

## Tune-up Procedure

During manufacturing each phone will be individually calibrated.

The measurement is done in a fully calibrated setup, which is based on Anritsu MT8820C (adjustment of gain factors) or Agilent 8960 or RS CMU200 or RS CMW500 (control of power levels).

Furthermore, the highest power level is verified afterwards in a call or data measurement on three channels (low, mid and high).

Procedure:

1. Set the phone to operational voltage and on one certain channel in a special service mode by means of company proprietary software.
2. The actual power is measured at several power levels.
3. The gain factors of each individual phone are adjusted via the Board-test SW using automatic adjustment arithmetic until the Tune-up value is met.
- 4 . The Tune-up value is below:

1) WiFi

WiFi 802.11b (2.4GHz) Normal			
Channel	Channel 1	Channel 7	Channel 13
Target (dBm)	14	14	15
Tune-up(dB)	14± 1	14± 1	15± 1
WiFi 802.11g (2.4GHz) Normal			
Channel	Channel 1	Channel 7	Channel 13
Target (dBm)	15	14	16
Tune-up(dB)	15± 1	14± 1	16± 1
WiFi 802.11n20 (2.4GHz) Normal			
Channel	Channel 1	Channel 7	Channel 13
Target (dBm)	15	14	16
Tune-up(dB)	15± 1	14± 1	16± 1
WiFi 802.11n40 (2.4GHz) Normal			
Channel	Channel 3	Channel 7	Channel 11
Target (dBm)	16	16	16
Tune-up(dB)	16± 1	16± 1	16± 1

WiFi 802.11ac80 (5GHz) Normal					
Channel	Channel 42	/	/	/	/
Target (dBm)	14	/	/	/	/
Tune-up(dB)	14± 1	/	/	/	/

2) Bluetooth (所有模式均需要分信道设置 Tune up)

GFSK			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	4	5	4
Tune-up(dB)	4± 1	5± 1	4± 1
DQPSK			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	3	3	3
Tune-up(dB)	3± 1	3± 1	3± 1
8DPSK			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	3	4	3
Tune-up(dB)	3± 1	4± 1	3± 1

### 3) UHF

GMSK mode (1W)						
Channel	Channel Low		Channel Mid		Channel High	
Channel spacing	12.5	25	12.5	25	12.5	25
Target (dBm)	30	30	30	30	30	30
Tune-up(dB)	30± 1	30± 1	30± 1	30± 1	30± 1	30± 1
GMSK mode (0.5W)						
Channel	Channel Low		Channel Mid		Channel High	
Channel spacing	12.5	25	12.5	25	12.5	25
Target (dBm)	26.99	26.99	26.99	26.99	26.99	26.99
Tune-up(dB)	26.99± 1	26.99± 1	26.99± 1	26.99± 1	26.99± 1	26.99± 1

The appropriate gain control settings are stored in RF table (a special section in Flash marked with Read only and untouchable for end user) each phone individually (for each power level).

The user has no possibility to change these settings later on.