Tune up procedure

Tune up procedure shall be over the power range or at specific operating power levels.

1. It must provide an operational voltage (3.4 ~ 4.35V DC) to turn on the device and on one certain channel in service mode by means of company proprietary software.
2. Base station simulator (CMW500) measures the FCC CERTIFICATION FOR MOBILE PHONE, Model: N601 device specific RF characteristics.
3. The maximum gains of each individual device are adjusted until the target value met.

Tune-up Power		
Mode	Frequency Bands	Tune-up Power
GSM	GSM850	31.5dBm±2dB
	GSM1900	28.0dBm±2dB
GPRS	GPRS850(1 slots)	31.5dBm±2dB
	GPRS850(2 slots)	30.5dBm±2dB
	GPRS850(3 slots)	28.5dBm±2dB
	GPRS850(4 slots)	26.5dBm±2dB
	GPRS1900(1 slots)	28.0dBm±2dB
	GPRS1900(2 slots)	26.0dBm±2dB
	GPRS1900(3 slots)	23.5dBm±2dB
	GPRS1900(4 slots)	21.5dBm±2dB
EDGE	EDGE850(1 slots)	25.5dBm±2dB
	EDGE850(2 slots)	23.5dBm±2dB
	EDGE850(3 slots)	22.5dBm±2dB
	EDGE850(4 slots)	20.5dBm±2dB
	EDGE1900(1 slots)	23.0dBm±2dB
	EDGE1900(2 slots)	21.5dBm±2dB
	EDGE1900(3 slots)	19.5dBm±2dB
	EDGE1900(4 slots)	17.5dBm±2dB
WCDMA Band V	RMC	21.5dBm±2dB
	HSDPA	20.5dBm±2dB
	HSUPA	20.5dBm±2dB
WCDMA Band II	RMC	21.0dBm±2dB
	HSDPA	20.0dBm±2dB
	HSUPA	20.0dBm±2dB

FDD-LTE	Band 2	21.0dBm±2dB
FDD-LTE	Band 4	22.0dBm±2dB
FDD-LTE	Band 7	20.0dBm±2dB
Wi-Fi 802.11b	2.4GHz	15.0dBm±2dB
Wi-Fi 802.11g	2.4GHz	14.0dBm±2dB
Wi-Fi 802.11n-HT20	2.4GHz	13.5dBm±2dB
BT EDR	2.4GHz	7.0dBm±2dB
BT BLE	2.4GHz	-2.0dBm±2dB

Maximum Power Reduction(MPR) for LTE Conducted Power								
Modulation	Channel bandwidth/Transmission bandwidth fondiguration(RB)						3GPP 36.101 Requirement MPR(dB)	MPR Setting (dB)
	1.4MHz	3.0MHz	5MHz	10MHz	15MHz	20MHz		
QPSK	> 5	>4	>8	>12	>16	>18	≤1	1
16QAM	≤5	≤4	≤8	≤12	≤16	≤>18	≤1	1
16QAM	>5	>4	>8	>12	>16	>18	≤2	2

Then these appropriate gain settings are stored in each device individually.

The user has no possibility to change these settings later on, and during manufacturing each device will be individual calibrated. The measurement is done in fully calibrated setup, which is based on a CMW500 base station simulator. Furthermore, the highest power level is verified afterwards in a call measurement on three channels (low, middle and high).