

As an ultra portable transceiver, it built in high-capacity batteries, automatic antenna tuner, and covering HF, 50MHz frequency band.

X5105 will bring you a whole new operating experience, 3.6 "super large LCD display screen can provide rich information content. The built-in 3800mAh large capacity battery, can provide 6~8 hours of use, it is convenient for you in the outdoor operation. It has built in highly efficient automatic antenna tuner (ATU), you can quickly deploy your outdoor shortwave communication station, covering the HF, 50MHz band full mode, allowing you to listen to any frequency on the shortwave frequency information.

X5105 is compact (about 160*100*46mm, free of protrusions) and has a light body (about 0.94kg). It can provide the maximum RF power 5W in the whole band, it can work in a wide voltage range of 11.7V~15V DC, Its standby current is low and provides longer battery life.



HF/50MHz TRANSCEIVER

X5105

X5105 basic specification parameters

Routine parameter	Receiver unit	Transmitter unit															
Frequency range: Receive:	Receiver structure: Double conversion superheterodyne + digital baseband processing	Transmitter power:															
1MHz-5.5MHz	IF frequency 70.455MHz/10.695MHz	<table border="1"> <tr> <td></td> <td>SSB/CW/FM</td> <td>AM</td> </tr> <tr> <td>HF/50MHz Band</td> <td>≥4.5W</td> <td>1.5W</td> </tr> </table>		SSB/CW/FM	AM	HF/50MHz Band	≥4.5W	1.5W									
	SSB/CW/FM	AM															
HF/50MHz Band	≥4.5W	1.5W															
Transmitting	Receiving sensitivity	Modulation mode: SSB balanced modulation															
1MHz-5.5MHz(Amateur band only)	<table border="1"> <tr> <td></td> <td>SSB/CW/FM</td> <td>AM</td> </tr> <tr> <td>0.5~1.79MHz</td> <td>----</td> <td>10uV</td> </tr> <tr> <td>1.8~27.999MHz</td> <td>0.25uV</td> <td>2uV</td> </tr> <tr> <td>28~30MHz</td> <td>0.25uV</td> <td>2uV</td> </tr> <tr> <td>50~54MHz</td> <td>0.25uV</td> <td>2uV</td> </tr> </table>		SSB/CW/FM	AM	0.5~1.79MHz	----	10uV	1.8~27.999MHz	0.25uV	2uV	28~30MHz	0.25uV	2uV	50~54MHz	0.25uV	2uV	AM low level amplitude modulation
	SSB/CW/FM	AM															
0.5~1.79MHz	----	10uV															
1.8~27.999MHz	0.25uV	2uV															
28~30MHz	0.25uV	2uV															
50~54MHz	0.25uV	2uV															
Operating mode: A1A, A3E, J3E, F3E		FM variable reactance															
Channel storage		Spur reduction ≥45dB															
Antenna impedance:		Carrier suppression: ≥40dB															
supply voltage:	normal: 13.8VDC + 15%	Selectivity SSB -6dB:2.4kHz/-60dB:4.6kHz															
Operating temperature range:	-10℃ ~ +60℃	CW -6dB:500Hz/-60dB:2000Hz															
Frequency stability:	after turn on the radio 1-60 minutes is ± 2ppm	AM -6dB:6.0kHz/-60dB:25.0kHz															
Current consumption:	receive: 660mA@ Max transmit: 2.5A@ Max	FM -6dB:12.0kHz/-60dB:25.0kHz															
		Image suppression: 70dB															
Dimensions:	160*100*46mm[does not include protrusion]	IF suppression: 60dB															
Weight:	0.94Kg[host only]	Audio output : 0.6W (4Ω, ≤10% THD)															
		Sideband spurious: ≥50dB															
		SSB frequency response: 400Hz-2800Hz (-6dB)															
		FM Maximum frequency swing: ±5kHz															
		Microphone impedance: 200-10k(conventional 600Ω)															
		Antenna tuner storage points: store one point at each interval of 100kHz															
		The first antenna tuning time: less than 10s															
		Fetch time of antenna tuning: less than 2S															





Double conversion superheterodyne + digital baseband processing , the advanced digital processing unit makes the signal clearer.

Full featured display screen

The X5105 has a 3.6 inch dot matrix LCD display, which is very prominent for its compact size, it's easy to read the content.

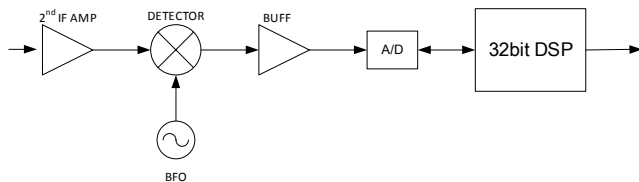


Digital baseband processing

The built-in digital processing baseband provides richer extensions, such as NR and NTH capabilities. After demodulating the audio, the DAC samples the demodulated audio signals digitally, and then performs the digital calculation by the high-speed processor to do digital noise reduction, which can effectively improve the 6dB signal-to-noise ratio.

The depth of NR and NTH can be adjusted and can be set according to your demand.

The voice of the transmitter is also digitally processed.



Configure high stability TCXO

The internal clock source is provided by a high stability TCXO, and the frequency stability is kept at ±1ppm level even better.

LO local oscillator with excellent performance

The local oscillator unit adopts high performance DDS (Direct Digital Synthesizer). The output signal has a pure frequency spectrum, low phase noise and wide frequency band coverage. The good performance of the product all benefits from the excellent quality of local oscillator



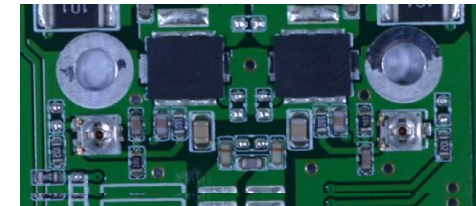
Built in automatic antenna tuner

The ATU unit can adapt to most shortwave antennas and achieve successful tuning, which can effectively reduce the difficulty of antenna erection and debugging. thus realizing rapid antenna in the field and ensuring the smooth flow of communication timely. The processor will memorize the tuning data at intervals of 100kHz, so that the tuning data can be quickly retrieved and the tuning time is greatly reduced.



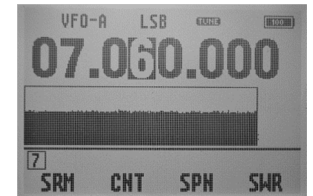
A stable and reliable power amplifier unit

The two RD07MUS1 constitute a push-pull power amplifier circuit that provides stable 5W RF power output. The PA unit is designed with large redundancy and good frequency characteristics, and can continuously cover the HF/50MHz frequency band.



Scanning receiver / spectrum display

Set the bandwidth, you can observe the scope of the signal, and in the way of spectrum display, you can quickly capture the radio signal.



Built in high-capacity battery

Built in large capacity (3800mAh) polymer lithium battery, it can provide 6~8 hours of life for the host (only receive). Smart charging management circuit can make charging simpler, without excessive operation.

IF OUT

The X5105 and XDT1* can be combined into a complete SDR device and display the color spectrum and demodulate the digital communication content on the XDT1. *XDT1 Currently in R & D status.

Xiegu Radio