

1 Samsung Z105

Tests have been performed with the Samsung Z105 release SW 2.4.7.A, on May, 12th 2004
Trace activation code: *#0011#

1.1 Trace mode synthesis

3GPP Parameters	UE Parameters	Availability	Display	Accuracy	Comment
CPICH Ec/lo level	[11] Line4 E:	Y	Range-3dB/-21dB Resolution 1dB	Range -3/-17dB +/-1dB	
CPICH RSCP level	[11]Line4 R:	Y	Range -23dBm/-125dBm Resolution 1dB	Range -23/ -105 +/-3dB	Test performed with CPICH Ec/lo =3dB
RSSI level	[11] Line 2 R:	Y	Range -21dBm/-101dBm resolution 1dB	Range -19/-98dBm +/- 2.5dB	
DL Frequency	[11] Line2 R:	Y	Channel Number	/	
UL Frequency	[11]Line3 T:	Y	Channel Number	/	
LAC UMTS	[12]LAC	Y	/	/	FAIL Always 0 See figure 2 Menu 12
Scrambling code		N	/	/	Not found
Cell Identity		N			
3G neighbours information		Y	/	/	Fail See figure 2 Menu 104

Table 1 - UMTS Trace, the handset is connected to UMTS network

GSM Parameters	UE Parameters	Availability	Display	Accuracy	Comment
Channel BCCH	[11]Line2 T: B:	Y			
LAC GSM	[12]LAC	Y			
RX lev	[11]	Y			
2G neighbours information	[103]	Y			

Table 2 – GSM trace, the handset is connected to the GSM network

1.2 UMTS display in trace mode

Line 2 R: **10786 -77**

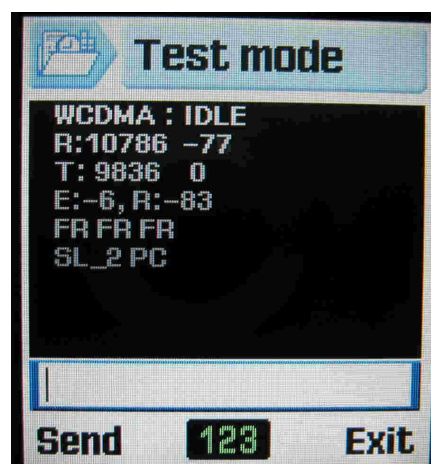
10786 is the downlink frequency (Channel)
-77 is RSSI level (dBm)

Line 3 T: **9836 0**

9836 is the uplink frequency (Channel)
0 is the TXpower (0 indicate no power)

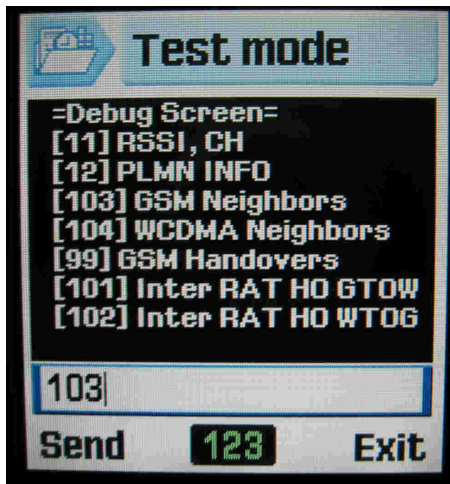
Line 4 E: **-6, R: -83**

E:-6 is the CPICH Ec/lo level (dB)
R:-83 is the CPICH RSCP level (dBm)

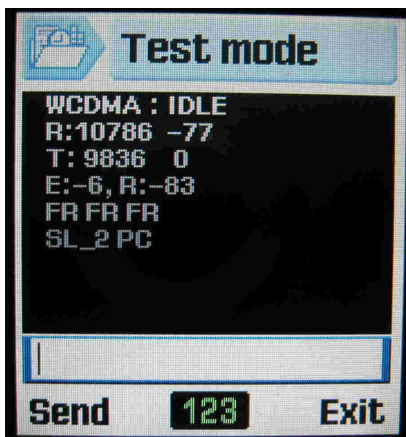


Menu 11

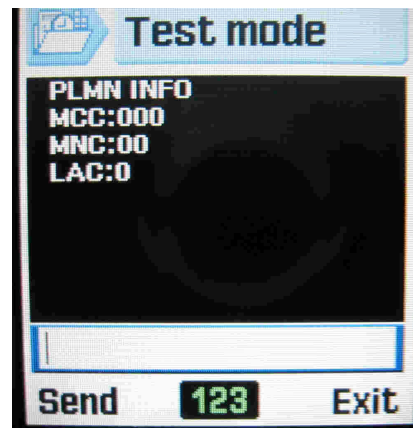
Figure 1 – Samsung Z105 main menu in trace mode and explanations of the metrics



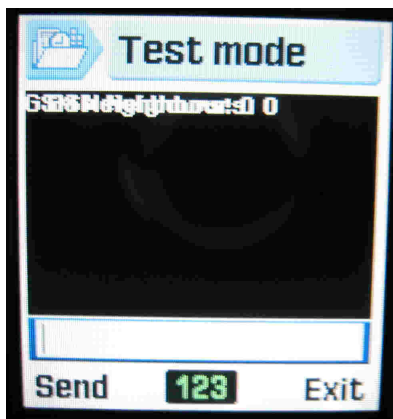
Menu 1



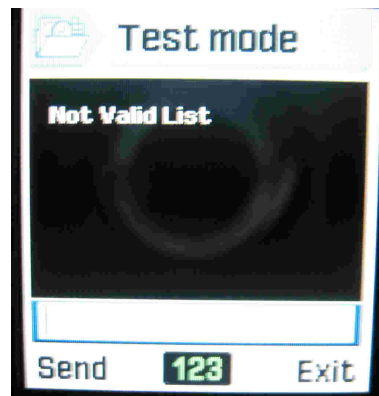
Menu 11 [11] RSSI,CH



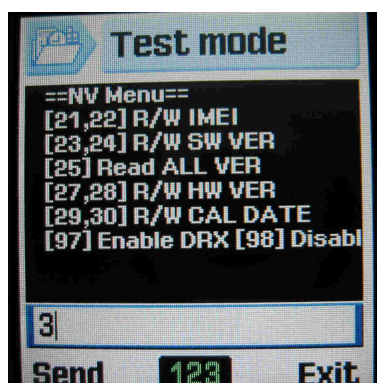
Menu 12 [12] PLMN INFO



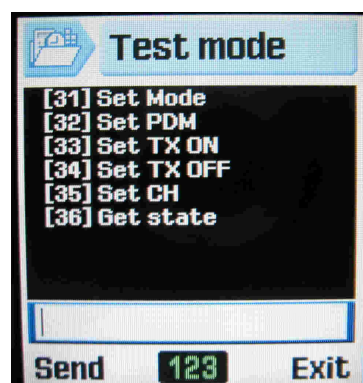
Menu 103
→ GSM neighbors ,not available



Menu 104
→ UMTS neighbors not available



Menu 2, HW parameters



Menu 3

2 LG8150

Tests have been performed with the LG 8150 release HW WY4.3.2.1 and SW V070W, on May, 12th 2004

Trace activation code: 2945##

2.1 Trace mode synthesis

3GPP Parameters	UE Parameters	Availability	Display Range	Accuracy	Comment
CPICH Ec/Io level	ECIO	Y		+/- 2 dB with conversion formula	Probable conversion formula: Ec/Io(LG)= -2*CPICH_Ec/Io (actual)
CPICH RSCP level	RSCP	Y	-23dBm/-125dBm	Range -25/ -103dBm +/-3.5dB	Miss sign(-)
RSSI level	RX level or RX AGC	Y	-21dBm/-101dBm	Range -19/-96dBm +/- 2.5dB	
DL Frequency	SRCH FREQ	Y	Channel Number	/	Valid after location
UL Frequency		N	/	/	
LAC		Y	/	/	Valid after handset on/off
Scrambling code	SCR CODE or Active set	Y	/	/	
Cell Identity		N	/	/	
3G neighbours information		N	/	/	

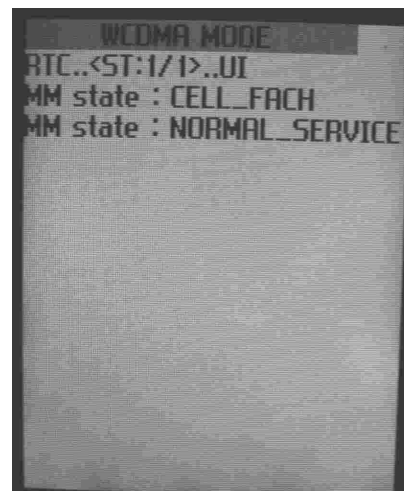
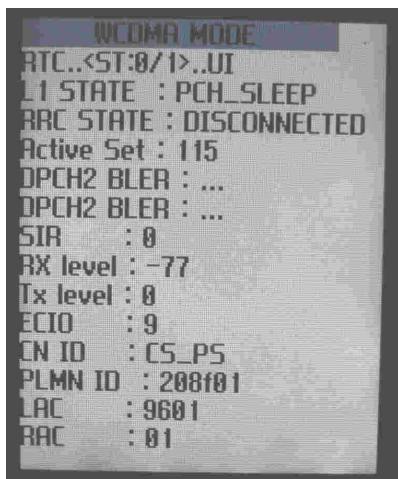
Table 3 - UMTS Trace, the handset is connected to UMTS network

GSM Parameters	UE Parameters	Availability	Display	Accuracy	Comment
Number of 2G BCCH	GSM FREQ	Y			
level of 2G BCCH	RX Level or RX AGC	Y	-21dBm/-101dBm	Range -19/-96dBm +/- 2.5dB	

Table 4 – GSM trace, the handset is connected to the GSM network

2.2 UMTS and GSM display

In trace mode the UE provides the following displays.



Display1

```
WCDMA MODE
ST..<UI:0/2>..P5
ECIO      8
RSCP      71
SCR CODE   115
SRCH      FULL SCAN
SRCH FREQ  10786
GSM FREQ   0
RX AGC     -67
RSSI VALUE 70, 6 6
BATTERY    222
TMSI 00017284
IMSI 9200018900001348
MSISDN ffffffff
PTMSI 0ce0efec
```

Display 2 (My menu,Bottom)

```
WCDMA MODE
ST..<UI:2/2>..P5
THERM VAL : 126
BATT THERM VAL : 130
CURRENT : 0 / 0
CHARGER_STATE : IDLE
CHARGER_DETECT : 0
INSTALL_BATT_ID : 1
BATTERY 237
RF STATE SLEEP_2
RDM : 1 4
```

Display 3 (Right)

→ main menu including ECIO, RSCP and scrambling code

Display4 (My menu, bottom)

```
WCDMA MODE
UI..<PS:0/0>..RTC
Net_op_mode : Mode II
Srv_domain : CS & PS
PDP Type : IP
IP_Addr : Null
Traffic_cls : Interactive
Uplink rate : 64Kbps
Downlink rate : 384Kbps
APN : Null
Auth Type : No Auth
Auth ID : NULL
Auth PASSWD : NULL
```

```
WCDMA MODE
PS..<RTC:0/0>..ST
Msm RTC
2000 12 30
0 6 4
Write Count : 1
Send Count : 1
block : 0
```

Display5

Display6