

SEAFRONT SEAFRONT1fgg3ey28b

SEAFRONT ATU-130 Micro Automatic Shortwave Antenna Tuner

Model: ATU-130 (SEAFRONT1fgg3ey28b)

1. INTRODUCTION

Thank you for choosing the SEAFRONT ATU-130 Micro Automatic Shortwave Antenna Tuner. This device is designed to automatically tune your antenna for optimal performance across the 1.8-50MHz frequency range, handling up to 200W of power. Its compact size and robust aluminum alloy casing make it suitable for both home and mobile use. This manual provides essential information for the safe and efficient operation of your ATU-130.

Overview of the ATU-130 Automatic Antenna Tuner, highlighting its automatic tuning, excellent RF performance, high-quality components, and durable aluminum casing.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the device. Failure to do so may result in injury or damage to the equipment.

- Do not exceed the maximum power ratings specified in this manual.
- Ensure proper grounding of your antenna system and the tuner.
- Avoid operating the tuner in wet or excessively humid conditions.
- Disconnect power before making any connections or disconnections.
- Keep the device away from strong magnetic fields and heat sources.

3. SETUP

Follow these steps to set up your ATU-130 antenna tuner:

1. **Unpack the Device:** Carefully remove the ATU-130 from its packaging and inspect for any damage.
2. **Power Connection:** Connect a 10-15 VDC power supply (center positive) to the 'DC 10-15V' input on the rear panel. Ensure the power supply can provide at least 500mA.
3. **Antenna Connection:** Connect your shortwave antenna to the 'ANT' (UHF) connector on the rear panel.
4. **Transceiver Connection:** Connect your transceiver's antenna output to the 'INP' (UHF) connector on the rear panel.
5. **Grounding:** Connect a reliable ground wire to the 'GND' terminal on the rear panel. Proper grounding is crucial for safety and performance.



Rear panel connections: ANT (Antenna), INP (Input from Transceiver), GND (Ground), and DC 10-15V (Power Input).



The ATU-130 tuner shown with its power input cable connected.

4. OPERATING INSTRUCTIONS

The ATU-130 is designed for automatic operation, requiring no control line from your radio. It features a built-in SWR meter for reference.



Front panel of the ATU-130, featuring the power switch, display, and control buttons.

4.1 Powering On and Initial Check

1. Ensure all connections are secure.
2. Flip the 'POWER' switch to the ON position. The display will illuminate.
3. The device will typically start in 'AUTO' mode.

4.2 Automatic Tuning

The ATU-130 automatically detects an RF signal and initiates the tuning process to achieve the lowest possible SWR.

- Transmit a low-power signal (e.g., 5-10W) from your transceiver.
- The tuner will automatically adjust its internal components. The display will show the SWR value.
- Once tuning is complete, the SWR value will stabilize.

4.3 Manual Tuning (TUNE Button)

If automatic tuning does not yield satisfactory results, or if you wish to manually initiate a tune cycle:

- Press the 'TUNE' button.
- Transmit a low-power signal. The tuner will perform a tuning cycle.

4.4 Bypass Mode (BYPASS Button)

To bypass the tuner and connect your antenna directly to the transceiver:

- Press the 'BYPASS' button. The tuner will become inactive, and the RF signal will pass through directly.
- The SWR meter function is still active in BYPASS mode, providing a direct SWR reading from your antenna. Note that this SWR reading is approximate and for reference only, not a high-precision measurement.

4.5 Power Handling Guidelines

- The maximum operating power is 150W.
- For SSB (Single Sideband) modes, the maximum measurable power is 275W, but it is recommended not to exceed 200W for extended periods.
- For continuous modes (FT8, CW, FM), the power should not exceed 100W.
- If the SWR deviation is significant before tuning, reduce power as necessary.
- For continuous operation at higher power, it is recommended to use a 10-minute ON, 5-minute OFF interval to prevent overheating.

5. MAINTENANCE

The ATU-130 is designed for reliable operation with minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use abrasive cleaners or solvents.
- **Inspection:** Periodically check all cable connections for tightness and signs of wear.
- **Storage:** When not in use for extended periods, store the tuner in a dry, dust-free environment.

6. TROUBLESHOOTING

If you encounter issues with your ATU-130, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	No power, incorrect voltage, or faulty power cable.	Check power supply connection (10-15 VDC, center positive). Ensure power supply is functional.
Tuner does not tune, or SWR remains high.	Antenna mismatch too severe, faulty antenna/cable, or insufficient RF power for tuning.	Ensure antenna and cables are correctly connected and functional. Transmit a low-power signal (5-10W) to initiate tuning. The tuner may not be able to match extremely high SWR.
Display disappears or flickers at higher power (e.g., above 30-40W).	Potential power supply instability or internal component stress.	Ensure your power supply is stable and can deliver sufficient current. Reduce transmit power. If the issue persists, contact support.
Displayed SWR does not match external SWR meter.	Internal SWR meter is for reference only, not high-precision.	The ATU-130's SWR meter provides an approximate value. For precise measurements, use a dedicated, calibrated external SWR meter.
Tuner gets excessively hot during operation.	Operating at high power for extended periods, or poor ventilation.	Adhere to power handling guidelines (e.g., 10 min ON / 5 min OFF for continuous modes at high power). Ensure adequate ventilation around the device.

7. SPECIFICATIONS

Feature	Specification
Model	ATU-130

Feature	Specification
Material	Aluminum Alloy
Frequency Range	1.8 - 50 MHz
Power Supply Voltage	10 - 15 VDC (center positive)
Max Current Consumption	500 mA
Max Operating Power	150 W
Max Measurable Power (SSB)	275 W (Recommended <200W long term)
Max Power (Continuous Modes)	<100 W (FT8, CW, FM)
Min Start-up Configuration Power	5 W
Min Measurable Power	0.1 W
Measurement Accuracy (<10W)	0.1 W
Measurement Accuracy (>10W)	1 W
Max Installed Inductance	8.53 μ H
Min Installation Inductance	0.05 μ H
MCU	PIC18F2520
Capacitor Type	1000V C-channel SMD
Relays	HF32 (10A), HF33 (5A)
Dimensions (L x W x H)	Approx. 155 x 88 x 38 mm (6.1 x 3.5 x 1.5 inches) (excluding projections)
Weight	Approx. 0.5 kg (17.6 oz)

8. WARRANTY

Specific warranty information for the SEAFRONT ATU-130 is not provided in the product details. Please refer to the retailer's return policy or contact the manufacturer directly for warranty terms and conditions.

9. SUPPORT

For technical assistance, troubleshooting beyond this manual, or inquiries regarding your ATU-130, please contact SEAFRONT customer support through their official website or the platform where you purchased the product. Provide your model number (SEAFRONT1fgg3ey28b) and purchase details for efficient service.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question