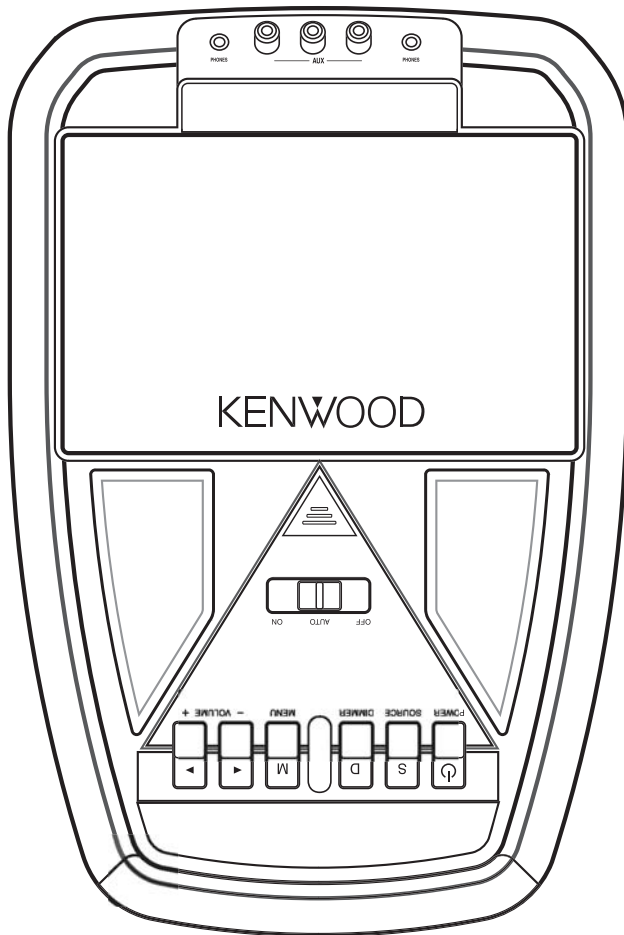


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OVERHEAD CONSOLE WITH
7" DIAGONAL LCD SCREEN

LZH-70W

USER MANUAL

KENWOOD USA CORPORATION

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CONGRATULATIONS!

Your LZH-70W console lets rear-seat passengers enjoy audio/video entertainment from its 7" diagonal LCD screen and wired & wireless headphone outputs. This manual will let you familiarize yourself with all of the LZH-70W's features and capabilities.

For the latest information about this and other Kenwood products, visit the Kenwood USA Corporation Web site at: www.kenwoodusa.com

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Safety Precautions

WARNING

To prevent injury and/or fire, take the following precautions:

- Ensure that the unit is securely installed. Otherwise it may fly out of place during collisions and other jolts.
- When extending the ignition or ground wires, make sure to use automotive-grade wire or other cables that are 18 gauge (AWG18) or thicker to prevent wire deterioration and damage to the wire coating.
- To prevent short circuits, never put or leave any metallic objects (e.g., coins or metal tools) inside the unit.
- If the unit starts to emit smoke or strange smells, turn off the power immediately and consult your Kenwood dealer.
- Be careful not to drop the unit or subject it to strong shock—the unit may break or crack because it contains glass parts.
- Do not touch the liquid crystal fluid if the LCD is damaged or broken due to shock. The liquid crystal fluid may be dangerous to your health or even fatal. If the liquid crystal fluid from the LCD contacts your body or clothing, wash it off with soap immediately.
- Do not install the console so that the screen can be seen by the driver while operating the vehicle.

CAUTION

To prevent damage to the LZH-70W, take the following precautions:

- Make sure to ground the unit to a negative 12V DC power supply.
- Do not open the back cover of the unit.
- Do not install the unit in a spot exposed to direct sunlight or excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.
- Do not subject the monitor unit to excessive shock, as it is a piece of precision equipment.
- When replacing a fuse, only use a new one with the prescribed rating. Using a fuse with the wrong rating may cause your unit to malfunction.
- To prevent short circuits when replacing a fuse, first disconnect the wiring harness.
- Do not use any screws except for the ones provided. The use of improper screws might result in damage to the main unit.

RESETTING THE MICROPROCESSOR

If the unit does not seem to be working properly, turn the vehicle's ignition off, then on again. If that does not solve the problem, consult your Kenwood dealer.

If you experience problems during installation, consult your Kenwood dealer.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE

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 may cause harmful interference to radio communications if it is not installed and used in accordance with the instructions. 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 the 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/ technician for help.

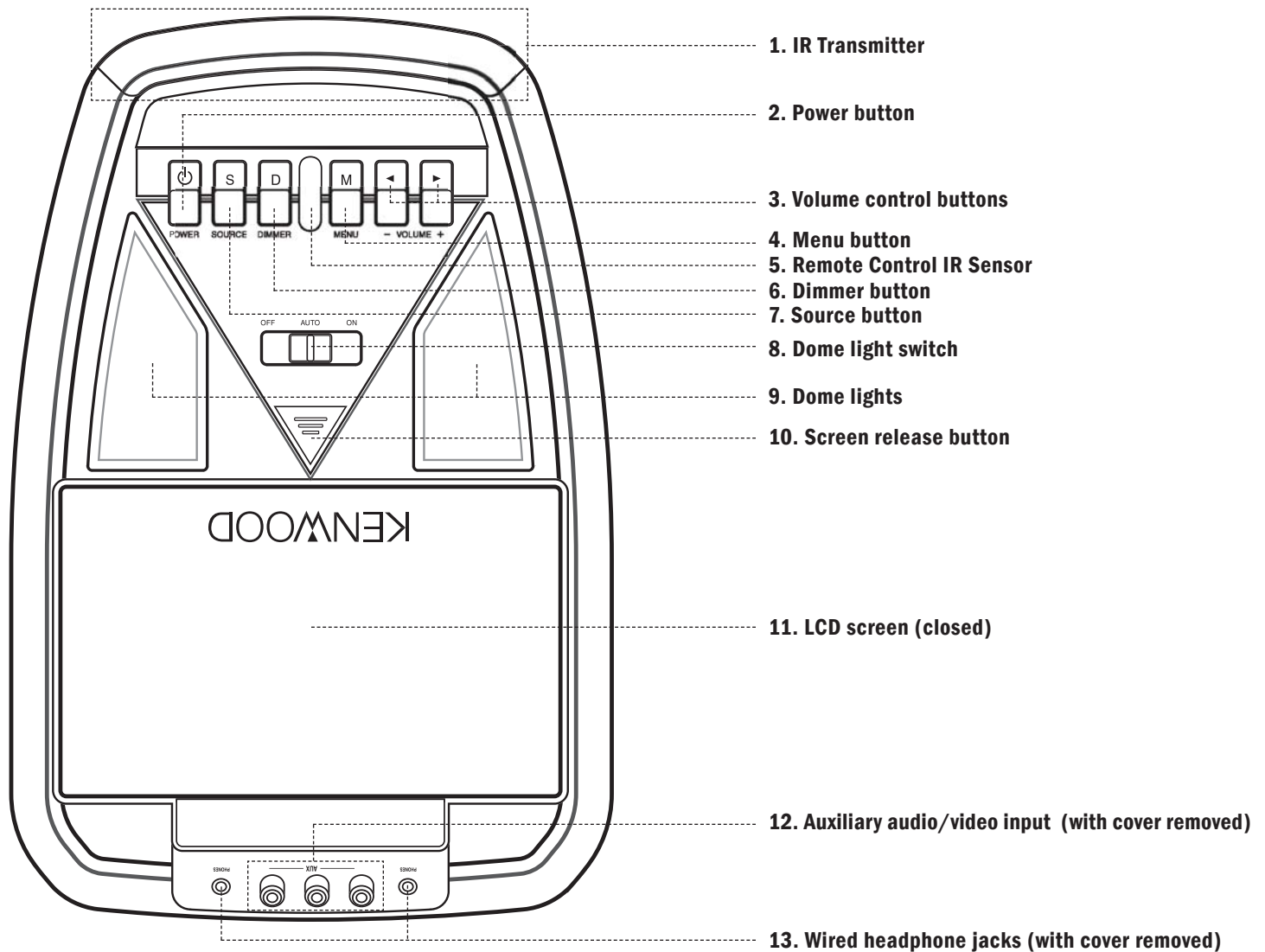
NOTE

This Class B digital apparatus, complies with Canadian ICES-003. This video unit is set for rear passenger use only. Use of this video unit in any front seat and/or where it may be visible to the driver may be illegal in some states and may cause driver distraction and an accident, resulting in injury or death.

Warnings

- Do not use any solvents or cleaning materials when cleaning the video system.
- Do not use any abrasive cleaners, they may scratch the screen. Use only a lightly dampened lint-free cloth to wipe the screen if it becomes dirty.
- Lock the LCD screen in the fully-closed position when it's not being used.
- Always adjust the volume setting to the lowest position before putting on headphones.
- Remember to leave the dome light switch in the OFF or AUTO position when the vehicle is unattended, as the dome lights can drain the vehicle's battery if they are left on when the vehicle is not running.
- Do not put pressure on the LCD screen.
- Caution children to avoid touching or scratching the screen, as it may become dirty or damaged.

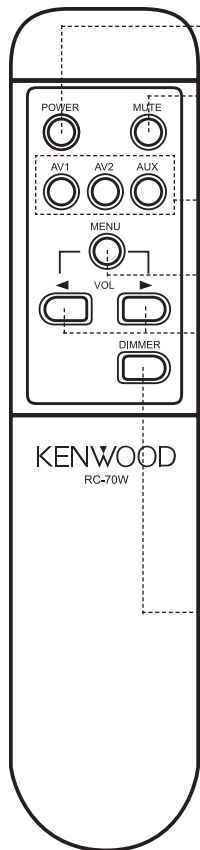
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Front Panel Controls and Features

- 1. IR transmitter:** Transmits audio to wireless headphones.
- 2. Power button:** Press to turn the console on and off.
- 3. Volume control buttons:** Controls volume the to the wired headphone jacks and the wired A/V output connections. (Note: The KPH-IR70 wireless headphones have built-in volume controls for use with the LZH-70W.)
 - When the MENU button is pressed, use the VOLUME buttons to perform the various adjustments.
- 4. Menu button:** Activates the screen adjustment modes.
- 5. Remote control IR sensor:** Receives signals from the included wireless remote.
- 6. Dimmer button:** Press to reduce the screen's brightness for night-time viewing; press again to restore full brightness.
- 7. Source button:** Each press of the button cycles between the following 3 inputs: AV1/AV2/Aux. The selected input is displayed on the screen.
- 8. Dome light switch:** Switches the console's dome lights into the following modes:
 - Off: Turns the dome lights off.
 - Auto: Automatically switches on the dome lights on and off in conjunction with the vehicle's interior illumination.
 - On: Turns the dome lights on.
- 9. Dome lights:** Provide additional illumination in the vehicle's interior.
- 10. Screen release button:** Slide the button away from the screen to release the flip-down LCD screen.
- 11. LCD screen:** 7" diagonal LCD screen, with 336,960 pixel resolution.
- 12. Auxiliary audio/video input:** Allows connection of a camcorder, game, portable DVD player or other audio/video source with RCA-type output connectors.
- 13. Wired headphone jacks:** Allows connection of wired stereo headphones with stereo mini-type connectors.

Remote control functions



Power button: Press to turn the console on and off.

Mute button: Press to temporarily mute the sound to the wired headphones; press again to restore the sound.

Source buttons: Press to access the Video 1, Video 2 and Aux inputs.

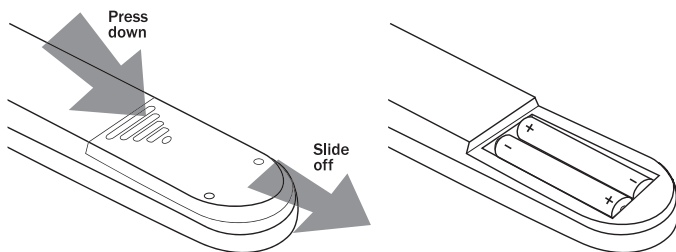
Menu button: Activates the screen adjustment modes.

Volume buttons: Controls volume to the wired headphone jacks and wired A/V output connections. (Note: The KPH-IR70 wireless headphones have built-in volume controls for use with the LZH-70W.)

- When the MENU button is pressed, use the volume buttons to perform the various adjustments.

Dimmer button: Press to reduce the LCD screen's brightness for night-time viewing; press again to restore full brightness.

Installing Batteries in the Remote



1. Remove the battery cover as shown on the left.
2. Install two AAA batteries with their poles as shown on the right.
3. Replace the battery cover.

CAUTION:

Do not leave the remote in direct sunlight, such as on the dashboard.

NOTE:

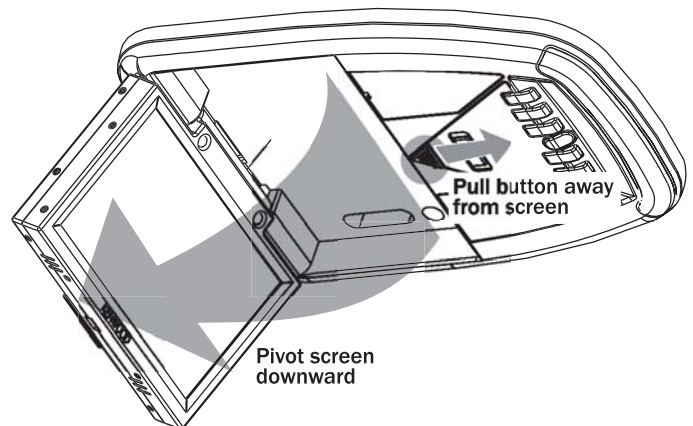
The supplied batteries are for operational checks, and may not last as long as regular alkaline batteries.

When the remote-controllable distance is reduced, replace both batteries with new ones.

Basic Console Operation

Turning the console on and off

1. Slide the screen release button away from the screen to unlock the screen.
2. Pivot the screen downward until a comfortable viewing angle is reached. The internal friction detent will hold the screen in position while the console is in use.



3. Press the POWER button on the console or the remote to turn it on and off. When the console is on, internal backlighting will illuminate the controls.

- After the unit has been turned on and is displaying a picture, adjust the viewing angle and Dimmer control to optimize the picture quality.
- Pivot the screen to the locked position when not in use. The power will automatically turn off.

Console dome lights

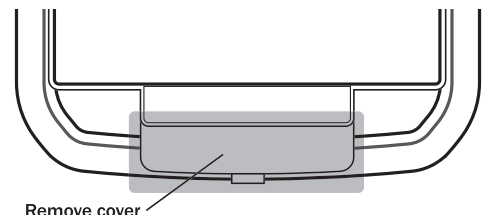
The LZH-70W's dome lights are controlled by the three position sliding switch. Sliding the switch to the ON position will turn the lights on. The AUTO position will allow the lights to turn on and off with the vehicle's interior lighting, and the OFF position will prevent the lights from turning on at all times.

- Do not leave the vehicle unattended with the dome light switch in the ON position, as this could discharge the vehicle's battery.

Connecting an auxiliary audio/video source

Make sure the console's power is OFF before making any connections

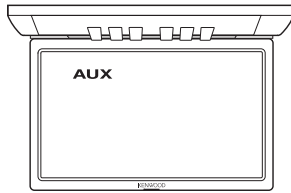
The Auxiliary A/V Input lets you connect optional A/V equipment, such as a camcorder or video game. The connectors can be accessed by removing their protective plastic cover located behind the screen hinge.



Use RCA cables to connect the audio and video signals to their respective jacks. Mono audio sources will require the use of an RCA Y-cable to connect to both right and left inputs.

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Once the connections have been made, turn the console on and press the SOURCE button until the on-screen display's input indicator reads "AUX".



Wired headphone jacks

The wired headphone jacks are located underneath the A/V Aux input jack cover. You can connect wired headphones with standard 1/8" stereo mini connectors to each of the wired headphone jacks.

Using the Parental Attention/MUTE Switch

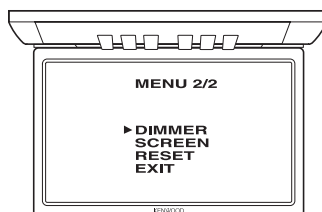
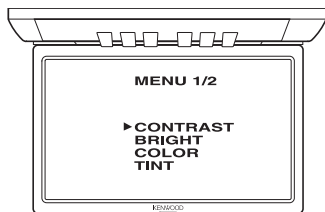
The Parental Attention/MUTE Switch (mounted separately at the time the console was installed) allows you to get the attention of passengers in the rear seat. Pressing the switch mutes all audio output from the console (including audio sent to wireless headphones) and displays the following message on the console's screen:



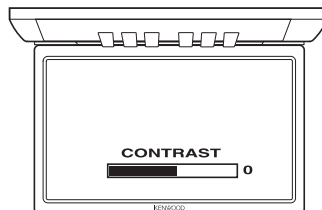
Pressing the switch while the message is displayed removes the message and restores the audio.

Adjusting the Video Picture

Press the MENU button repeatedly to cycle through the following adjustments:



When the adjustment you want appears on the screen, use the VOLUME + and VOLUME - buttons to perform the adjustment (CONTRAST adjustment shown):



Picture Quality settings

CONTRAST setting

Use the volume buttons to increase and decrease the whiteness in the picture.

BRIGHTNESS setting

Use the volume buttons to make the picture brighter or darker.

TINT setting

Use the volume buttons to tint the color towards red or green.

COLOR setting

Use the volume buttons to increase or decrease the color depth.

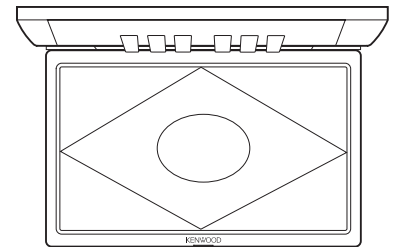
Screen Mode settings

The LZH-70W's LCD screen is a widescreen (16:9) format. Since a conventional video picture (4:3 format) will not fill the screen completely, you can select from four different ways to view a 4:3 picture.

- Press the MENU button to select the SCREEN adjustment, and use the VOLUME buttons to cycle-through the following screen modes:

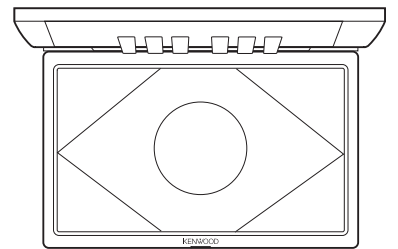
Full Picture mode

The 4:3 picture is stretched so it fills the entire width of the LZH-70W's screen. The image will appear distorted (wider than normal).



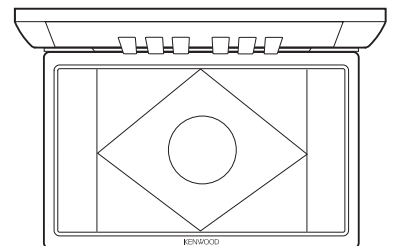
Zoom mode

Zooms-in on the central portion of the picture so it fills the LZH-70W's entire screen. The image is not distorted, but video resolution will be reduced.



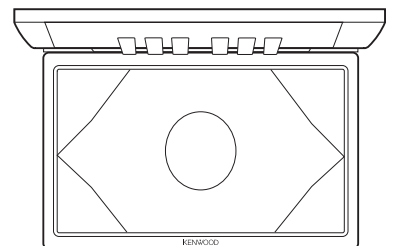
Normal Picture mode

The entire 4:3 picture is displayed without alteration in the center 75% of the LZH-70W's screen, with gray bars on either side (called "windowboxing").



Cinema mode

Zooms-in on the central portion of the 4:3 picture, slightly stretching the image vertically. The edges of the image are stretched horizontally to fill all of the LZH-70W's screen. The image will appear slightly distorted, and video resolution will be reduced.



Resetting the adjustments

You can reset all of the Picture Quality and Screen Mode adjustments to their factory settings:

Press the MENU button until "RESET" appears on the screen.

- Press the VOLUME + button to reset the adjustments to their factory settings.
- Press the MENU button to retain the adjustments you have made.

Changing the Dome Light Bulbs

1. Use a flat blade screwdriver to pry the dome light cover off.
2. Remove the burned-out bulb.
3. Replace the bulb with a 5-Watt (12V) Type 158 T10 Wedge bulb.
4. Snap the dome light cover back on.

Troubleshooting Guide

What might appear to be a malfunction in your unit may just be the result of misoperation or miswiring. Before calling for service, first check the following for possible problems.

PROBLEM	CAUSE	SOLUTION
The console does not power-up	The fuse has blown The vehicle's ignition lacks an ACC position	Replace the fuse with one of the same rating Connect the console's ignition wire and battery wire together
Buttons do not operate, or operate erroneously	The microprocessor is malfunctioning	Reset the microprocessor (see 'Resetting The Microprocessor' on page 3)
No video picture	Improper connection(s) to video source(s)	Verify that the video sources are properly connected
The video image is dark	The screen is cold	Liquid Crystal Display screens may appear darker when they are cold. Once you turn the console's power on and the screen's temperature rises, its normal brightness will return.
No sound from wireless headphones	The headphone's power is off The headphone's batteries are exhausted	Make sure the headphones' power switch is turned on Replace the headphone batteries with fresh ones

Specifications

Screen Size7.0" (diagonal)
 LCD Display Aspect Ratio16:9
 LCD Display Total Resolution336,960 pixels*
 Viewing Angle+30°/-60° (vertical), 120° (horizontal)
 Minimum Brightness>= 350 cd/m²
 Typical Brightness400 cd/m²
 Video Input (Composite Signal)1Vp-p/75ohms
 Audio Input1,2VRMS

Video Output (Composite Signal)1Vp-p/75ohms
 Audio Output1.2VRMS
 Headphone Output0.1W/16ohms (stereo)
 Dimensions12" (L) x 8³/₁₆" (W) x 1¹⁵/₁₆" (H)
 Weight2.75 lb
 Operating VoltageDC 11V ~16V
 Power Consumption0.97A ~ 1.15A
 Operating Temperature14°F - 140°F (-10°C - 60°C)

* Although the effective pixels for the liquid crystal panel is given as 99.999% or more, 0.001% of pixels may not light or may light incorrectly.

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