AKK D835 RX

AKK Diversity RX 5.8G 80CH FPV Receiver Module Instruction Manual

Model: D835 RX

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the AKK Diversity RX 5.8G 80CH FPV Receiver Module. This module is designed to enhance your FPV experience by providing reliable 5.8GHz signal reception with diversity functionality, compatible with FatShark goggles.

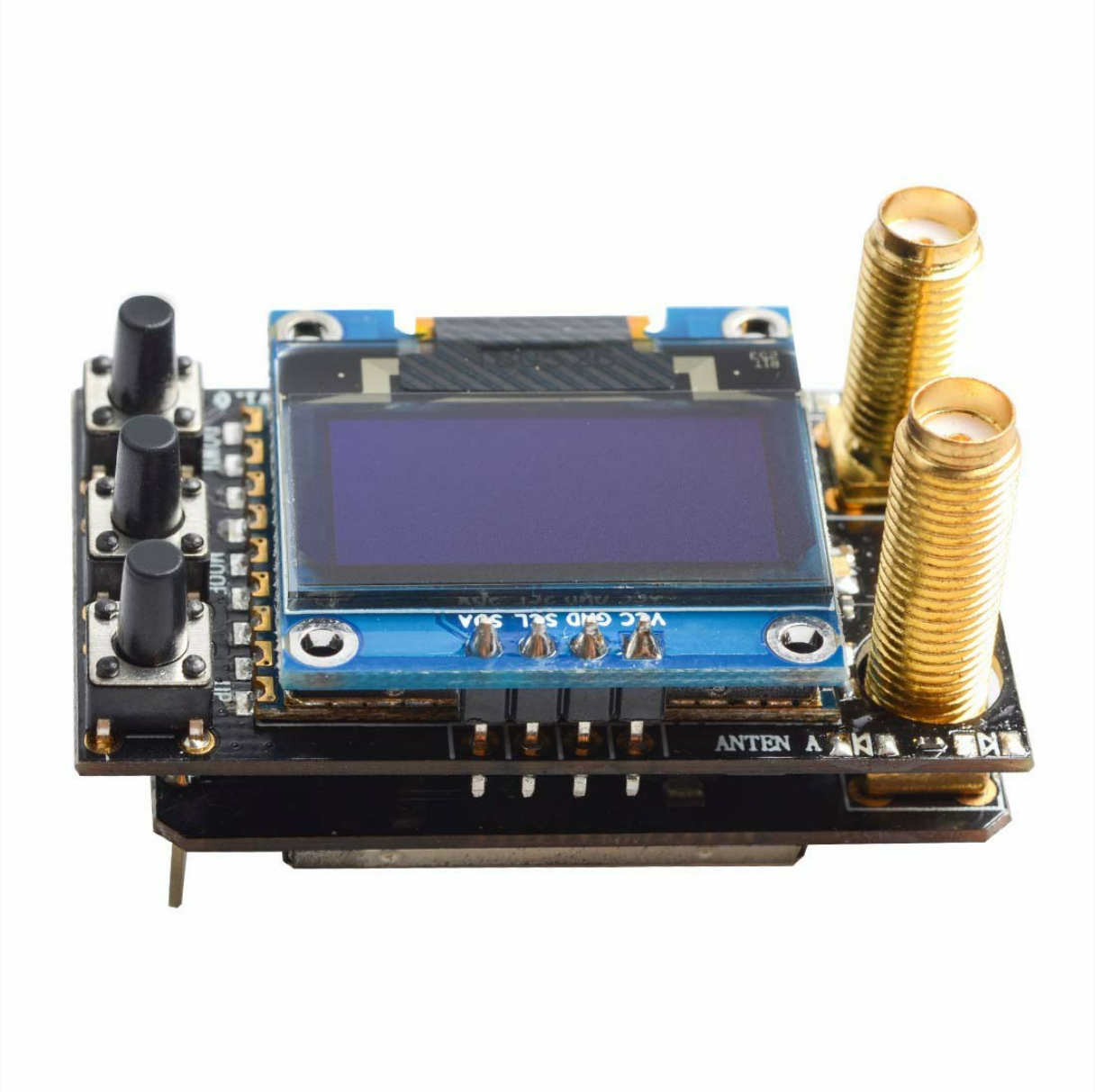


Image 1.1: Front view of the AKK Diversity RX 5.8G 80CH FPV Receiver Module. This image displays the compact design of the module with its pin connectors and antenna ports.

2. Features

- 5.8GHz frequency with 80 channels for wide compatibility.
- Diversity receiver with two RX modules for improved signal stability and reception.
- Built-in low power buzzer for warning indications.
- SMA Female antenna connectors for standard FPV antennas.
- Compatible with FatShark goggles for seamless integration.
- OLED display for clear information and menu navigation.
- Intuitive button interface for easy menu control.

3. Specifications

Specification	Value
Frequency	5.8GHz

Number of Channels	80 Channels
Antenna Connector	SMA Female
Input Voltage	5V
Approximate Dimensions (L x W x H)	9.91 x 7.87 x 4.06 cm (Parcel Dimensions)
Approximate Weight	68 g (Parcel Weight)
Material	Metal, Glass
Manufacturer Reference	D835 RX

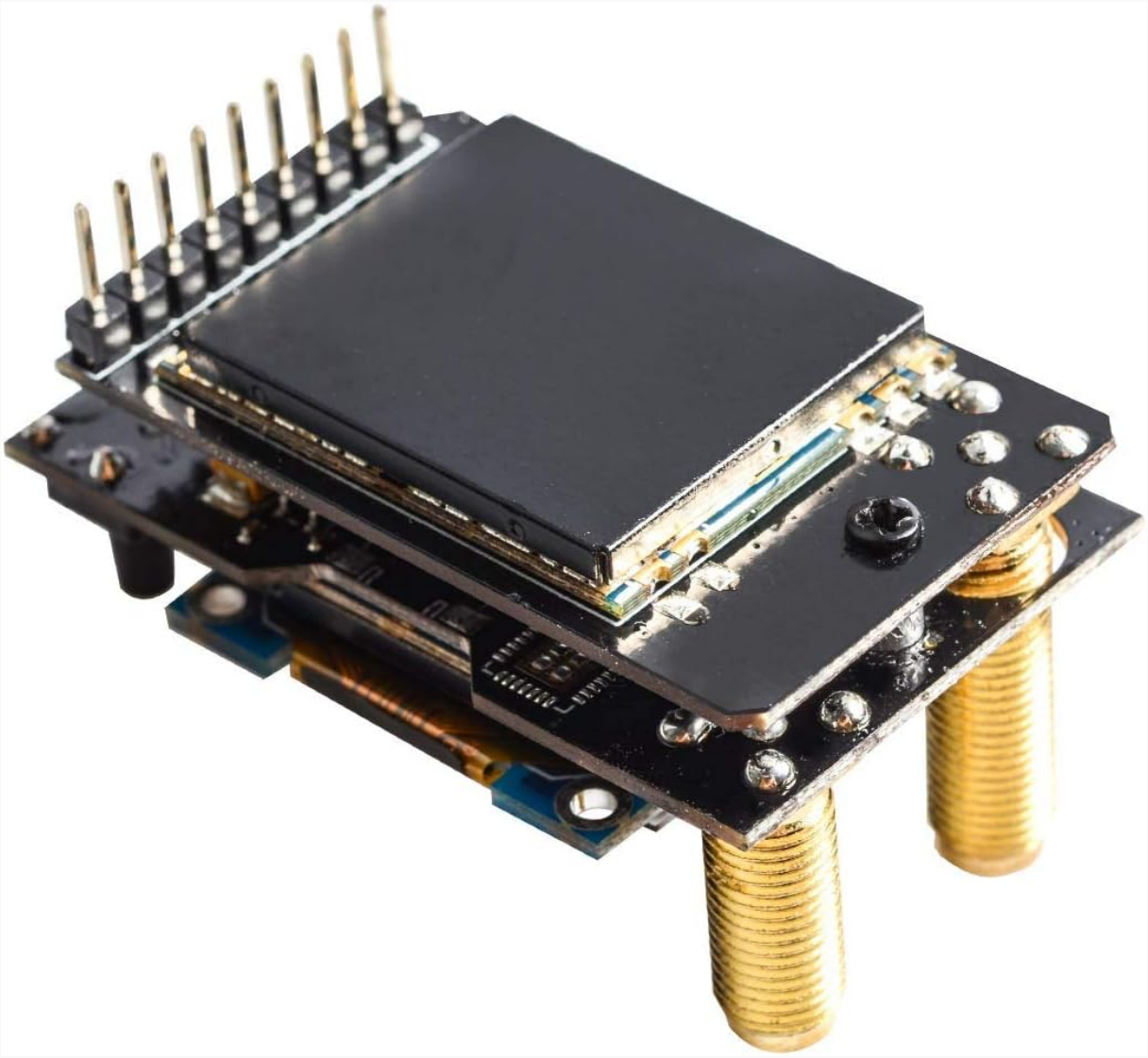


Image 3.1: AKK Diversity RX module with key dimensions indicated. This image provides a visual reference for the physical size of the module.

4. Package Contents

- 1 x AKK Diversity RX 5.8G 80CH FPV Receiver Module

5. Setup

5.1 Physical Installation

The AKK Diversity RX module is designed for integration into compatible FPV goggles, such as FatShark models. Ensure the module is correctly aligned with the module bay pins. Note that the module does not include a cover, and a custom or third-party cover may be required for a secure fit within your goggles.

5.2 Wiring

The module requires a 5V power supply. Connect the wires as indicated in the diagram below:

- **5V:** Connect to a 5V power source (typically red wire).
- **GND:** Connect to ground (typically black wire).
- **Audio:** Connect to the audio input of your goggles (typically orange wire).
- **Video:** Connect to the video input of your goggles (typically green wire).

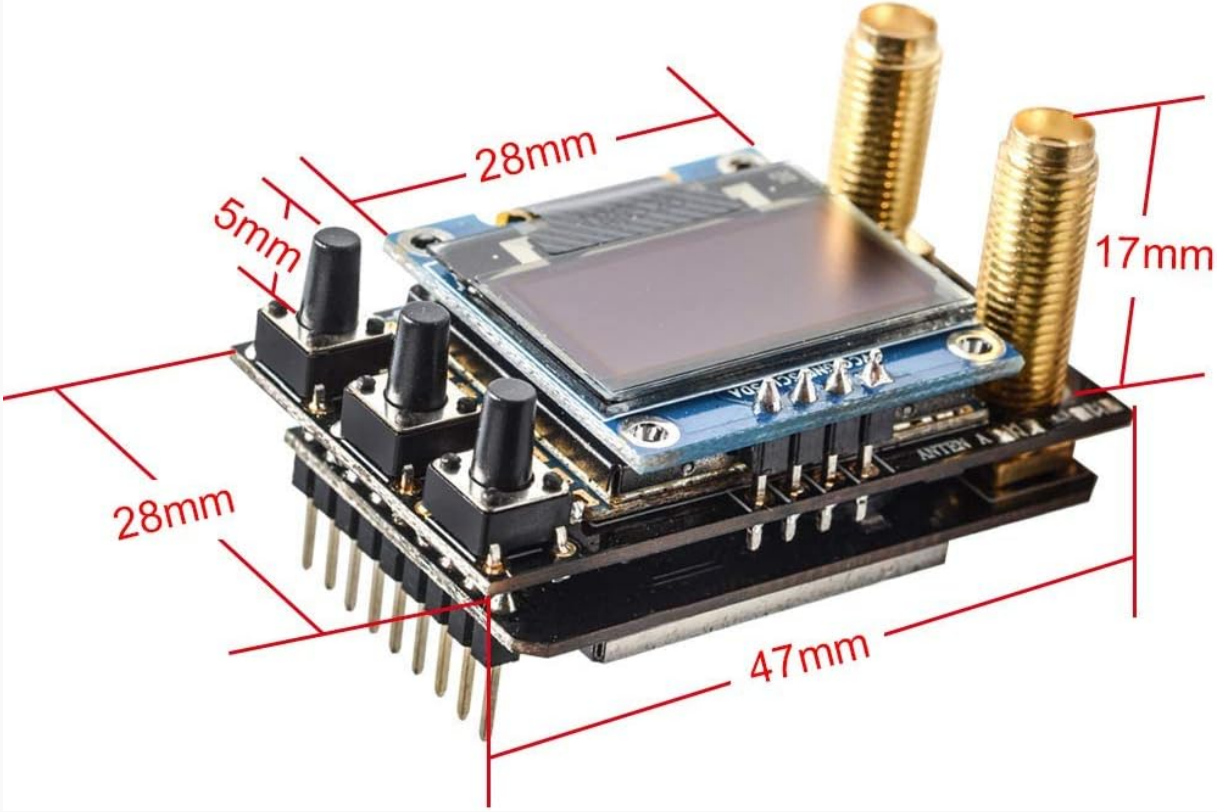


Image 5.1: Detailed wiring diagram for the AKK Diversity RX module. This image illustrates the pinout for 5V, GND, Audio, and Video connections.

5.3 Antenna Connection

Connect two 5.8GHz FPV antennas (not included) to the SMA Female connectors on the module. Ensure connections are secure but do not overtighten.

6. Operation

6.1 Power On

Once installed and connected to a 5V power source, the module will power on. The OLED screen will display the AKK logo during startup.

6.2 Button Functions

- **Select Button:** Confirms selections within menus.
- **Up/Down Buttons:** Navigates through menu options and adjusts values.

6.3 OLED Display Introduction

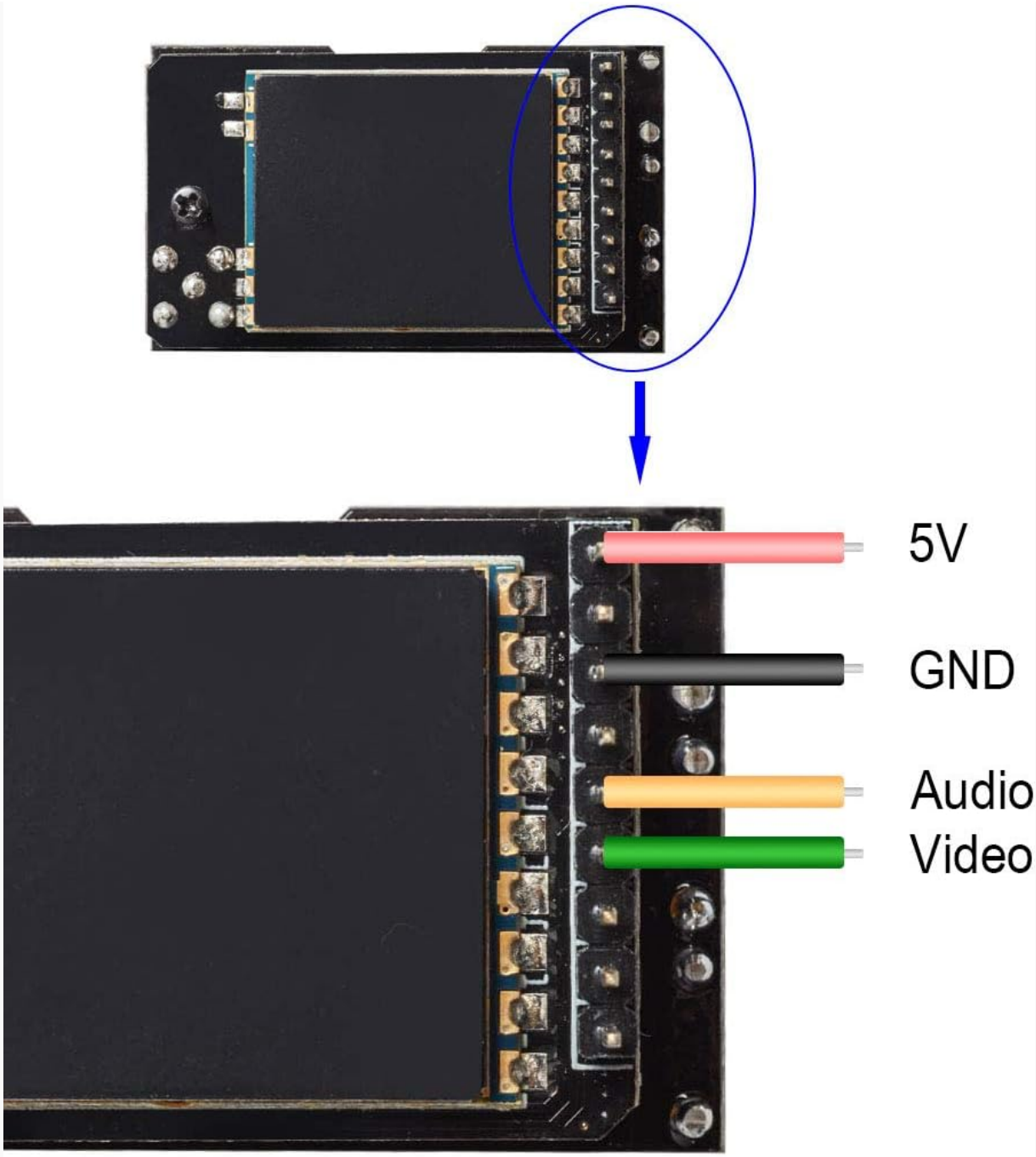


Image 6.1: OLED display showing Active Channel and Saved Channels interface. This image highlights the current channel, frequency, and signal strength indicators for both RX modules.

- **Active Channel:** Displays the current band, channel, and frequency.
- **Signal Strength:** Shows the signal strength of RX module A and B in percentage (%) or dBm.

6.4 Main Menu Navigation

From the active channel display, use the buttons to access the main menu, which includes options for Saved Channels, Band Scanner, and Settings.

6.5 Saved Channels

To save desired channels or delete unwanted ones, press the**Select** button for 3 seconds. The module can save up to 8 channels (A1 to A8). If no operation is performed, the OLED will count down and return to the Active Channel interface.

6.6 Band Scanner

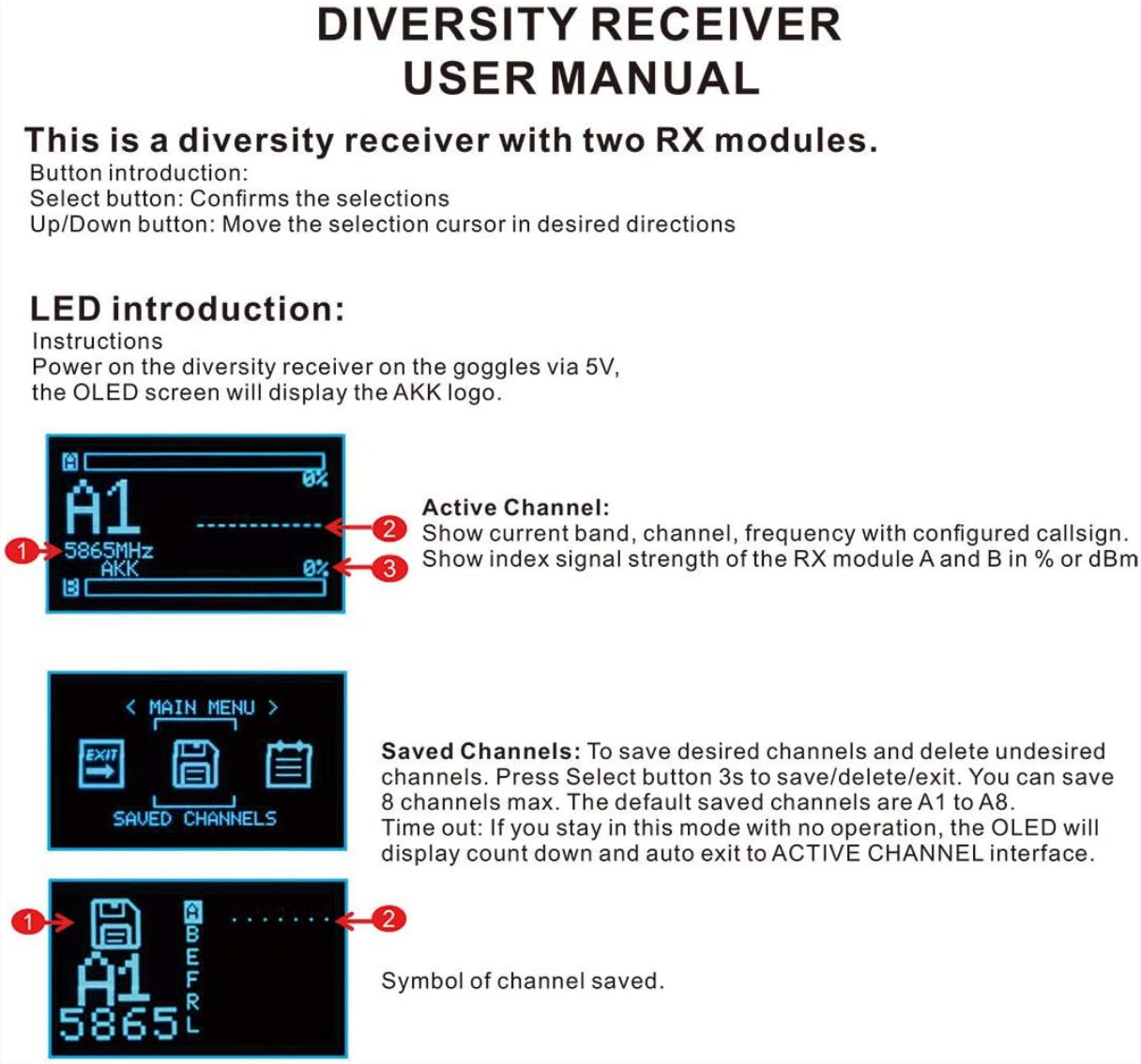


Image 6.2: OLED display showing Band Scanner and Settings menu. This image illustrates the visual representation of signal strength across different frequencies during a band scan.

The **Band Scanner** function searches all available frequencies to identify channels with the strongest signal, assisting in finding clear channels for your FPV video transmitter (VTX).

6.7 Settings Menu

Access the **Settings** menu to configure various functions of the diversity receiver.

6.7.1 Warning (Low Signal Level Buzzer)

The built-in buzzer will activate when the signal level drops below a configured threshold (20%, 35%, 50%, or None). If left in this mode without operation for 10 seconds, it will automatically return to the Active Channel interface.

6.7.2 Auto Lock

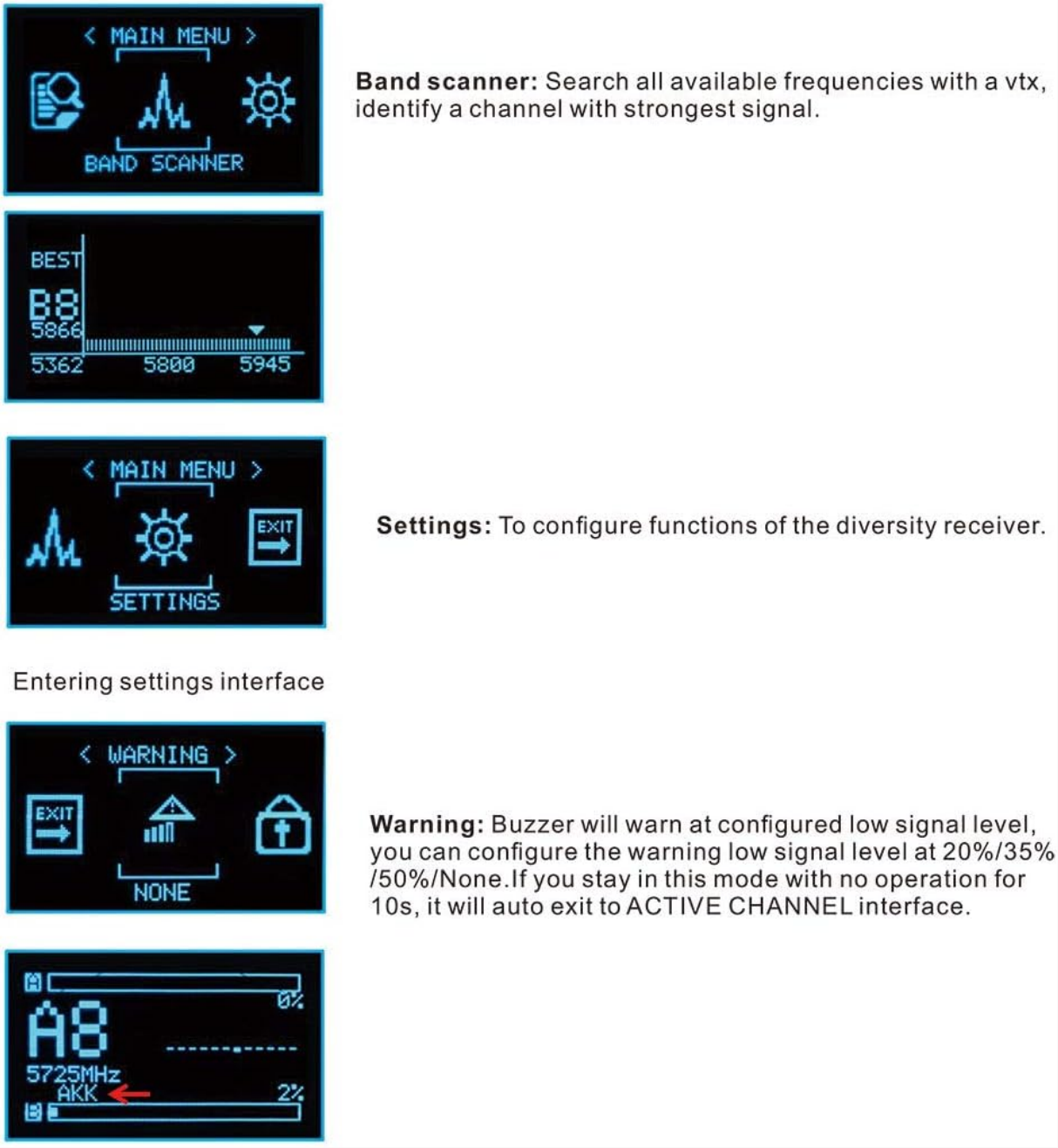


Image 6.3: OLED display showing Auto Lock, Units, Callsign, Speed, and Calibrate settings. This image provides a visual guide to these configuration options.

The **Auto Lock** feature can be set to ON or OFF. When ON, the device will automatically lock after 10 seconds of inactivity. Any button press will be invalid under lock status. Press the **Select** button for 3 seconds to unlock the device.

6.7.3 Units

Configure the signal strength display units to either percentage (%) or decibel-milliwatts (dBm).

6.7.4 Callsign

Set a personalized callsign, up to 9 alphanumeric characters and symbols.

6.7.5 Speed (Signal Detection Speed)

Adjust the signal detection speed with three options:

- **Low:** Designed for free style or long range flying.
- **Normal:** Balanced mode for most pilots.
- **High:** Designed for racing.

6.7.6 Calibrate

Use the **Calibrate** function for fine-tuning the receiver's performance.

7. Maintenance

- Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Avoid exposing the module to extreme temperatures or moisture.
- Regularly check antenna connections for tightness to ensure optimal signal reception.

8. Troubleshooting

- **No Video Signal:** Ensure all wiring (5V, GND, Audio, Video) is correctly connected. Verify that the FPV transmitter is powered on and operating on the same frequency and band as the receiver. Check antenna connections.
- **Poor Signal Quality:** Ensure antennas are securely attached and in good condition. Try different antenna types or orientations. Use the Band Scanner function to find a clearer channel. Check for sources of interference in the operating environment.
- **Module Not Powering On:** Verify the 5V power supply is correctly connected and providing adequate power. Check for any short circuits or damaged pins.
- **Buzzer Constantly Active:** Check the Warning settings in the menu. Adjust the low signal level threshold or set it to 'None' if the warning is not desired.

9. Warranty and Support

For warranty information and technical support, please refer to the official AKK website or contact your retailer. Keep your purchase receipt for any warranty claims.