



ST-05B

FM TRANSMITTER

Please read this manual before you use the device, restore the manual carefully in case you'll need it in the future.

3. Main Specifications:

NO.	Product name	specification	quantity
1	Host machine	ST-05B	1
2	antenna		1
3	Power adapter	DC12V/1.67A	1
4	Audio cable	3.5mm audio cable	1
5	manual	e-instruction manual	1

Thanks for buying the ST-05B portable FM transmitter.

Before you use this transmitter for the first time, please read the user manual carefully and operate the device following the instructions. It is multi-functional device but easy to operate. We sincerely hope our products will bring you happy experience.

1. Attention before use

- 1) Only professional engineers can do the repair work.
- 2) Don't power on the transmitter without connecting the antenna.
- 3) Don't use the transmitter in explosive environment (such as gas station, natural gas or steam)
- 4) Don't put the transmitter in extreme dusty, damp or hot places.
- 5) Please use the transmitter following the local regulations.
- 6) Please try not to use the transmitter in thunder/storm weather.

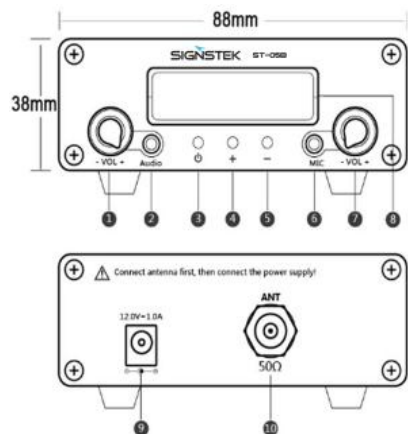
2. Main Characteristics:

- 1) High-fidelity high stability: Motherboard is adopted by next-generation integrated NC FM stereo radio transmitter chip the BH1415 from Japan ROHM Company, built-in PLL frequency PLL, audio pre-emphasis, limiter and low pass filter circuit to achieve high fidelity, high stability signal transmission
- 2) Stereo clear sound: the control panel is consisted of AT89C2051 and AT24C02; after the stage by two 2SC3355 and one 2SC2053 total of three power amplifier to ensure that the three-dimensional sound quality output effect
- 3) Good shielding: Structure design closely, not because of external signal induction frequency drift
- 4) Excellent heat dissipation: The stability of the chassis using high quality aluminum alloy material, lightweight and excellent heat dissipation can work continuously to ensure that equipment

4. All configurations

NO.	project	
1	working voltage	11~13V DC
2	working current	< 0.5A
3	frequency domain	76~108Mhz
4	frequency stability	±10PPM
5	stepped frequency	100KHZ
6	The operating temperature of the environment	-10℃~45℃
7	output impedance	50Ω
8	Rf power output range	H:0.5W (L:0.1W)
9	Harmonic and noise radiation	≤-30dB
10	audio distortion	0.3%
11	frequency response	50HZ~15000HZ
12	Preemphasis delay	50us
13	degree of separation	≥ 35 dB
14	input level	≤15 dB
15	Modulation frequency deviation	±75KHZ
16	SNR(Signal to Noise Ratio)	≥ 60 dB
17	Machine Size	113*88*38mm
18	Machine weight	269g

5. Operation Instruction`:



1	Audio input volume adjustment	2	The 3.5 mm audio input hole
2	The power switch button	4	Increasing the frequency button
5	Frequency decrease buttons	6	The microphone input hole 3.5 mm interface
7	The microphone input volume adjustment	8	display
9	The 12V 1.65A power supply interface	10	TNC antenna interface

6.Power Adjustment

The transmitter output power is divided into two files: high power transmission (H) = 500 mw; Low power (L) = 100 mw
Shut off power adapter, operate according to the following steps under transmitter power line cut off condition.

- 1) Press **【⏻】** and don't let go, then connect power(DC12V connected to transmitter),loosen the key after 3 seconds. Then into power adjustment status, LCD displays "L" or "H"(picture default as H high power transmission)
- 2) Press key **【▲】** , set it high power file (H).
- 3) Press key **【▼】** , set it low power file (L).
- 4) Select the power file you need, press key **【⏻】** again, power setting completed and it automatically into frequency range setting interface.

7.Frequency Range Setting

- 1) 1.Frequency band high-end setting: after frequency setting, press key**【⏻】** and into frequency range setting status, LCD displays 108MHz, this frequency is high-end of working frequency band.(High-end frequency defaulted as 108.00MHz). Through keys **【▲】****【▼】**to adjust the frequency you need to set.
- 2) Frequency band low-end setting: frequency band high-end setting completed, press key **【⏻】** and it will into frequency band low-end setting, LCD displays 76.00 Mhz. This frequency band is the low-end frequency,(low-end frequency factory defaulted as 76.00Mhz). Through keys **【▲】****【▼】** to adjust the frequency you need to set.
- 3)After frequency range setting finished, press key **【⏻】** for three times, setting finished and return to background, LCD displays OFF.
- 4)Attention: Low-end of frequency band can't be higher than high-end of frequency band, or transmitter will stop to work!

8. Common Troubleshooting

	Undesirable phenomena	Reason
1	Can not be boot	1) outlet for power; 2) The power cord is plugged in; 3) the power adapter is normal.
2	Standing wave is greater	1) The antenna is not connected; 2) The antenna does not match; 3)antenna installation location next to the reflector too
3	Transmitter distance is close	1) feeder loss; 2) poor launch environment; 3) Output power is not adjusted; 4) antenna installation height is not high enough; 5) The antenna does not match; 6) receiver sensitivity
4	No power output	1) Output power is not adjusted; 2) Machine standby or power.
5	Audio muting	1) The master volume is not large; 2) the input audio signal is normal.
6	The microphone is silent	1) microphone is normal; 2) the microphone volume is not large; 3) whether the microphone dynamic microphone; 4) microphone is plugged.
7	Sound quality is poor	1) microphone quality is not good; 2) Input audio sound quality is not good; 3) antenna installation method is not correct; 4) audio signal or machine volume is not adjusted.

9. After-sales Service:

Thank you for choosing our product, we'll provide lifetime maintenance. Within 200days after purchasing, we provide all-free repairing. The following circumstances are excluded:

- 1) Problems caused by unauthorized disassembling or repairing on the product.
 - 2) Problems caused by mis-operation without following the instruction.
 - 3) Problems caused by man-made damage/hit/crash/water and other non-product quality problems.
 - 4). The product being damaged by Thunder or other force majeure.
 - 5). Product case, Li-on battery, microphone, charger, audio cable, charging cable and other accessories are not in free repairing range.
- For products over or not belonging to the free-repairing period, we can provide repairing with very low cost.
- 1) We provide lifetime maintenance for product over the free-repairing period.
 - 2) We can repair the products that over the free-repairing period or damaged manmade with very low cost.

10. Disclaimer

Please use this product following local laws or regulations about using wireless products, otherwise the user will be responsible for any problems occurred by not obeying rules. We and our distributors are free of responsibility for that.