Irfora ATS-25 Max (TYHDEE22618)

Irfora ATS-25 Max Portable DSP Radio Receiver User Manual

Model: ATS-25 Max (TYHDEE22618)

1. Product Overview

The Irfora ATS-25 Max is a portable DSP radio receiver featuring an enhanced Si4732 chip and a 2.8-inch color touchscreen. Designed for clear data display and an improved user experience, this device offers a wide range of functionalities including HAM frequency modulation, radio search, and various band selections. It is equipped with a built-in rechargeable lithium battery for extended use.

Key Features:

- Compact and lightweight design for portability.
- Durable aluminum alloy casing.
- 2.8-inch color touchscreen for clear data visualization.
- Multifunctional display: time, signal strength, modulation modes, tuning steps, band selection (broadcast, HAM), bandwidth.
- Volume control via encoder with digital bar display.
- Type-C charging interface with a 2000 mAh integrated lithium battery.
- 3.5 mm stereo audio output and 3.5 mm audio frequency modulation antenna interface.
- Radio search function with direct frequency input and HAM amateur band short channel support.
- RDS services support for FM transmitters.

2. Package Contents

The package includes:

- 1 x Irfora ATS-25 Max Radio Receiver

3. Device Layout and Controls

Familiarize yourself with the various buttons, indicators, and screen elements of your ATS-25 Max receiver.

Figure 3.1: Front Panel Controls and Display Overview

This image illustrates the main display and control buttons on the front panel of the Irfora ATS-25 Max receiver. Key elements include the BFO indicator, AGC and ATT indicators, modulation mode indicator, bandwidth indicator, active band indicator, tuning step indicator, MUTE button, frequency unit indicator (MHz/kHz), time display, receiving frequency display, RDS FM station name display, S-meter, volume bar, HAM button, BFO button, STEREO-MONO indicator, VOL button, AGC activator, ATT button, MODE button, NEXT button, STEP key, BAND button, battery level indicator, FREQ button, and BANDW button.

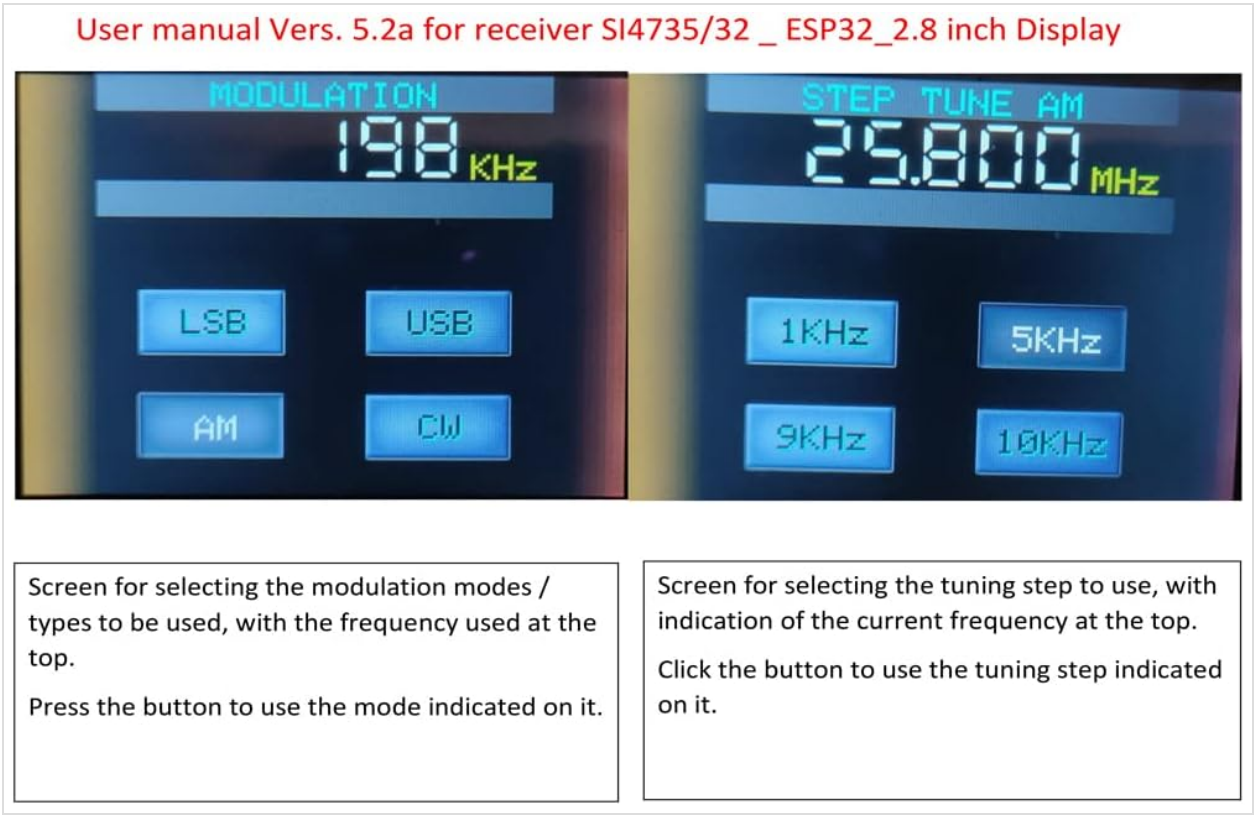

Figure 3.2: Rear Panel Ports and Switches

This image shows the rear panel of the Irfora ATS-25 Max receiver, detailing its connectivity options. From left to right, it features a USB Type-C port for charging and data download, an LED charge indicator, a POWER OFF/ON switch, a 3.5mm phone head (audio output) jack, and a BNC antenna connector. Additionally, there's a switch to select between SSB, LW, MW, FM/SW bands.

4. Setup

Follow these steps for initial setup of your radio receiver.

1. **Charging the Device:** Connect the receiver to a power source using a Type-C USB cable. The integrated 2000 mAh lithium battery supports a maximum charging current of 1.5 A. Ensure the device is fully charged before first use for optimal battery life.
2. **Connecting the Antenna:** Attach a suitable antenna to the BNC antenna interface on the rear panel. For optimal reception, ensure the antenna is properly connected and positioned.
3. **Powering On:** Locate the POWER OFF/ON switch on the rear panel and slide it to the 'ON' position. The display will illuminate.

5. Basic Operation

This section covers the fundamental operations of the ATS-25 Max receiver.

- **Power On/Off:** Use the POWER OFF/ON switch on the rear panel.
- **Volume Control:** The volume is adjusted using the encoder. A digital volume bar is displayed on the

screen. Pressing the encoder can also activate the volume function.

- **Time Display:** The screen displays the current time, often sourced from RDS FM stations.
- **Signal Strength:** The S-meter provides a digital display of the radio signal strength.
- **Mode/Modulation Selection:** Press the **MODE** button to access the page for selecting different modulation types (e.g., AM, FM, SSB).
- **Tuning Steps:** Use the **STEP** key to access the selection page for tuning step increments.
- **Band Selection:** Press the **BAND** button to access the page for selecting broadcast bands or the **HAM** button for amateur bands.
- **Bandwidth Selection:** Use the **BANDW** button to access the page for choosing the desired bandwidth in KHz.

6. Advanced Features

Explore the advanced capabilities of your ATS-25 Max receiver.

6.1. Direct Frequency Entry

The receiver allows for direct input of frequencies using a numeric keypad on the touchscreen.

Figure 6.1: Frequency Entry Screen

This screen is accessed via the **FREQ** key. It displays the current frequency and allows for direct manual entry using the numeric keypad. Use the decimal point button to separate MHz for FM bands. The **EXIT** button discards the entered frequency, **CLS** clears the entire entry, **DEL** deletes the last digit, and **OK** inserts the frequency into the VFO.

6.2. Radio Search Function

The device supports automatic station searching and direct frequency input. It also includes a dedicated short channel for HAM amateur bands. You can activate or deactivate RDS services for FM transmitters and easily view recorded FM transmitters in presets.

6.3. FM Band Scanner

The FM band scanner provides a visual representation of the frequency spectrum.

Figure 6.2: FM Band Scanner Display

This screen displays a graph of frequency (x-axis) versus received signal strength (y-axis). It shows the current frequency, signal quality, and start/end frequencies of the scan. The **SCALE** button provides a zoom function, **PAUSE** temporarily stops the scan (resumes on click, or pauses if encoder is rotated), and **STEP** changes the scanning step. The **BACK** button exits the graphic scanner function.

6.4. Memory Bank

Store and manage your favorite stations using the memory bank feature.

Figure 6.3: Memory Bank Screen

This screen shows the frequency to be stored and allows for managing memory locations. Use the **ADD** button to create a new entry; a black bar will appear for station name input via the encoder. Confirm characters by pressing the encoder or screen. Use **DEL** to delete the last character or press and hold to clear all text. The **EDIT** button changes station names, and the **DEL** button deletes selected memory locations (with confirmation). The **BACK** button exits the memory bank.

6.5. Screen Display Modes

The receiver offers various display modes for different functions and preferences.

Figure 6.4: FM and Light Screen Views

The left image shows the screen when the **FM** button is active, allowing you to switch between FM stations stored in the memory bank for your current location using the encoder. The right image shows the screen with the **LIGHT** button activated, where display brightness can be adjusted via the encoder. This view also features the S-Meter in digital display mode.

6.6. HAM Amateur Band Reception and BFO

Dedicated features for amateur radio enthusiasts.

Figure 6.5: HAM Band Reception and BFO Setting Screens

The left image displays the screen layout for HAM amateur band reception. The right image shows the BFO frequency setting screen, adjustable via the encoder. When the **BFO** button is activated, the BFO frequency is indicated in Hz. In SSB mode, pressing the 1KHz, 100Hz, or 10Hz digits moves the cursor for fine tuning. The **STEP** button changes the BFO tuning step (1Hz, 10Hz, 25Hz).

6.7. Modulation Modes and Tuning Steps

Select the appropriate modulation and tuning increments for your listening needs.

Figure 6.6: Modulation and Tuning Step Selection Screens

The left screen allows selection of modulation modes/types (LSB, USB, AM, CW) with the current frequency displayed at the top. Press the corresponding button to select a mode. The right screen is for selecting the tuning step (1KHz, 5KHz, 9KHz, 10KHz), also showing the current frequency at the top. Click a button to apply the indicated tuning step.

7. Specifications

Feature	Specification
Brand	Irfora
Model Number	TYHDEE22618
Material	Aluminum alloy + PCB
Display	2.8-inch touchscreen
Battery	1 x 2000 mAh lithium battery (included)
Charging Interface	TYPE-C, max. 1.5 A charging current
Stereo Audio Output Interface	3.5 mm
Antenna Interface	BNC
Audio Output Power	1.5 W
Product Dimensions (L x W x H)	18 x 10 x 5 cm (7.09 x 3.94 x 1.97 inches)
Package Weight	400 g (14.11 ounces)
Country of Origin	China

8. Troubleshooting

If you encounter issues with your Irfora ATS-25 Max receiver, consider the following:

- **Device Not Powering On:** Ensure the device is fully charged. Connect it to a power source using the Type-C cable and allow sufficient charging time. Verify the power switch is in the 'ON' position.
- **Poor Reception:** Check that the antenna is securely connected to the BNC interface. Try repositioning the antenna or moving to an area with better signal coverage. Ensure the correct band and modulation mode are selected for the desired frequency.
- **No Audio:** Verify the volume level is not set to zero or muted. Check headphone connections if applicable.
- **Screen Unresponsive:** If the touchscreen is unresponsive, try restarting the device.

9. Maintenance

To ensure the longevity and optimal performance of your receiver:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Avoid using harsh chemicals or abrasive materials. For the touchscreen, use a microfiber cloth.
- **Storage:** Store the receiver in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity.
- **Battery Care:** For long-term storage, it is recommended to charge the battery to approximately 50% every few months to maintain battery health.

10. Warranty and Support

Information regarding spare parts availability is currently unavailable. For warranty details and customer support, please refer to the documentation provided at the time of purchase or contact your retailer. Keep your proof of purchase for any warranty claims.