

User Manual

TV Antenna
AR-161

DEXP

Dear Customer,

Thank you for choosing our products.

We are pleased to offer you appliances and devices designed and manufactured to the highest standards of quality, functionality, and design. Before using the device, please read this manual carefully. It contains important information regarding your safety, as well as recommendations for the proper use and care of the product. Please keep this manual in a safe place and use it as a reference guide during future operation of the product.

Intended Use

A TV antenna is a device designed to receive analog and digital TV signals.

Safety Precautions

- Before connecting to a TV or other device, make sure the power to the devices is turned off. The antenna is powered by connecting it to the TV's USB connector.
- To avoid a short circuit, do not expose the device to any liquids, and do not place open containers of liquid near it.
- Before turning on the device, make sure it is securely connected to the power supply.
- Do not place any foreign objects on the device housing.
- Install the device in a dry, well-ventilated area. Keep it away from heating appliances, direct sunlight, mechanical vibration, moisture, and dusty environments.
- Protect the device from open flames, such as lit candles.
- After prolonged exposure to cold, allow the device to stand at room temperature for 1 hour before turning it on.
- Disconnect the antenna from all other devices and power if you do not plan to use it for an extended period, as well as before a thunderstorm. Do not touch the device or the power cord during a thunderstorm.
- Never use abrasive materials or organic solvents (alcohol, gasoline, etc.) to clean the device. A small amount of neutral detergent may be used. Always disconnect the antenna from the power supply and other devices before cleaning.
- Do not use the device if visible damage is detected. Unplug it immediately and contact an authorized service center.
- Do not use the device if the power cord, plug, or other parts are damaged. Ensure the power cord and plug are kept away from hot surfaces.

Specifications

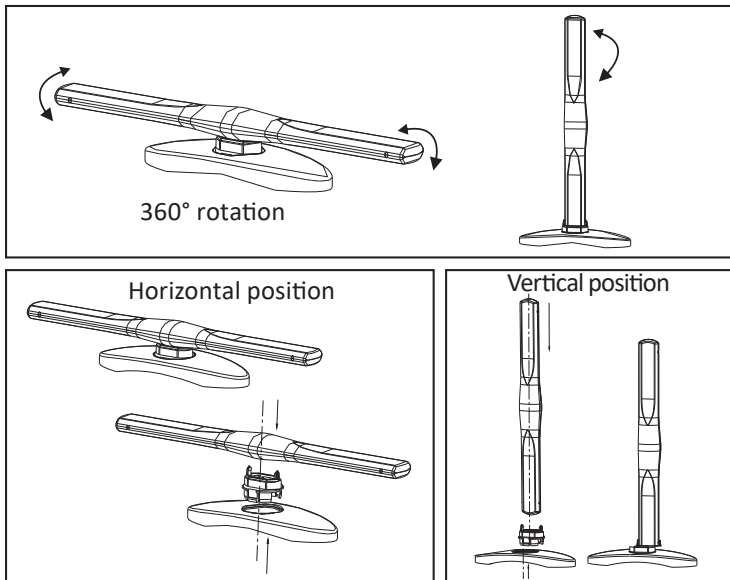
- Model: AR-161.
- Trademark: DEXP.
- Frequency range: 170–860 MHz.
- Supported bands: VHF/UHF.
- Max. gain: 25 dB.
- Supported broadcasting standards: DVB-T2.
- Impedance: 75 Ω .
- Power supply: 5 V, TV USB port.
- Horizontal or vertical placement.
- Placement: Indoor.
- Package contents: TV antenna, user manual.

Installation

1. Install the antenna at the maximum possible height.
2. Point the antenna directly toward the TV tower.
3. If necessary, use a signal amplifier to improve reception quality.

Note: To ensure the best possible signal reception, follow these guidelines:

- Keep the antenna away from sources of interference, which may include high-power devices such as air conditioners, elevators, hair dryers, microwave ovens, etc.
- Place the antenna as close to the window as possible.



Impact of TV Tower Location on Antenna Performance

The distance from your home to the TV tower is one of the most important factors affecting signal reception quality. Different distances require different types of antennas:

- Short distance (up to 20 km): If the tower is nearby, even a passive indoor antenna will work well. The signal will be strong and stable.
- Medium distance (20–50 km): At this distance, an active indoor antenna or a passive outdoor antenna with a signal amplifier may be required.
- Long distance (over 50 km): When located far from the tower, it is recommended to use an active outdoor directional antenna with an amplifier. It is important to orient the antenna correctly toward the TV tower for optimal reception.

In addition to distance, other factors affect signal quality:

- Terrain: Mountains, hills, and tall buildings can obstruct the signal.
- Weather conditions: Rain, snow, and fog can weaken the signal.
- Electromagnetic interference: Household appliances, reinforced concrete, Wi-Fi routers, and power lines can create interference that degrades reception quality.

Antenna Range Diagram



How to Identify a TV Tower

- Height and shape: TV towers are usually very tall structures. The higher the tower, the greater the coverage radius. They can reach several hundred meters in height and often have a lattice metal structure.
- Antennas: Numerous antennas of various shapes and sizes are mounted on the towers.
- Location: TV towers are typically built on elevated terrain or high buildings to ensure maximum signal coverage. In cities and large settlements, they are often found in designated areas.
- Fencing and restrictions: TV towers are often surrounded by fences and warning signs prohibiting unauthorized access. This is due to safety requirements.
- Flashing lights: To prevent collisions with aircraft, TV towers are usually equipped with flashing lights visible at night.
- Color: Towers are typically painted in red and white.
- Support equipment: Near the towers, you may notice technical buildings and generators that keep the equipment operational.

Digital Channel Support

To determine whether your TV supports digital television (DVB-T, DVB-T2, or similar standards), follow these steps:

- Check your TV specifications in the user manual or on the manufacturer's website. Your TV should support DVB-T, DVB-T2, ATSC, or other digital standards.

- Turn on the TV and go to the settings menu. In the “Channels” or “Tuner” section, try performing an “Auto-scan.” If the menu offers a digital TV option (sometimes labeled as “DTV”), your TV supports digital channels.
 - Look for markings and stickers on your TV. Some TVs have stickers indicating digital TV support. Look for labels such as “DVB-T2,” “ATSC,” etc.
 - Contact a sales representative or a home appliance specialist. They can tell you for sure whether your TV supports digital television.
 - Connect an external antenna and try scanning for channels using the auto-scan function. If your TV finds and displays digital channels properly, it supports digital television.
- Note:** If the TV does not support digital TV, you will need to connect a TV tuner to the TV and then connect the antenna to the tuner to boost the signal. The antenna cable plugs into the tuner, which converts the received signal into a format suitable for the TV. The decoded signal is then transmitted to the connected TV, allowing you to watch digital TV.

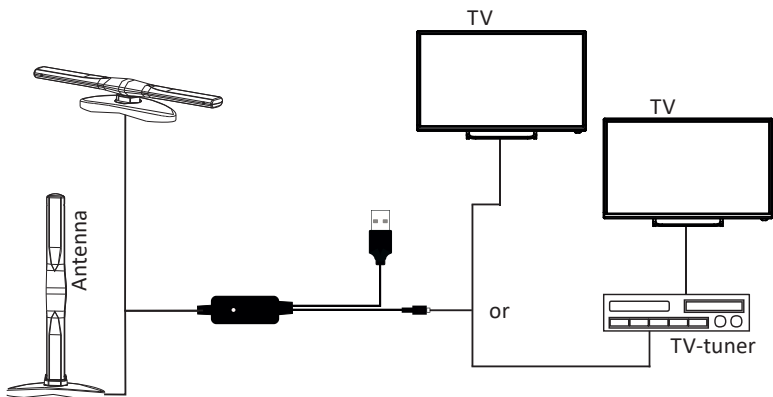
Checking Antenna Direction on TV*

- The antenna will receive the signal better if it is pointed toward the TV tower/re-lay station. To do this, monitor the signal strength and quality from the antenna: on the TV tuner remote, press the “INFO” button. Press the button several times.
- Two bars should appear on the TV screen: “Signal Level” and “Signal Quality.”
- To achieve maximum values for these parameters, rotate the antenna every 5 seconds and check whether the numbers on the screen change.

* Does not work on Smart TVs.

Connection Diagram

1. Connect the antenna's USB cable connector to the USB port on your TV.
 2. Connect the TV cable to the antenna input on your TV or digital tuner.
- Note:** This antenna can be connected directly to a TV or to a digital tuner.



All images and diagrams are for illustrative purposes only and may differ from the actual product.

Rules and Conditions for Installation, Storage, Transportation, Sale (Distribution), and Disposal

- Storage and transportation of the device must be carried out exclusively in dry, ventilated areas at temperatures not below -20 °C.
- Sale or distribution of the device must be carried out in accordance with local legislation.
- Disposal of this device must be carried out in accordance with local waste recycling regulations. By ensuring proper disposal of this product, you help prevent potential harm to the environment and human health resulting from uncontrolled waste disposal and promote the sustainable reuse of material resources. For more detailed information on collection and disposal points for this product, please contact your local municipal authorities or household waste collection service.

Troubleshooting Guide

Issue	Solution
No signal	Make sure digital TV broadcasting in the DVB-T2 standard is available in your region and that you are within the reliable signal coverage area

Issue	Solution
Image freezes or breaks up / No image / Audio drops out or is missing	Weak signal level. Try moving or reorienting the antenna to improve signal strength and quality
	Check that power is being supplied to the antenna. If necessary, connect the antenna to a different USB port that provides 5 V power
	Digital TV signals can only be received when DVB-T2 broadcasts are available. Poor reception quality of DVB-T2 signals due to insufficient signal level when operating in an interference zone, at the edge of, or outside the reliable coverage area (including due to terrain, landscape, and buildings) is not a product defect. To ensure better reception quality, check the following conditions for antenna placement: Keep the antenna at a sufficient distance from high-power devices such as air conditioners, elevators, dryers, microwave ovens, electric stoves, etc. Place the antenna as close to the window as possible, pointing in the direction of the transmitting antenna

Warranty Information

The manufacturer guarantees the device will function properly throughout the warranty period and be free from defects in materials and assembly. The warranty period commences on the date of purchase and applies to new products only. Warranty service includes free repair or replacement of defective parts that fail during the warranty period, provided the failure is not caused by consumer misuse and the product is operated in accordance with the user manual. Repairs or part replacements shall be performed at authorized service centers.

Warranty Period: 15 months / **Service Life:** 24 months

For the up-to-date list of authorized service centers, please visit:

<https://www.dns-shop.ru/service-center/>

Additional Information

Manufacturer: ZhongShan Wanlitong Antenna Equipment Co.,Ltd

Anle Industrial Area, Guangzhu Road, Dongfeng, Zhongshan, Guangdong, China.

Made in China.

Product specifications, information and appearance are subject to change without prior notice, for quality improvement of our products.

