

**OPERATIONAL DESCRIPTION
OF THE
21st CENTURY INNOVATIVE PRODUCTS/HANYANG ELECTRONICS, Ltd.
FRS-4000 “WALK & TALK” UHF TWO-WAY RADIO**

The FRS-4000 “WALK & TALK” is an FM modulated, UHF two-way radio that uses all fourteen frequencies allocated in the FCC part 95, Subpart B, the Family Radio Service (FRS). It is of the “F3E” modulation type that is the only one allowed for the Family Radio Service.

These fundamental or carrier frequencies in MHz are:

1: 462.5625 *	8: 467.5625 *
2: 462.5875	9: 467.5875
3: 462.6125	10: 467.6125
4: 462.6375	11: 467.6375
5: 462.6625	12: 467.6625
6: 462.6875	13: 467.6875
7: 462.7125 *	14: 467.7125 *

The frequencies marked with an * are examined in detail in this report. They represent the highest and lowest frequencies of two bands.

The FRS-4000 uses an integral antenna and has no casual user access for increasing its radiated power or modifying its basic functions. There is no enclosure shielding.

The FRS-4000 is powered by 4.5 VDC, supplied by 3 “AAA” alkaline batteries. All measurements in this report used fresh batteries.

The authorized bandwidth of the FRS-4000 “WALK & TALK” UHF TWO-WAY RADIO is 12.5 kHz according to Part 95, section 95.6330.

The FCC ID of the FRS-4000 is OVCFRS-4000.

TUNE UP PROCEDURE FROM HANYANG:

RX Adjustment:

1. Adjust Signal Generator to 462.5625 MHz at 1 mV. Adjust the FM modulation from 1 kHz to 1.75 kHz. Put this signal into the antenna jack.
2. Connect oscilloscope to number 2 of A>F> Detector at U108 and adjust 1FT101 to obtain maximum DC voltage.
3. Confirm RX sensitivity is below 119 dBm at 462.5625 MHz/12 dB SINAD (SQ OFF Mode).

TX Adjustment:

1. Begin adjustment at 462.5625 MHz for the TX test.
2. Confirm the RX power is no more than 500 mW.
3. Adjust VC101 for precise TX frequency
4. Input 1 kHz signal to MIC JACK terminal and then adjust the maximum frequency differential to 2.2 kHz

GENERAL SPECIFICATION OF THE FRS-4000

-See the Instruction Manual exhibit.