ALIGNMENT PROCEDURES

Model No : GMRS-1000Y

Destination : MUSICAL ELECTRONICS LIMITED

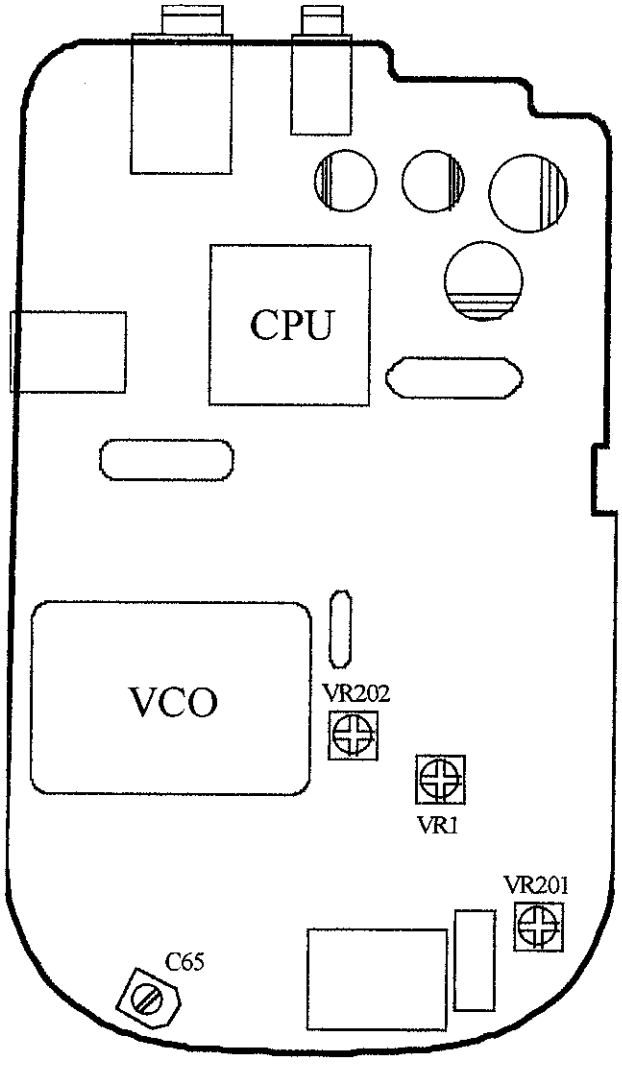
Frequency Range : 462.5500 ~ 467.7250 MHz

Jul - 19 - 2001

PCB Alignment Point

Location of Adjustment in PCB

《 GMRS-1000 》



FRS-300

Alignment Conditions

Standard Conditions :

Power Supply Voltage	*9.0 V DC*	
Audio Output	*75 mW*	
Audio Load	*8 ohm*	
Standard modulation	*± 1.5 KHz*	*at 1 KHz AF*
Transmission Load	*50 ohm*	
Reception Adjustment Frequency	*See below*	
Transmission Adjustment Frequency	*See below*	

Transmission / Reception Adjustment Frequencies

Channel	*Frequency*
1 CH	*462.5625 MHz*
14 CH	*462.7250 MHz*
21 CH	*467.7250 MHz*

≪ PLL Alignment ≫

Conditions :

1. Frequency CH-1, CH-21
2. Squelch ..... Open
3. Volume ..... Min
4. Power Supply ..... 9.0 V DC

Procedures

[GMRS VCO]

1) Set a reception Frequency to CH-1.

2) Connect a Digital Voltmeter with T.P1, and Confirm that a Voltage Should be a Range of 0.4 V ~ 1.0 V.

3) Set a Reception Frequency to CH-21 and Switch to Transmit Mode.

4) Confirm That a Voltage Should be Within a Range of 2.0 ~ 3.0 V.

≪ Transmission Alignment ≫

Conditions :

1. Dummy Load	.....	50 ohm
2. Frequency	.....	CH – 1, CH – 21.
2. Squelch	.....	Open
3. Volume	.....	Min
4. Power Supply	.....	9.0 V DC

Procedures

A) RF output Power Alignment

1) Set Supply Voltage to 9.0 V.

2) Adjust a Frequency to CH – 1 and Switch to Transmit Mode.

3) Confirm That the RF Power obtained at CH – 1 and CH – 21 must be Within a Range of 2.0 W Conducted.

B) TX Frequency Alignment

1) Set a Frequency to CH-14, and Switch to Transmit Mode.

2) Adjust VR2 so that a Frequency Counter Reading Should be Within 462.7250 MHz ± 100 Hz.

C) Deviation Alignment

1) Set a Frequency to CH-14, and Switch to Transmit Mode.

2) Input 1 KHz, From AG (Audio Generator), 100 mV (Open Voltage) to the EXT-MIC Terminal , and Adjust VR 201 so that Deviation is ± 2.3 KHz.

3) Lower the AG output, and Adjust the Deviation to 1.5 KHz. In that case, Confirm That AG output Voltage is Within a range of 10 ~ 30 mV (Open Voltage).

≪ Receiver Alignment ≫

Conditions :

1. Frequency ..... CH – 14.
2. Squelch ..... Open
3. Power Supply ..... 9.0 V DC

Procedures

A) RX Sensitivity Alignment

1) Set a Frequency to CH – 14.

2) Confirm that 12 dB Sinad is - 9 dB approx.

3) Confirm that a 12 dB Sinad of the Frequency at CH – 1 and CH – 21 Must be below - 7 dB.

B) Squelch Sensitivity Alignment

1) Set a Frequency to CH – 14.

2) Set a Signal Generator Output Level - 13.0 dBμV e.m.f.

3) Adjust the VR 1 so that Audio Signal Close Point.