

HF/VHF/UHF

ALL Mode SDR Transceiver

Q900

Technical specification

V1.2

Introduction

Q900 we introduced an ultra portable full range full mode SDR radio, Receive frequency from 100 k to 2 GHZ . The built-in LAN ports, which can realize remote operation.we have developed the QRadioble phone APP can easily control the radio, Make the radio operation more convenient and fast, the radio adopts a full keyboard design, built-in Bluetooth module, sound card module and communication serial port module. We fully support the currently popular radio control software and logging software to give you more playable space.

Features

1. Real-time spectrum.
2. Waterfall chart.
3. Doppler frequency tracking.
- 4, using software-defined radio technology (SDR), full-band support DMR(optional),SSB, CW, RTTY, AM, FM.
5. Double frequency conversion circuit structure.
6. IF width and IF shift hardware and software can be modified to provide powerful IF interference suppression.
7. DSP digital noise reduction.
8. Built-in 160-6 meters high-speed automatic antenna tuner.
9. Built-in bluetooth.
10. Built-in sound card with IQ and audio output.
11. Built-in 4.9AH batter.
12. USB TYPEC3.1 interface for power supply and computer connection.
13. High precision TXCO $\pm 0.5\text{ppm}$ (-10-60 $^{\circ}\text{C}$).
14. Ultra-wide working voltage range: 5-32VDC.
15. Power supply reverse connect protection.
16. Built-in GPS / BeiDou, GSM, electronic compass (acceleration, angle sensor) (optional).
17. GPS time service (requires optional GPS module).
18. Built-in UTC clock.
19. Voltage display.
20. Phone APP remote operation.

21. LAN remote operation

22 Ultra-light weight: $\leq 1.5\text{KG}$.

Configuring

standard module	Optional module	
WFM	GPS	
Bluetooth module	Electronic compass (Altitude meter)	
Bluetooth hand microphone	cable hand mic	
built-in sound card	Telescopic HF antenna	
automatic antenna tuner	encoder	
FLASH		

Specifications

transmitter parameters		
Transmitter architecture	SDR	
transmission mode	DMR(optional),SSB, CW, RTTY, AM, FM	
Frequency resolution	1HZ	
Transmission frequency range ^{*1}	1.800—2.000, 3.500—3.900, 5.351.5—5.366.5, 7.000— 7.200, 10.100—10.150, 14.000—14.350, 18.068— 18.168, 21—21.450, 24.890—24.990, 28—29.7 , 50—54, 134— 170,400—450MHZ	
Output power	HF + 6m: SSB: (1-20W), CW: (0.1-20W), FM (0.1-20W), AM: (1-5W) VHF: SSB / CW / FM (0.5-10W) UHF: SSB / CW / FM (0.5-5W)	
Power current	TX:13.8V-6A (20W) 16.5V(35W) RX: 13.8V-0.25A typical value, 0.5A (highest brightness, audio peak)	
Carrier suppression	<50db	
spurious suppression	1.8-54MHZ: ≥50db 144-146MHZ: ≥60db 430-440MHZ: ≥60db	
channels	99 channel	
receiver parameters		
Receiver architecture	SDR	
reception mode	DMR(optional),SSB, CW, RTTY, AM, FM	

reception frequency range	100KHz—2GHz * ²	
IF bandwidth	20KHz	
sensitivity * ³	SSB / CW: (BW: 2.4kHz @ 10dB S / N) 0.18uV (1.8-54MHZ), 0.25uV (144-146MHZ), 0.25uV (430-440MHZ) AM: (BW : 6kHz @ 10dB S / N) 15uV (0.3-1.8MHZ), 2uV (1.8-54MHZ), 2uV (144-146MHZ), 2uV (430-440MHZ) FM: (BW: 15kHz @ 12dB S / N) 0.5uV (28.0-29.7MHZ), 0.25uV (50-54MHZ), 0.3uV (144-500MHZ), 0.5uV (430-440MHZ)	
intermediate frequency suppression	≥70db	
image suppression	≥80db	
audio output power	2W (10% distortion rate, 4Ω Load, 3KHZ)	
Antenna tuner parameters		
Tuning frequency range	1.8—54MHZ	
Tuning impedance	16.7Ω–150Ω Unbalanced (standing wave ratio is better than 1: 3)	

range		
Tuning accuracy	VSWR: 1: 1.5 or less	
Tuning time	2-5S (whole section 10S)	
tuning mode	automatic	
spectral parameters		
spectral bandwidth	48K radio frequency spectrum FFT	
Conventional parameters		
size	170X120X45mm (excluding projections)	
weight	<1.5KG	
voltage range	RX:5-32V TX: 5- 12V transmit power limit, 12-18V full power output, 18-32V transmit power limit	
Batter	5AH@8.4V	
Antenna interface	M	

Note ^{*1}: Frequency range is different according to different countries or areas, the actual frequency by local legal provisions.

Note ^{*2}:Data retention.

Note ^{*3}: to be calibrated, the final interpretation of all manufacturers.