

## NEC N3306 Tune-Up

### REVISION LIST

NO	DATE	CHANGE CONTENTS	CHANGE CAUSE	REV
1	2006.06.05			
2				
3				
4				
5				
6				
7				
8				
9				
10				

### Sensitivity Testing:

First part:

Tuning method

**Tuning equipment:**

CMU200

Cable with accurate compensation

WHITE SIM CARD

**Tuning method:**

Sensitivity is related to the noise that generated in the transmission path, so we need to eliminate the noise, which affect the sensitivity.

First, sensitivity is related to the component which we choose ,so we must choose the component which is benefit to the sensitivity, than we can test the sensitivity in the signal mode with CMU, if the sensitivity is lower than the standard value , we should find the interference source and eliminate it to improve the sensitivity.

Second part:

Test method

**Testing purpose:**

To verify the radiated RF performance of typical channel in normal conditions

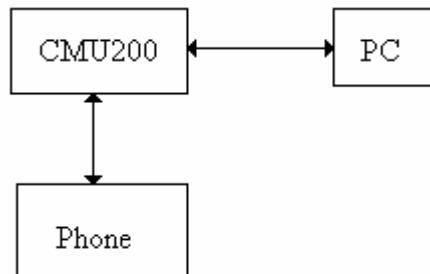
Testing equipment:

Phone	4
Battery	4
Imitate full-anechoic chamber	1
Measurement antenna (HF906)	1
CMU200 or 8960	1

## NEC N3306 Tune-Up

### Testing method:

1. Set up the system as follows:



2. Open the test software
3. Using the method of the substitute calibration method to calibrate compensation from phone to measurement antenna(because the limitation of the test software, one band can just set the only one compensation .So we set the compensation for each band to its middle channel's calibration value , the setting as follows:GSM900 38dB,DCS1800 42dB )
4. Set measurement channel: GSM900:975, 37,124; DCS1800:512,699,885;  
Set power level: GSM900:5,19;DCS1800:1,15;
5. Set measurement item to: frequency error, phrase error (peak value and average square root), and receive sensitivity.
6. Start the test software, after instruction of making a call, locate the phone on the bracket, the height of the it is 1.7 meter , the height of measurement antenna is also 1.7 meter , the distance from EUT to the measurement antenna is 3.8 meter.
7. Put the side which performance is best in radiation mode to the measurement antenna.
8. After the test is over, save the test result.

### Judgment Standard:

All the RF parameters should meet the GSM specification.

### Highest output power Testing

#### Tuning equipment:

CMU200

TAT tools with computer

Cable with accurate compensation

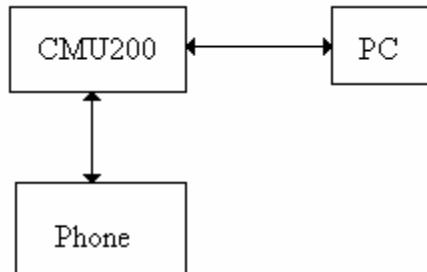
#### Tuning purpose:

In the GSM900 frequency band, the highest output power is  $33\text{dBm} \pm 2 \text{ dBm}$  ; in the DCS1800 and PCS1900 frequency band , the highest output power is  $29\text{dBm} \pm 2 \text{ dBm}$  . The manufacturer tolerance of the highest output power is 2 dBm.

# NEC N3306 Tune-Up

## Tune method:

1. Set up the system as follows:



2. connect the cell phone with the computer and CMU200, then power on the phone, when we enter the TAT, choose the TX mode, set the compensation of the cable, and adjust the value of the peakpow from the lowest channel to the highest channel (for GSM900 the typical channel is ch975、ch62、ch124, for DCS1800 the typical channel is ch512、ch698、ch885, for PCS1900 the typical channel is ch512、ch661、ch810), make sure the flatness of the output is lower than ± 0.2dBm.

