



# Entry level receivers & Antennae

There are thousands of options when it comes to radio equipment! To make it easy to start, the following are some entry level radio and antenna options to get you started in receiving stations from all over the world.

## 1.) Great Value ATS-20+ Starter radio receiver < € 35 on Alibaba or Bangood



For the price point the ATS-20+ is hard to beat offering a wide range of features for radio enthusiasts. It supports multiple bands including AM, FM, and shortwave broadcast and Amateur radio bands, providing access to all sorts of broadcasts worldwide. The device is equipped with a digital display for easy navigation and tuning. Enhanced with DSP (Digital Signal Processing) technology, the ATS-20+ ensures clear and stable reception even in challenging conditions. The radio comes with a USB cable and is powered by an internal rechargeable battery. The ATS-20+ is compact and lightweight versatile and user-friendly radio suitable for both beginner and experienced users.

Modulation mode and frequency table:

MODULATION	Frequency Band	BAND
FM	76 - 108 MHz	VHF/LSW
AM WIDE	30,000 KHz	
	28,400 KHz	
	27,500 KHz	
	24,940 KHz	
	21,200 KHz	
	18,100 KHz	
	17,600 KHz	
	15,300 KHz	
AM USB LSB	1.8 - 30 MHz	HF/SW
	14,270 KHz	
	13,600 KHz	
	11,940 KHz	
	10,100 KHz	
	9,600 KHz	
	7,050 KHz	
	6,000 KHz	
	4,850 KHz	
	3,700 KHz	
	1,900 KHz	
	520 - 1720 KHz	MF/MW
	150 - 510 KHz	LF/LW

- PARTS LIST:**
1. Radio body
  2. Antenna
  3. Mini USB-cable

User Manual

**CHARACTERISTIC:**

- All Band Radio (LW, MW, SW, FM)
- High set demodulation chip ensures high sensitivity, high stability and high reliability
- LCD Display
- Large capacity rechargeable lithium battery
- High power external player
- High quality metal case

**KEY MENU:**

BAND+ Frequency Band Stepping + Volume +	BAND- Frequency Band Stepping - Volume -
STEP Am mode frequency fine tuning step	BW Bandwidth switching in AM mode
AGC Gain Mode control	MODE AM mode switching

**TUNE/ BFO/ ATS**

1. Rotary trimming frequency
2. Press in SSB mode to adjust BFO
3. Press auto search radio

Voltage:	5V	Current:	1A
N.W.:	214g	G.W.:	388g
Size:	11.5*88*38CM	Package Size:	15.5*10.2*6.3CM

**Head phone:**

Headphone audio interface can be used as FM antenna at the same time

**Charging method of lithium battery:**

Connect USB power and radio USB port with data cable, The LED indicates charging in red and full in green.

**NOTE:**

The radio can't be turned on or the sound becomes low. Maybe the battery is dead and needs to be charged.

**Example 1: Receiving FM station**

1. Connect the FM antenna
2. Turn FM / AM receiving switch to FM
3. Turn on the power switch
4. The LCD screen starts to show, wait a few seconds to enter the working state
5. Press the button "band + / band -" until FM is displayed in the upper left corner to enter FM working mode
6. Rotate "TUNE / BFO / ATS" to adjust the receiving frequency, Or press "TUNE / BFO / ATS" button to search for radio station automatically and then you will see the frequency change just above the display.
7. After receiving the sound from the radio station, adjust the volume by pressing "Vol +" and "Vol -"

**Example 2: Receiving AM radio**

1. Connect the AM antenna
2. Turn FM / AM receiving switch to AM
3. Turn on the power switch
4. The LCD screen starts to show, wait a few seconds to enter the working state
5. Press the button "band + / band -" until AM/LSB/USB is displayed in the upper left corner to enter "AM/LSB/USB" working mode
6. Press the mode button to switch AM mode. Here we select AM mode as an example. Press the mode button until AM is displayed in the upper left corner of the screen
7. Use the band + and band - buttons to find the frequency point close to the receiving station
8. Press the step button to select the step size
9. Rotate "TUNE / BFO / ATS" to adjust the receiving frequency
10. After receiving the sound from the radio station, adjust the volume by pressing "Vol +" and "Vol -"
11. Press BW button to adjust bandwidth, press AGC button to adjust gain to find the clearest received sound

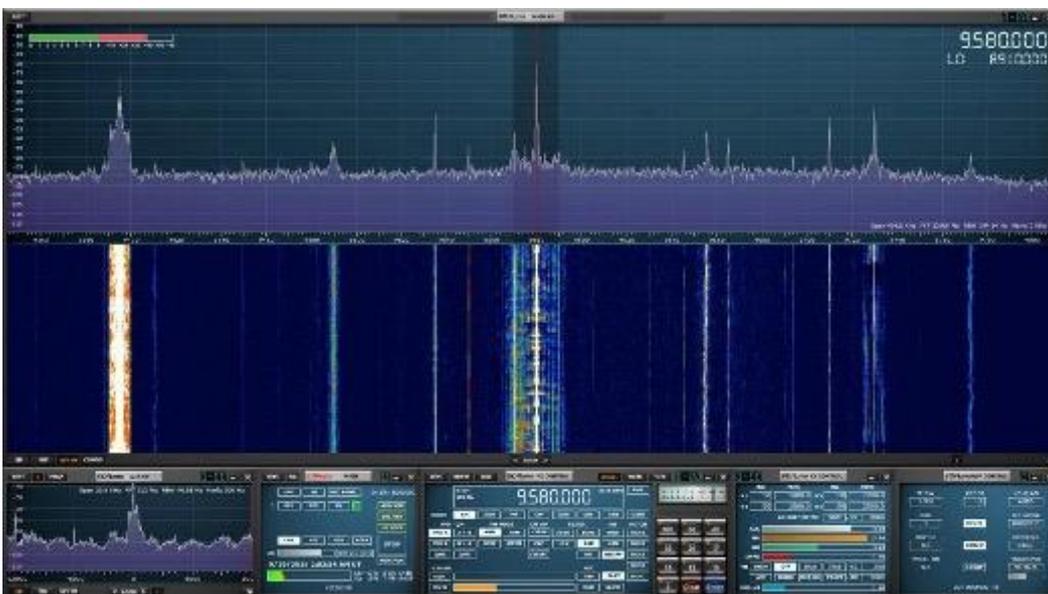
**Example 3: BFO**

1. Enter USB / LSB working mode
2. Adjust to the frequency to be heard
3. In USB or LSB mode, press "TUNE / BFO / ATS" button to enter BFO regulation.
4. Press the "step" key to select the step size
5. Rotate "TUNE / BFO / ATS" to adjust the frequency
6. Adjust the sound quality and volume

## 2.) The SDRplay RSP1A radio receiver < € 125 on many retail sites



When you invest a modest € 125 to purchase an RSP1A or RSP1B, you take a *major* step forward and into the world of Software Defined Radio or SDR. Software Defined Radio uses sophisticated software and digital signal processing to achieve remarkable performance and versatility. The RSP1A is an entry level usb powered from a PC and uses the PC and SDR software application (SDRuno) to provide a powerful receiver.



*SDRuno windows can be arranged a number of ways on your monitor.*

Installing the RSP1A and SDRplay is a pure plug-and-play experience: just download and install the application, plug in the RSP1A to your computer, wait for the USB driver to automatically install, then start SDRplay.

- 3.) **Simple home made wire Antenna < € 5. Use an old piece of speaker wire or LAN cable. Ideal length is 71ft or 20.64 meters**



- 4.) **MLA 30 + Loop Antenna a perfect starter Antennae for short wave listening < € 35 on Alibaba or Bangood**

