JF-414EU

SERVICE MANUAL

2-WAY PORTABLE
HANDHELD
RADIOS

J-communications co., ltd

CONTENT

1. GENERAL

1.1 GENERAL

This equipment, JF-414EU is called 2 way portable handheld radios. The frequency range is 462~467MHz, UHF operating channels for international 2 way portable radios.

1.2 CHARACTERISTIC

a) All active device in this radio is composed of semiconductor and high density IC.

b) To design this radio in compact and weight approximately 140g with battery cell.

C) CPU of this equipment is TMP47P202 from TOSHIBA.

d) It's power can operate by use of alcaline 4 cell(1.5V AAA) battery.

1.3 COMPOSITION

This radio is composed of following.

a) Transmitter

b) Antenna

c) Hand Strap

2. SPECIFICATION

2.1 GENERAL SPECIFICATIONS

a) Frequency Range : 462MHz,467MHz

b) Output Impedance : 50Ω Unbalanced

c) Modulation Type : 8K00F3E

d) Communication Mode : Half duplex

e) Channel Capacity : 14 channel

f) Channel spacing : 12.5 kHz

g) Power : 5.4 or 6.6V

h) Battery Life : > 30 hours (Tx5%, Rx5%, Stand-by 90%)

i) Operating Temperature : -10℃~+60℃

j) Dimension : 100(H)x 50(W)x 24(D)mm

k) Weight : 140g(with Battery)

2.2 ELECTRICAL SPECIFICATION

a) TRANSMITTER

1) Output power : Max 500mW

2) Frequency Stability : ±5ppm(-10℃~+60℃)

3) Modulation Method : FM

4) Oscillation Method : PLL SYNTHESIZER

5) Max. Frequency Deviation : < ±2.5kHz

6) Cooling Method : air-cooling Method

7) Spurious Emission : < 60dB

8) FM Hum/Noise : < 40dB(1kHz 70% modulation)

9) Distortion : > 5%(1kHz 60% modulation)

10) Tx Audio Response : 6dB /OCT ±3dB PRE-EMPHASIS(300Hz~2.5kHz)

b) RECEIVER

1) Receive Method : Double Super Heterodyne

2) Receive Sensitivity : < 0.25 uV(12dB SINAD)

3) Squelch Sensitivity : 0.2 uV

4) Selectivity : < 60dB (12.5kHz)

5) Local Frequency Stability : ±5ppm(-10℃~+60℃)

6) Spurious Response : < 60dB

7) Audio output : < 250mW

8) Distortion : > 5% (1kHz 60% Modulation)

9) RX Audio Response : 6dB/OCT ±3dB DE-EMPHASIS(300Hz~2.5kHz)

10) S/N Ratio : < 40dB (1kHz 70% modulation)

11) IF : 1st IF = 21.7MHz

2nd IF = 450kHz

12) Local Frequency : 1st Local Frequency = fc - 21.7MHz

2nd Local Frequency = 21.25MHz