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> Portable Pocket Radio, ATS120 Receiver SI4732 ESP32 BT 150K-30Mhz 64M-108Mhz Frequency Amplitude Modulation LSB USB All Band Modes Adjustable 2.4inch Digital TFT Display Rotary Encoder Knob

Mulcort ATS120

Mulcort ATS120 Portable Pocket Radio User Manual

Model: ATS120

INTRODUCTION

The Mulcort ATS120 is a compact and versatile portable pocket radio designed for a wide range of listening experiences. It features a SI4732 chip, ESP32 microcontroller, Bluetooth connectivity, and a 2.4-inch TFT touchscreen display. This radio supports Frequency Modulation (FM), Amplitude Modulation (AM), Lower Sideband (LSB), and Upper Sideband (USB) multi-mode reception, including RDS functionality for FM. With its built-in 40mm speaker and enhanced Bluetooth stereo audio transmission, it offers a high-fidelity audio experience. The ATS120 is equipped with an 820mm ultra-long rod antenna and a durable aluminum alloy housing, making it ideal for portable use.

SAFETY INFORMATION

Please read all safety instructions before using the device. Keep this manual for future reference.

- **Warning:** Please dispose of the packaging materials properly after use to avoid choking hazard.
- Do not expose the device to extreme temperatures, direct sunlight, or high humidity.
- Avoid dropping or subjecting the device to strong impacts.
- Do not attempt to disassemble or modify the device. This may void the warranty and cause damage.
- Use only the provided TYPE-C cable for charging.

PACKAGE CONTENTS

Ensure all items are present in the package:

- 1 x Mulcort ATS120 Receiver
- 1 x TYPE-C Charging Cable
- 1 x Lanyard

PRODUCT OVERVIEW



Figure 1: Front view of the ATS120 radio, highlighting the 2.4-inch TFT color touchscreen display and integrated speaker grille.

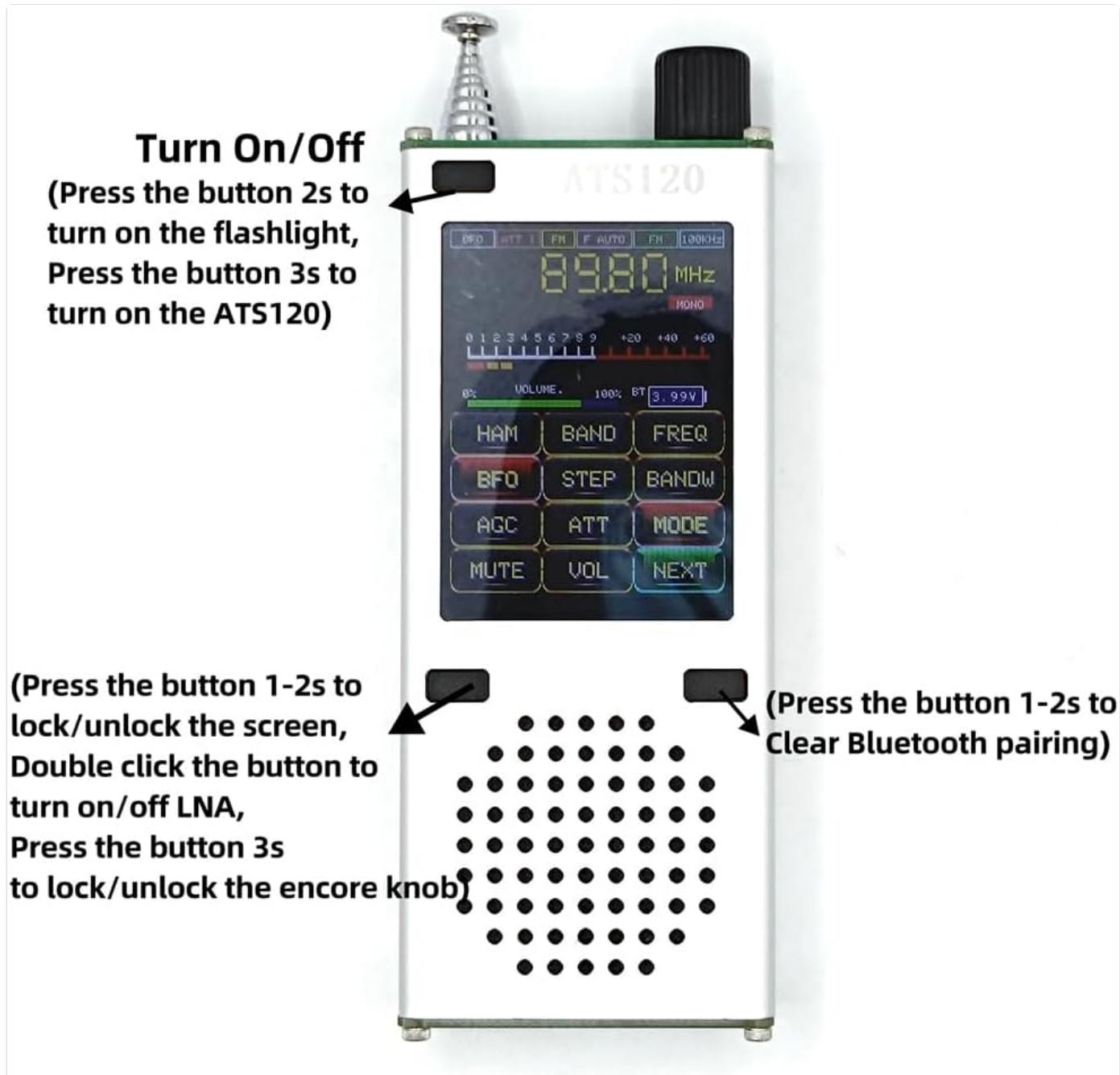


Figure 2: Front panel controls and display functions. The top left button turns the device on/off (3s press) and flashlight (2s press). The bottom left button locks/unlocks the screen (1-2s press), turns LNA on/off (double click), and locks/unlocks the encoder knob (3s press). The bottom right button clears Bluetooth pairing (1-2s press).



Figure 3: Top panel of the ATS120, featuring the retractable antenna, 3.5mm earphone jack (also functions as FM antenna input), USB-C charging port, and the main rotary encoder knob for tuning.

he bottom 3.5mm external antenna interface design makes it can be connected to various antennas



Figure 4: Bottom panel of the ATS120, revealing the 3.5mm external antenna interfaces for Shortwave (SW/SSB) and Medium Wave (MW) reception, allowing connection to various external antennas.

Built-in 40mm large size speaker



Figure 5: Detail of the integrated 40mm large-size speaker, providing clear audio output.

SETUP

1. Charging the Battery

Before first use, fully charge the ATS120 radio. Connect the provided TYPE-C cable to the USB-C port on the top of the radio and the other end to a standard USB power adapter (not included) or a computer USB port. The LED indicator will show charging status.

2. Powering On/Off

To power on the ATS120, press and hold the top-left button for approximately 3 seconds. The display will light up. To power off, press and hold the same button for 3 seconds until the display turns off.

3. Antenna Extension

For optimal reception, especially for FM and Shortwave bands, fully extend the telescopic rod antenna located on the top of the device.

OPERATING INSTRUCTIONS

1. Basic Operation

- **Tuning:** Use the rotary encoder knob on the top right to tune to desired frequencies.
- **Volume Control:** Adjust volume using the on-screen controls or dedicated buttons if available.
- **Mode Selection:** The touchscreen allows selection between Frequency Modulation (FM), AM, LSB, and USB modes.
- **Screen Lock:** Press the bottom-left button for 1-2 seconds to lock or unlock the touchscreen. This prevents accidental input.
- **Encoder Knob Lock:** Press the bottom-left button for 3 seconds to lock or unlock the rotary encoder knob.
- **Flashlight:** Press the top-left button for 2 seconds to turn the built-in flashlight on or off.

2. Advanced Features

- **Bluetooth Connectivity:** The ATS120 supports enhanced Bluetooth stereo audio transmission. To clear Bluetooth pairing, press the bottom-right button for 1-2 seconds.
- **LNA Preamplifier:** Double-click the bottom-left button to toggle the LNA (Low Noise Amplifier) preamplifier on or off. This can improve reception in weak signal areas.
- **RDS Function (FM):** When in FM mode, the radio supports RDS (Radio Data System) to display station information where available.
- **Radio Frequency Spectrum Scanning:** Utilize the spectrum scanning function to visualize and identify active frequencies.
- **External Antenna:** For improved reception on SW/SSB and MW bands, connect an appropriate external antenna to the 3.5mm jacks on the bottom of the radio (refer to Figure 4).

MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the radio's surface. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use for extended periods, store the radio in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** To prolong battery life, avoid fully discharging the battery frequently. Charge the device regularly, even if not in use.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Radio does not power on.	Battery is depleted.	Charge the radio using the provided TYPE-C cable.
Poor reception.	Antenna not extended; weak signal area; LNA off.	Fully extend the telescopic antenna. Move to an area with better signal. Double-click the bottom-left button to activate LNA. Consider using an external antenna for SW/MW.
Touchscreen or knob unresponsive.	Screen/knob lock is active.	Press the bottom-left button for 1-2 seconds to unlock the screen, or 3 seconds to unlock the encoder knob.
Bluetooth pairing issues.	Previous pairing data interfering.	Press the bottom-right button for 1-2 seconds to clear Bluetooth pairing and try again.

SPECIFICATIONS

Feature	Detail
Model	ATS120
Brand	Mulcort
Display	2.4-inch Digital TFT Color Touchscreen
Frequency Ranges	FM: 64-108MHz (with RDS) MW: 520kHz-1710kHz SW/SSB: 1730kHz-30000kHz
Modes	FM, AM, LSB, USB
Battery	1 x 3.7V, 1200mAh Lithium Battery
Speaker	Built-in 40mm large-size speaker
Connectivity	Bluetooth, USB (TYPE-C for charging)
Dimensions	120 x 20 x 50mm (4.72 x 0.79 x 1.97 inches)
Weight	Approx. 7.5 ounces (212g)
Material	Aluminum Alloy

WARRANTY AND SUPPORT

Mulcort products are designed and manufactured to the highest quality standards. For specific warranty information regarding your ATS120 Portable Pocket Radio, please refer to the warranty card included with your purchase or contact Mulcort customer support directly.

For technical support, troubleshooting assistance, or any inquiries about your product, please visit the official Mulcort website or contact their customer service department. Contact details are typically available on the product packaging or the brand's official online presence.

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