise d'alimentation. La prise d'alimentation doit être installée aussi proche que possible de l'appareil et doit être facile d'accès.

## **WARNING**

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

## **AVERTISSEMENT**

POUR EVITER UN FEU OU UN RISQUE D'ELECTROCUTION NE PAS EXPOSER CET ENSEMBLE A LA PLUIE OU A L'HUMIDITE; DE MEME, NE PAS BRANCHER LA PRISE POLAIRE AVEC UNE RALLONGE A MOINS QUE LES DENTS DE LA PREMIERE NE S'Y INSERENT PLEINEMENT.

EVITER D'OUVRIER LE COFFRET CAR IL Y A, A L'INTERIEUR, DES COMPOSANTS SOUMIS A UNE HAUTE-TENSION; POUR LES REPARATIONS, S'ADRESSER A UN PERSONNEL QUALIFIE.

## **WARNING**

This equipment has been tested and found to comply with the limits for a Class 'B' digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Installation Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case, the user will be required to correct the interference at his own expense.

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### **DOC compliance Notice**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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### **DOC avis de conformation**

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le Matériel D'interférence du Canada.

## **SAFETY TIPS**

**Please read and follow the safety precautions listed below to ensure the equipment is free from damage, and to ensure that no injury will occur as a result of improper use.**

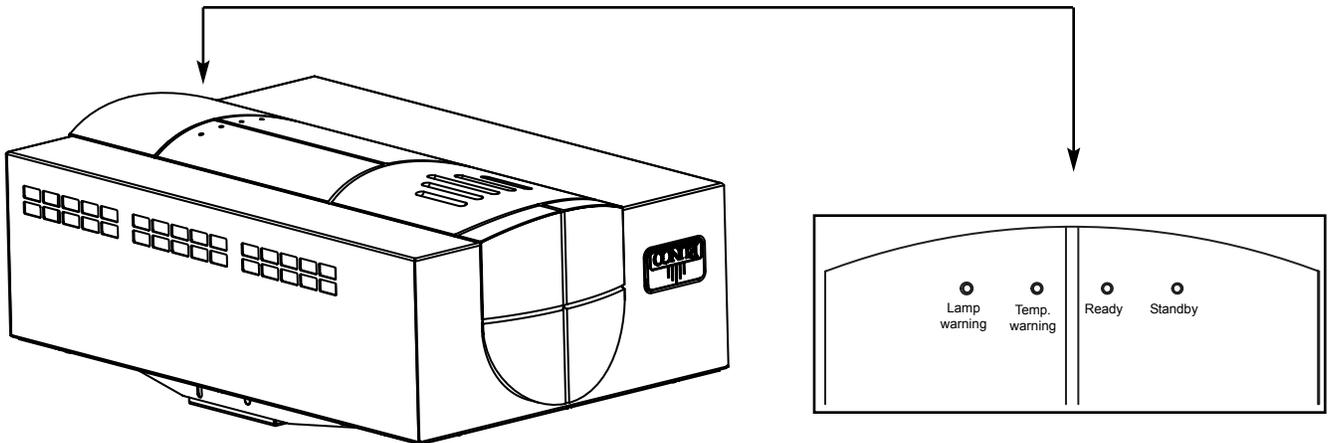
- Do not insert any object, especially metal or liquids, into the Projector or Controller.
- Do not place any objects containing water or any other liquid on top of the Projector or Controller.
- Do not place the units in direct sunlight, near heaters or in extremely dusty or humid locations.
- Do not install this system outdoors or otherwise exposed to the elements.
- Do not place heavy objects on top of the Projector or Controller.
- If the power cord is damaged or frayed in any way, electrical shock and/or fire may result. Please do not place objects on the power cord, and keep the cord away from heat-emitting devices. Should the power cord become damaged in any way, please contact your Runco dealer for a replacement cord.
- Do not remove the cover of the Projector or Controller for any reason. If any problems arise with the unit, please contact a Runco dealer or Runco International for service. Removing the covers will void the warranty.

# Indicator Lights

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## Top View

The Projector has four lights which provide a status of the operation of the Projector. These are described below:



**Lamp warning:** Lights up YELLOW when the lamp has reached its useable life expectancy (1500 hours).

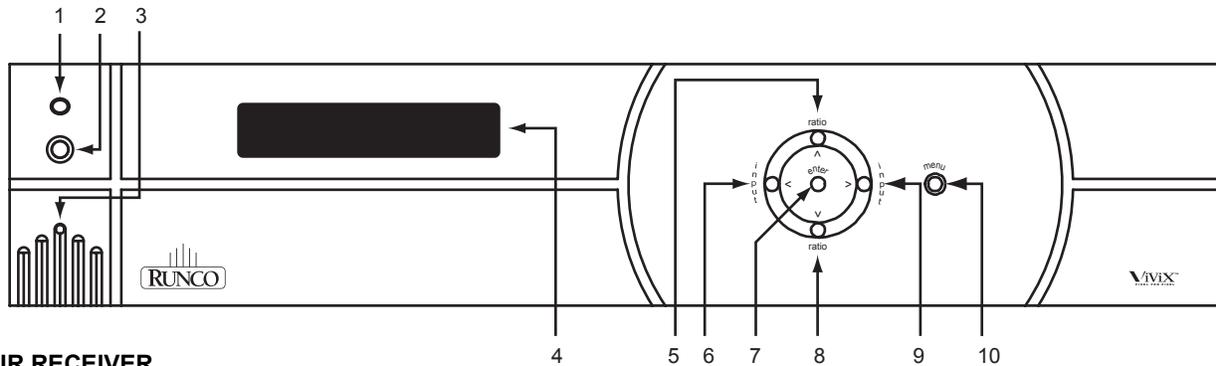
**Temp warning:** Flashes RED when the internal temperature is too high. Ensure that the Projector is in a reasonably cool environment and there is nothing blocking the ventilation holes on the Projector.

**Ready:** Lights GREEN when the Projector is ready for use.

**Standby:** Lights when Projector is in the standby mode; dims when in operation.

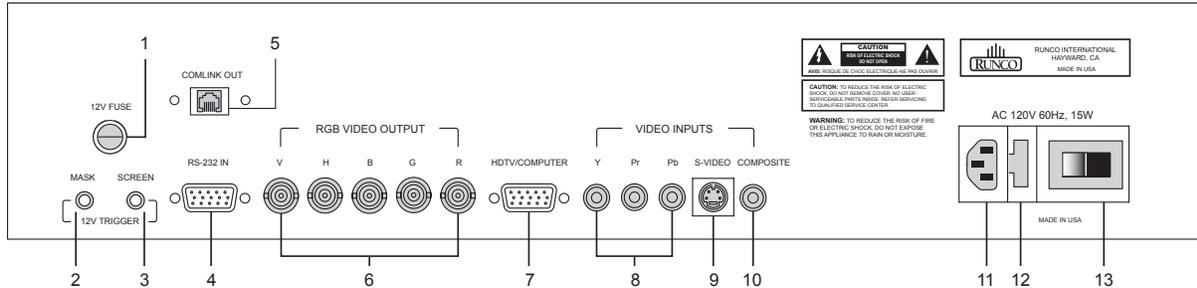
# Front and Rear Panel Descriptions

## Front Panel



1. **IR RECEIVER**  
Receives the infrared signal from the remote control.
2. **POWER BUTTON**  
Turns the unit ON or OFF. The Main Power switch on the rear of the unit must be on first for this button to be active.
3. **POWER INDICATOR**  
When the PFP Controller is ON, this LED will illuminate GREEN. When the unit is OFF or in STANDBY, this LED will illuminate RED. A flashing red light indicates a fault. If this happens, unplug the unit for 2 minutes and re-try. A yellow LED indicates a communication problem; double check that the ComLink cable is connected properly (pg. 8).
4. **LED DISPLAY**  
Indicates the model number, current source, resolution and aspect ratio.
5. **UP BUTTON**  
When no menu is present on-screen, this button will toggle you through the different aspect ratios.  
When the menu is on-screen, the UP button will move the cursor up within a menu.  
When an adjustment item has been selected (i.e. brightness), the UP button will increase the value of that function.
6. **LEFT BUTTON**  
When no menu is present on-screen, the LEFT button will toggle you through the five different sources, in the order of:  
**RGB HD → Component HD → Component → S-Video → Composite**
7. **ENTER BUTTON**  
When an item is highlighted on the On-Screen Display, the ENTER button will select the item.
8. **DOWN BUTTON**  
When no menu is present on-screen, this button will toggle you through the different aspect ratios.  
When the menu is on-screen, the DOWN button will move the cursor down within a menu.  
When an adjustment item has been selected (i.e. brightness), the DOWN button will decrease the value of that function.
9. **RIGHT BUTTON**  
When no menus are present on-screen, the RIGHT button will toggle you through the five different sources, in the order of:  
**Composite → S-Video → Component → Component HD → RGB HD**
10. **MENU BUTTON**  
The MENU button brings up the main adjustment menu. After making adjustments, the MENU button will bring you back to the sub-menu, then to the main menu. The menu will then either time-out after approximately 10 seconds, or pressing the MENU button will remove the menu immediately.

## Rear Panel



### 1. 12v FUSE

This fuse protects the 12v outputs from the MASK and SCREEN jacks.  
(Screen Fuse: 5mm x 25mm, AGC, 0.5A, 250V, Fast Blow)

### 2. MASK

This is a 12V output that is used to trigger masking on screens that have that capability.  
(For use on motorized screens only, 1/4A maximum load).

### 3. SCREEN

This is a 12V output that is used to trigger the screen to drop.  
(For use on motorized screens only, 1/4A maximum load).

### 4. RS-232 IN

This is for systems using serial (RS-232) to control the PFP Controller.

### 5. COMLINK OUT

The output of this jack must be connected to the ComLink input of the DLC-2000HD Projector.  
If this is not connected, neither the Controller or the Projector can operate.

### 6. RGB OUTPUT

This is the RGB Video output of the PFP Controller. Connect the RGB output of the Controller via a **five-wire** RGB cable to the DLC-2000HD Projector.

### 7. HDTV/COMPUTER

This is the input for RGB or Component HDTV sources. Computer and Progressive DVD sources may also be input here.

### 8. COMPONENT INPUT

This is the input for **Component Video** from sources such as DVD players.

**Note:** The component output from a DTV decoder or a progressive-scan DVD cannot be used with this port; it must be used with the HDTV port.

### 9. S-VIDEO INPUT

This is the input for **S-Video** from sources such as Satellite receivers, S-VHS VCR's and DVD players.

### 10. COMPOSITE VIDEO INPUT

This is the input for **Composite Video** from sources such as laser disc players, VCRs and other misc. sources.

### 11. POWER INPUT

Plug in Main Power here.

### 12. 115 VAC FUSE

This is the main AC Input fuse (.5A/250V).

### 13. MAIN POWER SWITCH

Disconnects or applies main power to the Controller.

# Remote Control Description

## A. IR OUTPUT INDICATOR

Illuminates when a button is pressed, indicating that an IR signal is being transmitted.

## B. POWER BUTTON

Toggles the power on and off. For a discreet on or off command, you can use the direct access buttons (see 'J'). **Note:** When the main AC power switch is first turned ON, the Controller will go through an initiation cycle for approximately 15 seconds. The Controller cannot be turned on or operated until the initialization is complete.

## C. UP BUTTON

When no menus are present on-screen, the UP button will toggle you through aspect ratios in the following order:

**Standard (4:3) → Letterbox → Anamorphic**

When the menu is on-screen, the UP button will move the cursor up within the menu. When an adjustment item has been selected (i.e. brightness), the UP button will increase the value of that function.

## D. LEFT BUTTON

When no menus are present on-screen, the LEFT button will toggle you through the five different sources in the following order:

**RGB HD → Component HD → Component → S-Video → Composite**

## E. DOWN BUTTON

When no menus are present on-screen, the DOWN button will toggle you through aspect ratios in the following order:

**Anamorphic → Letterbox → Standard (4:3)**

When the menu is on-screen, the DOWN button will move the cursor down within the menu. When an adjustment item has been selected (i.e. brightness), the DOWN button will decrease the value of that function.

## F. RIGHT BUTTON

When no menus are present on-screen, the RIGHT button will toggle you through the five different sources in the following order:

**Composite → S-Video → Component → Component HD → RGB HD**

## G. MENU BUTTON

Pressing the MENU button will bring up the main menu. If no action is taken within approximately 10 seconds, the menu will time-out (disappear). Also, if you are in an adjustment mode or function, pressing MENU will bring the menu back one level.

## H. ENTER BUTTON

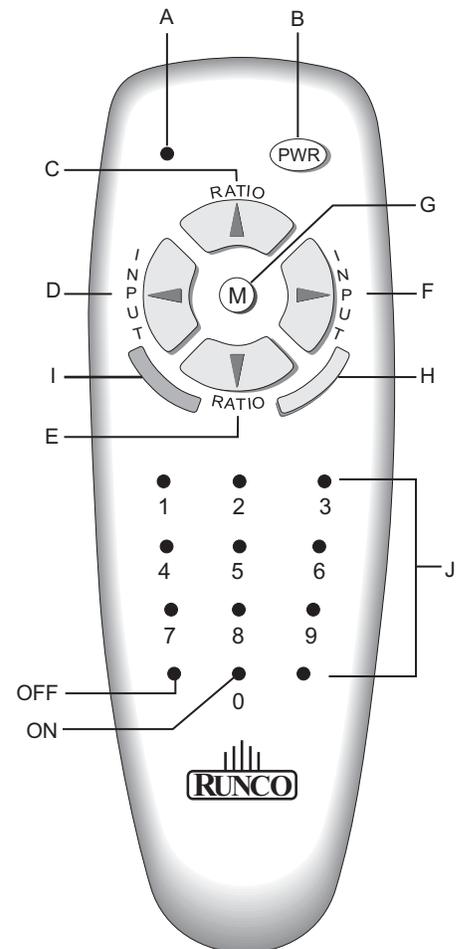
When an item is highlighted on a menu, pressing ENTER will select that item.

## I. PROGRAM BUTTON

If the remote control loses its 'memory' as a result of weak or dead batteries, it must be re-programmed for the **PFP Controller's** code set.

To reprogram the remote, press the PROGRAM button followed by 0,1,3.

**Note:** Pressing Enter after typing in the code is not necessary.



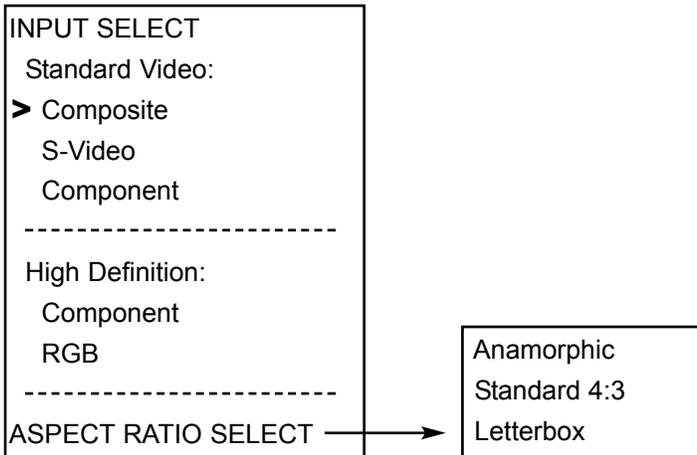
## J. DIRECT ACCESS BUTTONS

These buttons will allow you to directly access an aspect ratio, source, or turn the unit on or off without having to go through any menus. These buttons are:

- 1: Selects COMPOSITE video
- 2: Selects S-video
- 3: Selects COMPONENT video
- 4: Selects Component HD
- 5: Selects RGB HD
- 6: Not used
- 7: Selects the ANAMORPHIC aspect ratio
- 8: Selects the STANDARD (4:3) aspect ratio
- 9: Selects the LETTERBOX aspect ratio
- 0: Turns the Controller ON.
- OFF: Also known as the button left of '0', this turns the Controller OFF.

# Menu Description and Navigation

## Menu Tree



## Main Menu

Through the Main Menu, you can easily switch sources and Aspect Ratios.

**To select a source**, you may either use the direct access buttons on the remote (pg. 9) or the Left/Right buttons on the remote or Front Panel (pgs. 7, 10). If you wish to select a source via the Main Menu, press MENU, highlight the desired source with the Up/Down arrows and press Enter. The arrow to the left of the sources indicates the source currently in use.

**To select an Aspect Ratio**, you may use either the direct access buttons on the remote (pg. 9) or the Up/Down buttons on the remote or Front Panel (pgs. 7, 10). If you wish to select an Aspect Ratio via the Main Menu, press MENU, highlight ASPECT RATIO and press Enter. The Aspect Ratio selection menu will then appear; highlight the desired Aspect Ratio with the Up/Down buttons and press Enter.

If you are in the Main Menu and you highlight the currently selected source and press Enter, you will see the image quality adjustment menu. You can access these functions (Contrast, Brightness, Color, Tint) by highlighting one and pressing Enter. *For best results*, it is recommended that these adjustments be left the way the installer set them during initial installation. These adjustments are detailed in the DLC-2000HD installer menu.

# Specifications

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## **DLC-2000HD Projector:**

<b>Projector Type:</b>	LCD
<b>Native Resolution:</b>	1366 x 768
<b>Lamp:</b>	250W Metal Halide
<b>Inputs:</b>	RGB/Component
<b>Bandwidth:</b>	180 Mhz (RGB)
<b>Power Requirements:</b>	100-120 VAC, 200-240 VAC 50/60 Hz (export version)
<b>Current:</b>	3.3A (100-120 VAC), 1.7A (200-240 VAC)
<b>Power Consumption:</b>	360W
<b>Dimensions:</b>	Width: 16.310 in. (414 mm) Depth: 25.801 in. (655 mm) Height: 8.439 in. (214 mm)
<b>Weight:</b>	56 lbs. (25.4 kg)
<b>Safety Regulations:</b>	Complies with FCC Class 'B', CE, C-Tick

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## Controller:

Inputs:	(1) Component, (1) S-Video, (1) Composite, (1) HDTV/Computer
Input standards:	NTSC/PAL/480p/720p/1080i/SVGA/XGA
Output format:	1366 x 768
Bandwidth:	Video inputs: 5.5 Mhz, HDTV/Computer: 100 Mhz
Power Input:	120V (220V export model), 50/60 Hz
Power Consumption:	15W
Control Options:	RS-232, Infrared, Front Panel
Operating Environment:	41°-95°F (5°-35° C), 0-90% humidity, Non-condensing
Dimensions:	Width: 17.45 in. (443.23 mm) Depth: 16 in. (406.40 mm) Height: 3.5 in. (88.90 mm)
Weight:	16 lbs. (7.26 kg)
Safety Regulations:	Complies with FCC Class 'B', CE, C-tick
Fuses:	(Screen Fuse: 5mm x 25mm, AGC, 1A, 250V, Fast Blow) (Main Fuse: 5mm x 20mm, 500mA, 250V, Slow Blow)
Rack Ears:	Included

## Supplied Accessories

- Remote Control w/ 2 AAA Batteries
- Rack Mount Hardware
- Power Cords (2)
- 50' RJ-11 cable
- User's Manual
- Warranty information
- DB9 to RJ-11 Connector
- DB9 Female to DB9 Male Connector



RUMA-006700 rev 11-03



**THE WORLD'S FINEST HOME THEATER PRODUCTS™**