

## Installation and Operating Instructions

# Specifications: Dell™ W2300 LCD TV User's Guide

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### General

Model number W2300 LCD TV

### Flat Panel

#### Screen dimensions

Screen type	Active matrix - TFT LCD
Screen dimensions	23 inches (23-inch viewable image size)
Preset display area:	
Horizontal	501.12± 3 mm (20.04 inches ± 0.12 inches)
Vertical	300.67± 3 mm (12.03 inches ± 0.12 inches)
Pixel pitch	0.3915 mm
Viewing angle	+/- 88° (vertical) typ, +/- 88° (horizontal) typ
Luminance output	450 CD/m <sup>2</sup> (typ)
Contrast ratio	400 to 1 (typ)
Faceplate coating	Anti-glare
Backlight	CCFL (12)
Panel Weight	2.7 Kg/ 5.95lbs

### Resolution

Horizontal scan range	30 kHz to 61kHz (automatic)
Vertical scan range	56 Hz to 75 Hz (automatic)
Optimal preset resolution	1280 x 768 at 60 Hz
Highest preset resolution	1280 x 768 at 75 Hz
* Highest addressable resolution	1280 x 768 at 60 Hz

\* Addressable means the LCD TV will sync up to this mode.

However, Dell does not guarantee the image will be sized, shaped and centered correctly.

### PC Display Modes

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal/Vertical)
VGA, 720x 400	31.469	70.087	28.3	-/+
VGA, 640x 480	31.469	59.940	25.2	-/-

VESA, 640 x 480	37.500	75.000	31.5	-/-
VESA, 800 x 600	37.879	60.317	40.0	+/+
VESA, 800 x 600	46.875	75.000	49.5	+/+
VESA, 1024 x 768	48.363	60.004	65.0	-/-
VESA, 1024 x 768	60.023	75.029	78.8	+/+
VESA, 1280 x 768	47.776	59.870	79.5	-/+
VESA, 1280 x 768	60.289	74.893	102.25	-/+
VESA, 1280 x 768	47.396	59.995	68.25	+/-

## TV Display Modes

### Americas model

Band Assignment	AIR CH		CATV CH	
	CH	Video Carrier (MHz)	CH	Video Carrier (MHz) STD
VHF LOW	02-06	55.25-83.25	02-15	55.25-127.25
VHF HIGH	07-13	175.25-211.25	16-44	133.25-343.25
UHF	14-69	471.25-801.25	45-125	349.25-799.25

## HDTV Display Modes

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Scan
1920 X 1080i	33.75	60	74.25	Interlace
1280 X 720P	45	60	74.25	Progressive
1920 X 1080i	28.125	50	74.25	Interlace
1280 X 720P	37.5	50	74.25	Progressive

## SDTV

Characteristics	PAL	NTSCM
Lines per picture	625 frames	525 frames
Field frequency, nominal value	60 fields/s	59.94 fields/s
Nominal video bandwidth	5HMz	4.2 MHz
Norminal line period	64μs	63.5555μs
Line-blanking interval	12±0.3μs	10.9±0.2μs

Interval between time datum (0H) and back edge of line-blanking pulse	10.5µs	9.2 to 10.3 µs
Front porch	1.5±0.3µs	1.27 to 2.22µs
Synchronizing pulse	4.7±0.2µs	4.7±0.1µs
Build-up time of the line blacking pulse	0.3±0.1µs	=/< 0.48µs
Build-up time of the line synchronizing pulse	0.2±0.1µs	=/< 0.25µs
Start of sub-carrier burst	5.6±0.1µs	5.3(4.71 to 5.71)µs
Duration of sub-carrier burst	2.25±0.23 (10±1 cycles)µs	2.23±3.11 (9±1 cycles)µs

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## Electrical for PC

Video input signals	Analog RGB, 0.7 Volts +/-5%, positive polarity at 75 ohm input impedance Digital DVI-D TMDS, 600mV for each differential line, positive polarity at 50 ohm input impedance
Synchronization input signals	Separate horizontal and vertical synchronizations, polarity-free TTL level, Composite
AC input voltage / frequency	90 to 264 VAC / 50 or 60 Hz ± 2Hz

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## Physical Characteristics

Connector type	15-pin D-subminiature, blue connector; DVI-D, white connector
Signal cable type	Analog: Detachable, D-sub, 15pin, shipped detached to the LCD TV Digital: Detachable, DVI-D, Solid pins, shipped detached from the LCD TV
Dimensions: (without packing)	
Height	448.0 mm (17.63 inches)
Width	758.0 mm (29.84 inches)
Depth	265.5 mm (10.45 inches)
Weight (LCD TV only)	13.8 Kg (30.4 lbs)
Weight (with packaging)	18.7 Kg (41.21 lbs)

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## Environmental

Temperature:	
Operating	0°C to 35°C (32°F to 95°F)
Nonoperating	Storage: 0 to 60°C (32°F to 140°F) Shipping: -20 to 60°C(-4°F to 140°F)
Humidity:	
Operating	10% to 80% (noncondensing)
Nonoperating	Storage: 5% to 90% (noncondensing) Shipping: 5% to 90%(noncondensing)
Altitude:	

Operating	3,657.6m (12,000 ft) max
Nonoperating	12,192 m (40,000 ft) max
Thermal dissipation	239BTU/hour (typical at PC model) 342 BTU/hour (typical at TV model))

## Power Management Modes

If you have VESA's DPMS compliance display card or software installed in your PC, the LCD TV can automatically reduce its power consumption when not in use. This is referred to as 'Power Save Mode\*'. If input from keyboard, mouse or other input devices is detected by the computer, the LCD TV will automatically "wake up". The following table shows the power consumption and signaling of this automatic power saving feature:

PC display power management mode

Power Management Definition					
VESA Modes	Video	H-sync	V-sync	Power Used	LED color
ON	Active	Yes	Yes	70W (typical)	Green
OFF	Blanked	No	No	< 3 W	Amber



**NOTE:** In Power Saving Mode, Press Any Key on Keyboard or Move Mouse.  
Activate the computer and 'wake up' the LCD TV to gain access to the [OSD](#).

## TV and Video Power Management Modes


Power management Definition				
Display	Video	Power State	Power Used	LED color
ON	Active	Always On	100W (typical)	Green
Stand by	Blanked	Off after 30minutes of no signal	< 3W	Amber
Power switch off	Active/Blanked	Off	< 1W	OFF

This monitor is **ENERGY STAR®**-compliant as well as TCO '99 power management



\* Zero power consumption in OFF mode can only be achieved by disconnecting the main cable from the monitor.

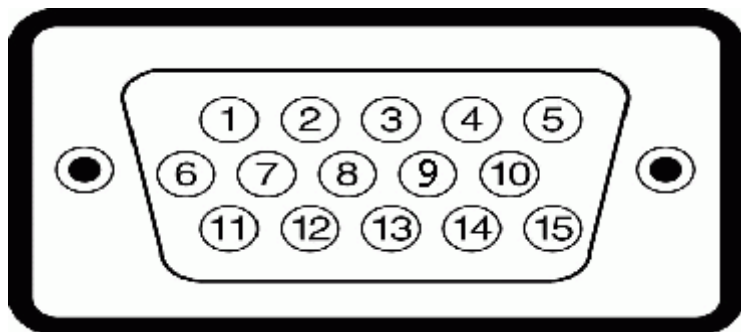
**ENERGY STAR®** is a U.S. registered mark. As an **ENERGY STAR®** Partner, DELL has determined that this product meets the **ENERGY STAR®** guidelines for energy efficiency.

 **NOTE:** This LCD TV automatically returns to normal operation when horizontal and vertical sync return, which occurs when you move the computer's mouse or press a key on the keyboard.

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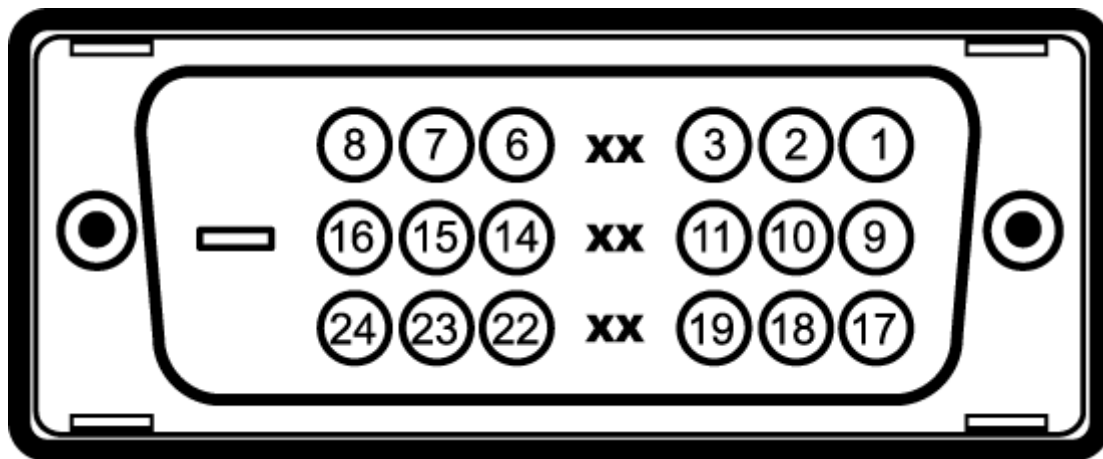
## Pin Assignments

**15-pin D-Sub connector:**



Pin Number	LCD TV Side of the 15-Pin Side Signal Cable
1	Red
2	Green
3	Blue
4	GND
5	Self test
6	Red GND
7	Green GND
8	Blue GND
9	+5V (supply form PC)
10	Sync GND
11	GND
12	Bi-directional data (SDA)
13	H. Sync
14	V. Sync (vclk)
15	Data clock (SCL)

**24 pin digital-only DVI cable:**



Note: Pin 1 is at the top right.

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data 2-	9	T.M.D.S. Data 1-	17	T.M.D.S. Data 0-
2	T.M.D.S. Data 2+	10	T.M.D.S. Data 1+	18	T.M.D.S. Data 0+
3	T.M.D.S. Data 2 Shield	11	T.M.D.S. Data 1 Shield	19	T.M.D.S. Data 0 Shield
4	No Pin	12	No Pin	20	No Pin
5	No Pin	13	No Pin	21	No Pin
6	DDC Clock	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data	15	Self test	23	T.M.D.S. Clock +
8	No Connect	16	Hot Plug Detect	24	T.M.D.S. Clock -

## Plug and Play Capability

You can install the LCD TV in any Plug and Play-compatible system. The LCD TV automatically provides the computer system with its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so the system can configure itself and optimize the LCD TV settings.

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# Height-Adjustable Stand (HAS): Dell™ W2300 LCD TV User's Guide

[Attaching HAS](#) • [Cable Management](#) • [Tilt Swivel](#) • [Vertical Adjustment](#) • [Removing HAS](#)

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## Attaching HAS

Lay LCD TV on a flat, soft, and clean surface or use the foam cushion shipped with your LCD TV. Attach stand to LCD TV by aligning tabs on stand to the LCD TV.



## Cable Management

Run all cables through the provided cable sleeve and then run the sleeve (with cables) through the cable clip in the back of HAS.



## Tilt/Swivel

With the attached pedestal, you can tilt and/or swivel the LCD TV for the most comfortable viewing angle.



## Vertical Adjustment

Press the Lock Down button at the bottom of the HAS to make any vertical adjustment. HAS travels vertically.



## Removing HAS

Lay LCD TV on a flat, soft, and clean surface or use the foam cushion shipped with your LCD TV. Press the release button, and pull up the base.





# Attaching the Cables: Dell™ W2300 LCD TV User's Guide

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[Connecting Your PC](#) • [Connecting as a TV](#) • [Connecting your DVD/VCD/VCR/CATV Box](#) • [Connecting A/V outputs](#)

## Connecting your PC



**CAUTION:** Before performing any of the setup procedures listed below, read and follow the safety instructions.

### A. Connection through blue VGA & lime green audio cable

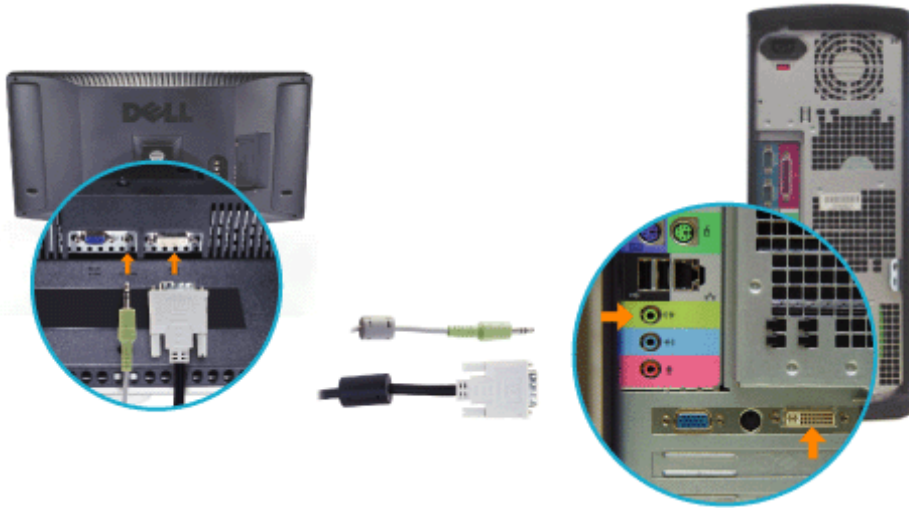
1. Connect one end of the blue VGA cable to the VGA plug on W2300, and connect the other end to the VGA plug on your PC.
2. Connect one end of the lime green audio cable to the audio jack by the D-sub plug on W2300, and connect the other end to the Audio jack on your PC.



OR

### B. Connection through white DVI cable & lime green audio cable

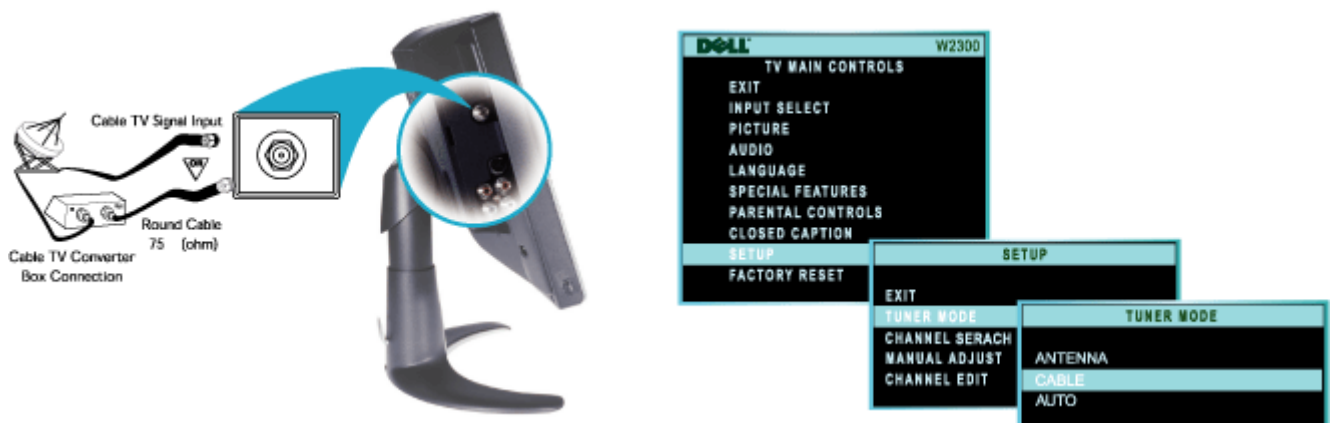
1. Connect one end of the white DVI cable to the DVI plug on W2300, and connect the other end to the DVI plug on your PC.
2. Connect one end of the lime green audio cable to the audio jack by the DVI plug on W2300, and connect the other end to the audio jack on your PC.



## Connecting as a TV

[Cable TV](#) • [Antenna](#) • [TV to VCR](#)

### Cable TV



1. If your Cable TV signal is a single, round cable (75 ohm), then you're ready to connect to the TV. Connect the TV cable to the ANTENNA/CABLE plug on the TV.
2. If you have a cable converter box, connect the cable TV signal to the IN (put) plug on the converter, connect the OUT(put) plug from the converter to the 75  $\Omega$  (ohm) plug on the TV.
3. Verify that the On Screen Display (OSD) is set to Cable.

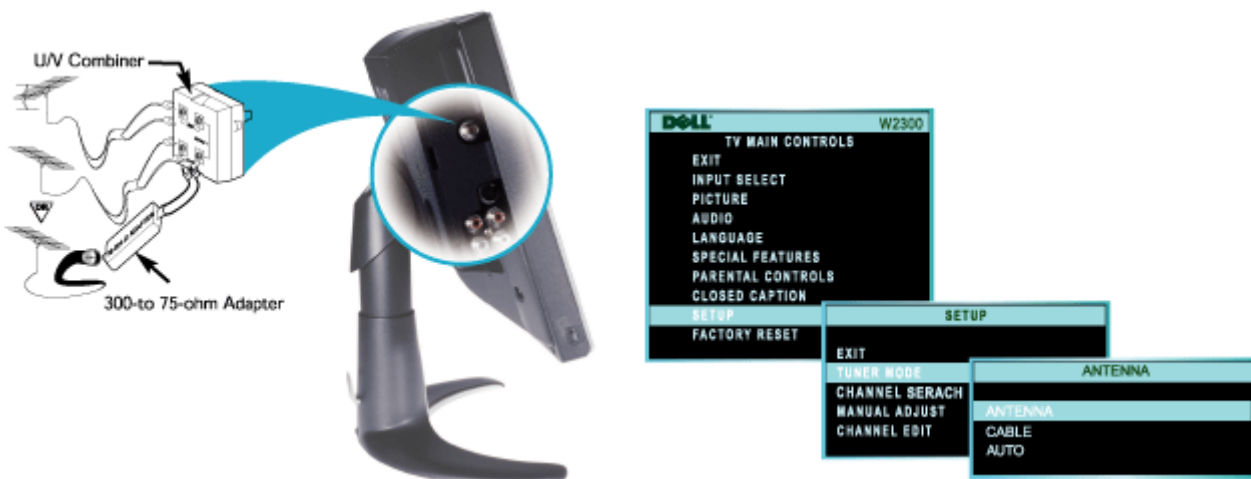


*Note: The connecting cable for the converter is supplied by the Cable TV company.*

### Antenna



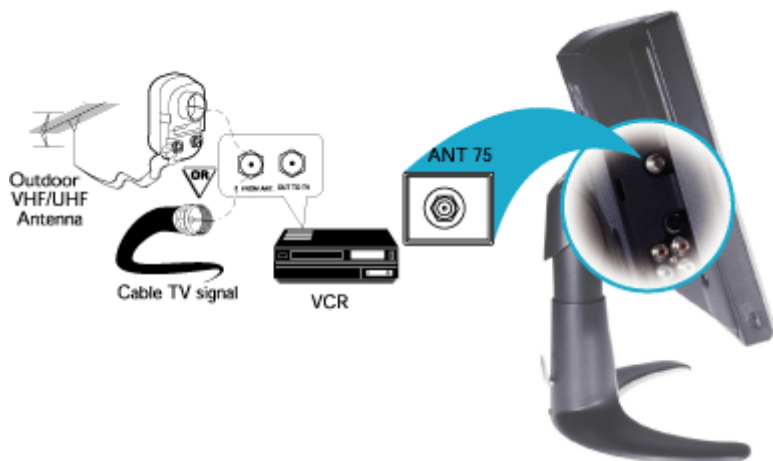
1. If your antenna has a round cable (75 ohm) on the end, then you're ready to connect it to the TV. If your antenna has flat, twin-lead wire (300 ohm), you first need to attach the antenna wires to the screws on a 300 -to 75- ohm adapter.
2. Push the round end of the adapter (or antenna) onto the 75Ω (ohm) plug on the back of the TV. If the round end of the antenna wire is threaded, screw it down finger tight.
3. Verify that the On Screen Display (OSD) is set to Antenna.



 **Note:** If your home has separate UHF and VHF antennas, you will need a combiner to connect to the TV.

## TV to VCR

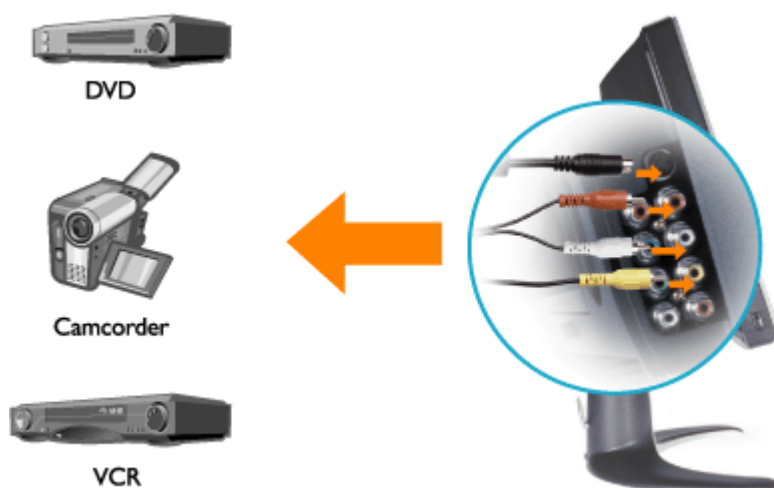
Follow the steps below to connect a basic antenna or Cable TV signal to a VCR, and then the VCR to the TV. For information on other hookups (possible when cable/ descrambler boxes are included), refer to the owner's manuals for the VCR and the cable converter.



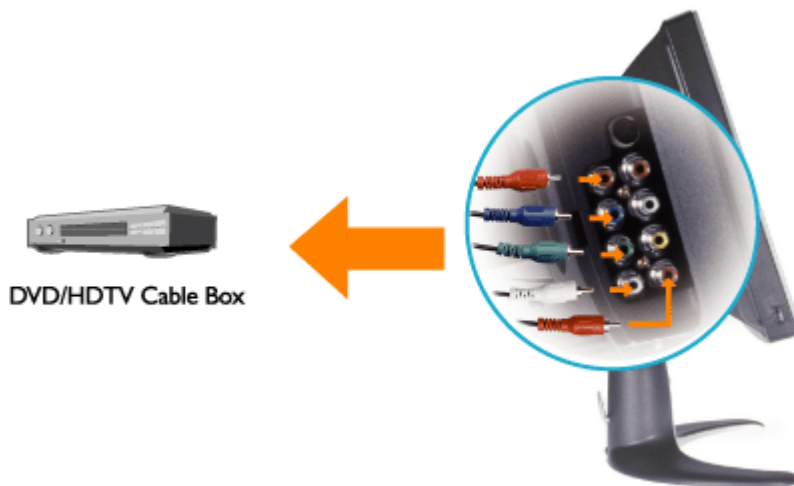
1. Connect your antenna or Cable TV signal to the IN FROM ANT (enna) plug on the VCR.
2. Connect the OUT TO TV plug on the VCR to the 75 ohm plug on the TV (connecting cable supplied with the VCR).
3. Refer to the owner's manual included with your VCR for other possible connections and TV/VCR operating details.

## Connecting to DVD/VCD/VCR/CATV BOX

Connect devices with cables provided. Select Composite or S-Video input from On Screen Display (OSD) Menu. Refer to the Controls and Indicators section in this document for more information on the OSD. S-Video Source generally yields better video performance than composite.



Connect device with cables provided. Select Component input from OSD Menu. For optimal performance use YPbPr for HDTV formats.



## Connecting A/V Outputs

1. The Composite output jacks on W2300 back cover provides the function to record your favorite program through broadcast or cable TV.
2. Connect devices (VCR, Camcorder...) with cables provided. Select TV input from OSD Menu.



# Regulatory: Dell™ W2300 LCD TV User's Guide

[Energy Efficiency](#) • [Federal Communications Commission \(FCC\) Notice \(U.S. Only\)](#) • [Canadian Regulatory Information \(Canada Only\)](#) • [MIC Notice \(Republic of Korea Only\)](#) • [NOM Information \(Mexico Only\)](#) • [Regulatory Listing](#)

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## Energy Efficiency



The proper operation of the function requires a computer with VESA® DPMS power management capabilities. When used with a computer equipped with VESA® DPMS, the monitor is **ENERGY STAR®**-compliant.

As an **ENERGY STAR®** Partner, Dell Computer Corporation has determined that this product meets the **ENERGY STAR®** guidelines for energy efficiency.

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## Federal Communications Commission (FCC) Notice (U.S. Only)



**Caution:** 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

**Instructions to Users:** This equipment complies with the requirements of FCC (Federal Communication Commission) equipment provided that following conditions are met.

1. Power cable: Shielded power cable should be used.
2. Video inputs: The input signal amplitude must not exceed the specified level.



**Notice:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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## Canadian Regulatory Information (Canada Only)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.