**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 ± 0.5ppm (-10-60 ℃).

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: ≤1.5KG.

**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 |  |  |

**Specications**

|  |  |  |
| --- | --- | --- |
| **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 range | 16.7Ω–150Ω Unbalanced (standing wave ratio is better than 1: 3) |  |
| 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.