ANTUNER
Quick Start Manual

Properties

Model Name	AT-100M
Support Radio	Any Radio
Support Antenna	Any Antenna
Frequency Range	1-30Mhz
Power Range	★1-18Mhz or SSB/CW 0.1W-100W ★18-30Mhz or FM/AM/FT8 0.1W-50W
Physical Size	139mm x 74mm x 29mm
Weight	370g
Maximum Power	Max 3W
Charging	Type-C USB 5v/1A(Support overcharge and overdischarge protection)
Battery Capacity	3300mAh
Shutdown Current	About 15μA
Stand-by Current	About 13mA,about stand-by 150-200 hours(no tuning status)
Tuning Standby	Start 1-3 relays need current 130-330mA,about stand-by 10-25 hours.
Charging Time	Fully charge about 4 hours. The LED indicator light is red when charging,green when fully charged.

Tuning

1.First,please connect the radio and antenna respectively.
2.The radio station is set to the frequency range supported by the device, the minimum output power, and the working mode is FM, AM, CW or SSB.
3.Long press the [TUNE] button to achieve tuning or give up tuning, or when the swr exceeds the set value when operating the radio, automatic tuning will also be triggered.
4.Operate the radio station to keep transmitting, at this time, the device will automatically tune to the lowest standing wave and then stop automatically.
5.When the screen shows [SWR] value is 1.0-2.0, the tuning is successful.
6.Set the radio power to the maximum transmission power, frequency, and mode supported by the device to make a call.

Notice

1. **Antenna feeder system**: A good antenna feeder system can improve the tuning success rate and avoid abnormalities during normal power transmission after tuning;
2. **Power supply instructions**: Ensure that the device has sufficient power. It is recommended that the battery voltage is not lower than 3.6V. If the voltage is too low, the device will restart or shut down;
3. **Radio type**: The factory default radio type is 100W, in order to bring you good power accuracy and functional experience, please adjust according to the maximum output power of your radio [FIX RADIO];
4. **Equipment calibration**: The power and standing wave value algorithm of the tuner has been calibrated when the tuner leaves the factory. But in order to ensure the accuracy, please recalibrate the [FIX PWR] and [FIX SWR] parameters after changing the use environment, antenna feeder, and radio. Please refer to the station.
5. **Start tuning**: Please fully confirm the transmission power, frequency, and mode of your radio before starting to tune, so as not to damage the equipment.
6. **Communication operation**: During the normal communication process, please always pay attention to the standing wave and power of your radio station. If there is any abnormality, please stop transmitting in time and check before operating.

ANTUNER
Advanced Configuration

Enter Advanced Function

Turned off, press and hold the [TUNE] button, and then turn on.

	Function	Menu	Range	Suggest	Introduce
1	Buzzer	★BEEP ON	NO/YES	YES	Push button or standing wave alarm
2	User Store	USER COUNT	0-9	0	User defined memory count
3	Tuning Parameters	★TUNE AUTO	NO/YES	YES	Automatically tunes when the VSWR is too high
4		★TUNE COUNT	1-20	8	Number of tuned results automatically stored
5		★TUNE AUTOSWR	1.00-2.50	1.80-2.0	The standing VSWR auto-tunes beyond this value
6		TUNE STOPSWR	1.00-2.50	1.10	Stop Tuning until the tuning result is lower than this value
7		TUNE DELAY	10-80	32-40	Wait for operating time of the relay(ms)
8		★TUNE SETP	1-8	2-4	Tuning step depth, swr will be lowe
9		★TUNE MIN ADC	5-50	30	Start tuning voltage value(15≈0.1W,50≈5.0W),QRP need attention
10	Calibration	FIX RADIO	100W/10W	100W	Set max power of your radio,QRP need attention
11		FIX PWR	60%-150%	100%	Calibration power
12		FIX SWR	60%-150%	100%	Calibration swr
13		★FIX AVG	1-10	3-6	Average value times of power and swr
14	Relay	SWITCH ON	NO/YES	NO	Relay default switching state and affect electricity
15	Test	TEST RELAY	ENTER		Test relay failure
16		TEST ADC	ENTER		Test radio signal power
17	Reset	RESET	ENTER		Reset System all value

★You'll be tweaking these parameters often and are very useful for tuning.
★[TUNE MIN ADC] is signal efficient acquisition voltage when auto-tuning is started.Too low will cause the induced voltage to be too sensitive.It is recommended to set more than "30".QRP users need to adjust this parameter.Refer to [TEST ADC]-[FWD] setting.