WEP253RPG

Emergency Broadcast Multi-mode Terminal

Description

WEP253RPG is a cloud broadcast multi-mode receiver terminal specially developed for broadcasting systems. This professional device integrates FM reception, audio decoding, signal amplification, and outdoor waterproofing, and supports wireless signal transmission. Powered by DSP digital audio processing technology, it delivers high-fidelity audio output. It features RDS subcarrier decoding and high-reliability signal encryption to prevent unauthorized broadcasts. The built-in lightning protection discharge tube safeguards the device from lightning strikes, ensuring the safety of the entire broadcast system. It is suitable for urban and rural cloud broadcasting systems, as well as outdoor or indoor wireless/IP sound reinforcement in schools, factories, parks, squares, amusement parks, and other locations. When used with the company's wireless transmitter, multifunctional control host, or cloud platform paging device, it can form a complete broadcasting system. The built-in wireless 4G/5G module supports IP network management and is compatible with all major carriers, including China Mobile, China Unicom, and China Telecom.

Features

- All-weather design with waterproof housing, suitable for both indoor and outdoor use; long service life, high FM sensitivity, and clear, bright audio output from the power amplifier.
- Supports multi-mode channels with wireless addressable reception, RDS subcarrier decoding, and high-reliability encryption methods to ensure broadcast security. Compatible with IP broadcast and 4G/5G cloud broadcast message channels.
- Built-in gas discharge tube capable of absorbing high voltage and strong current, protecting the device

from lightning strikes and ensuring high reliability.

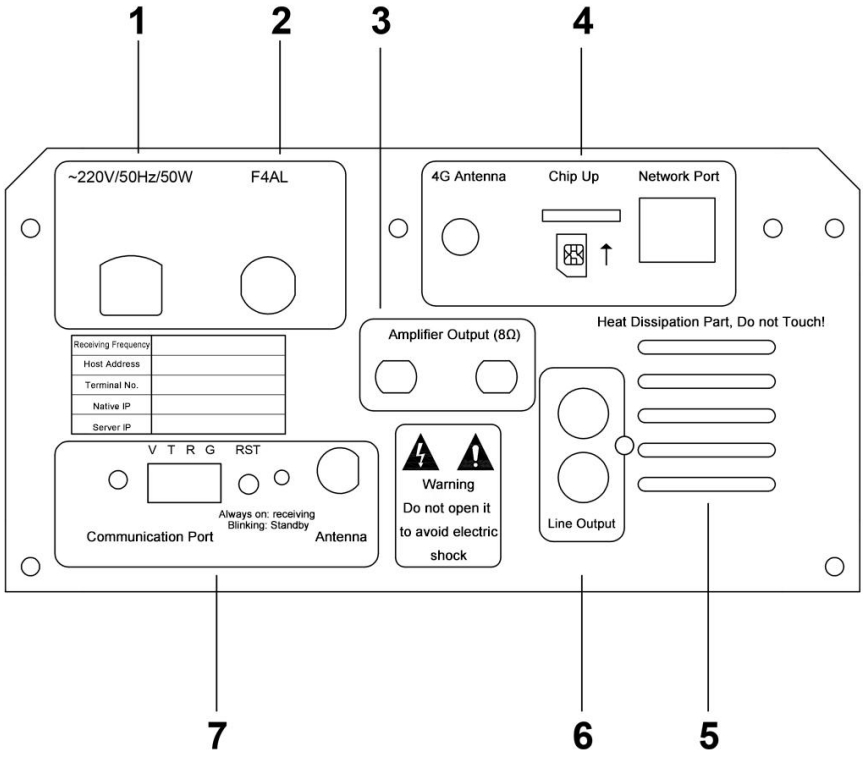
- Digital receiving unit for high-quality audio output.
- Support the remote timing and digital volume control of the remote upper host to solve the problem that mechanical potentiometer will fail for a long time;
- DSPPA proprietary control protocol with ultra-high sensitivity reception—able to accurately demodulate control signals even under weak signal conditions.
- Customizable reception modes: users can choose fixed-frequency reception or automatic frequency tracking for enhanced adaptability.
- Built-in high-fidelity amplifier circuit with comprehensive protection features.
- With working status indicator, easy to determine the device failure;
- Reserved communication port for convenient parameter configuration and firmware upgrades.
- Supports multiple power supply options, including solar, wind, and wired power, depending on project requirements.
- Auto standby when no signal and muted line output, ensuring low power consumption, energy savings, and extended device lifespan.
- Equipped with a unique physical code (non-rewritable), along with a remotely modifiable resource code.
- Fade-in volume feature on startup broadcasts, with continuously adjustable volume for routine broadcasts (cloud broadcast volume not adjustable).
- Remote web-based management for configuring local IP address, server address, receiving frequency, and resource code.
- Supports remote parameter configuration (including volume and frequency) via management platform.
- Supports zone-based broadcasting and volume control.
- Capable of receiving and processing upper-level FM signals, demodulating audio content and responding with corresponding play/stop actions.
- Capable of receiving and processing upper-level IP signals (via wired or 4G/5G connection), demodulating both audio and control signals and responding accordingly.
- Built-in short-circuit protection for amplifier output.
- One-touch reset function and comprehensive amplifier protection, including short-circuit, overheating, and overload protection.

Specifications

Model		WEP253RPG
FM Reception	Reception Frequency	76-108MHz
	Frequency Response	180Hz-15KHz
	SNR	≥60dB
	Receiving Sensitivity	2-100dBuV
	Data Demodulation	57 kHz, RDS encoding
Network Audio Decoding	Decoding or Encoding	MPEG-1 Layer 2
	Sampling Rate	48KHz
	Sampling Accuracy	24-bit
	Bit Rate	64Kbps
Line Output & Ports	1×IP Input	100/1000Mbps，UDP Protocol
	1×USB Input	2×RCA
	Output Interface	1Vrms
	Output Level	≤100Ω
	Output Impedance	180Hz-15KHz
	Frequency Response	≥60dB
	SNR	≤0.3%

	Distortion	USB/TTL Serial Port
	USB Communication Method	All-Network Access
Power Supply	Peak Output Audio Power	≥25W/8Ω（THD=0.5%）
	Standby Power Consumption	≤0.85W
	Max. Load Power Consumption	≤60W
	Voltage & Frequency	AC100-240V/50Hz

Front / Rear Panel



1. AC220V/50Hz/50W Power Input Cable.
2. AC220V Power Fuse – 4A
   If the power fuse is blown, please replace it with a fuse of the same specification; if it blows continuously, it means there is a fault inside the machine. Please replace the fuse after eliminating the fault.
3. 8Ω/25W Amplifier Output Port.
   Connect to an 8Ω constant impedance speaker.
4. 4G Antenna, SIM Card Slot, and Network Port
5. Cooling Ventilation Window.
   Do not block the ventilation port under any circumstances.
6. Audio Output Interface.
   Can be connected to an external power amplifier.
7. (1) Antenna Interface

Connect an antenna for RDS wireless reception or a coaxial cable for RDS wired reception.

(2) Status Indicator light.

A steady light indicates that the terminal is receiving a signal; a flashing light indicates standby mode.

(3) USB Communication TTL Port

Used for firmware upgrades, debugging, and maintenance. (Note: For IP/4G/5G versions,do not use this port with a Bluetooth configurator to modify parameters.)