

Tune Up

Description:	ZigBee IAS Warning Device
Brand Name:	Netvox
Model Name:	Z602B
Power Supply:	DC 12V from Adaptor Input 100-240VAC 50Hz/60Hz
Frequency Range:	Zigbee: 2400MHz-2483.5MHz: 16 Channels GSM850: Tx: 824.2-848.8 MHz Rx: 869.2-893.8 MHz PCS1900: Tx:1850.2-1909.8 MHz Rx:1930.2-1989.8 MHz
Modulation Technique:	Zigbee: O-QPSK GSM850: GMSK PCS1900: GMSK
Antenna Type:	Zigbee: Internal Fixed GSM850: Dipole PCS1900: Dipole
Antenna Gain:	Zigbee: 0dBi GSM850: 0.5dBi PCS1900: 2.2dBi
Max.Power:	Zigbee: 89.91dBuV/m GSM850: 32.48dBm PCS1900: 28.88dBm

1 Adjustment of RF Output Power:

(1) The equipment setup as shown in Figure 1.

(2) Operation of PC adjusts equipment.

(3) Use RF Engineering Tools at PC side.

Select GSM850 Band:

1) Set GSM850 Band.

2) Set ARFCN: 190

3) TX ON.

4) Adjust the power to 33dBm (Power control level: PCL=5) by PA DAC value.

5) Repeat 4) for 15 times, and adjust the power level to 31dBm, 29dBm, 27dBm, 25dBm, 23dBm, 21dBm, 19dBm, 17dBm, 15dBm, 13dBm, 11dBm, 9dBm, 7dBm, 5dBm.

6) Make 16 Ramp-Up/Ramp-Down data from the adjustment value of (5) and (6).

7) Data of 5) and 6) is written to flash memory.

8) The power output tolerance in GSM850MHz is +0.5dB/- 1.5dB.

Select PCS1900 Band:

- 1) Set PCS Band.
- 2) Set ARFCN: 661.
- 3) TX ON.
- 4) Adjust the power to 30dBm (Power control level: PCL=0) by PA DAC value.
- 5) Repeat 4) for 15 times, and adjust the power level to 28dBm, 26dBm, 24dBm, 22dBm, 20dBm, 18dBm, 16dBm, 14dBm, 12dBm, 10dBm, 8dBm, 6dBm, 4dBm, 2dBm, 0dBm.
- 6) Make 16 Ramp-Up/Ramp-Down data from the adjustment value of (5) and (6).
- 7) Data of 5) and 6) is written to flash memory.
- 8) The power output tolerance in GSM1900MHz is +0.5dB/- 1.5dB.

2 Adjustment of RX Sensitivity:

(1) Select GSM850 Band:

- 1) Set BCCH level: -85dBm; ARFCN: 190.
- 2) Test sample make a call to connect RF Tester.
- 3) Set TCH level:-102dBm.
- 4) Measure BER II error at TCH ARFCN:128,190,251.
- 5) Turn up the RX matching circuit to make sure BER II <2.44% at each ARFCN.

(2) Select PCS1900 Band:

- 1) Set BCCH level: -85dBm; ARFCN: 661.
- 2) Test sample make a call to connect RF Tester.
- 3) Set TCH level:-100dBm.
- 4) Measure BER II error at TCH ARFCN:512,661,810.
- 5) Turn up the RX matching circuit to make sure BER II <2.44% at each ARFCN.