



# Test & Calibration

## - electrical -



*Aspen*  
*M1i, M1a*

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# 1 Go/NoGo Testing

This Go/NoGo testing can be carried out in two alternative ways, with an:

- Antenna Coupler
- Direct Line

**For more information on Antenna Coupler and Direct Line testing, refer to 1220-1336: Generic Repair Manual – electrical, section ‘Setup Go/NoGo Test’!**

**For part no’s on the equipment below, refer to the ‘Tools Catalogue/Matrix’!**

## 1.1 Antenna Coupler

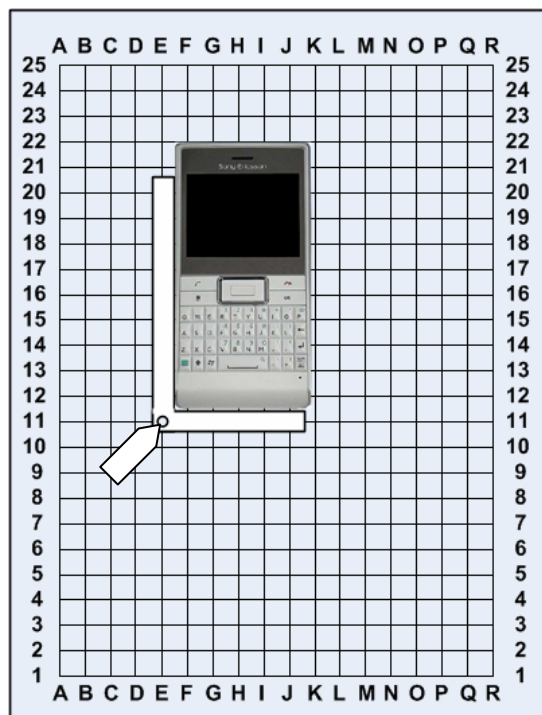
The following equipment has to be used:

- Rohde & Schwartz RF Shield Package
  - Rohde & Schwartz RF Shield Box
  - Rohde & Schwartz RF Coupler
  - Grid Positioning Holder
- RF Test Cable Flexible 1M
- RF Adapter for RF Shield Box

**GSM-850/900/1800/1900**

**WCDMA-850/900/1900/2100**

Put the grid positioning holder with its reference point in position **E11** and place the phone as shown in the adjacent picture.



## Go/NoGo Testing

### 1.2 Direct Line

The following equipment has to be used:

- RF Test Cable Flexible 1M
- RF Probe
- Dummy Battery with external power supply and cables (if not using a fully charged battery)

Connect the RF Probe as shown in the adjacent picture.

**To get access to the RF connector on the PBA, refer to 1234-5678: M1i, and M1a Working Instructions, section 4.12!**



## Go/NoGo Testing

**Follow the directions stated in 'Go/NoGo Test Script Parameters' to be found in 1220-1336: Generic Repair Manual – electrical, together with the 'Attenuation Factors' below!**

This phone is available as two versions, M1i and M1a, including the following bands:

**M1i:**

GSM-850/900/1800/1900

WCDMA-900/2100

**M1a:**

GSM-850/900/1800/1900

WCDMA-850/1900/2100



## 1.3 Attenuation Factors

**The attenuation values listed below in 1.3.1 and 1.3.2 are valid only when the equipment listed on the previous pages is being used!**

### 1.3.1 Loss Values – Antenna Coupler

Band	Channel	Attenuation			
		M1i		M1a	
		Rx	Tx	Rx	Tx
GSM 850	Low	11.50	18.11	11.50	18.11
	Mid	8.00	17.05	8.00	17.05
	High	8.00	15.88	8.00	15.88
GSM 900	Low	6.00	10.45	6.00	10.45
	Mid	8.00	8.71	8.00	8.71
	High	7.00	7.85	7.00	7.85
GSM 1800	Low	8.00	11.67	8.00	11.67
	Mid	10.00	8.75	10.00	8.75
	High	12.00	7.59	12.00	7.59
GSM 1900	Low	9.00	10.17	9.00	10.17
	Mid	12.00	11.53	12.00	11.53
	High	15.00	9.04	15.00	9.04
WCDMA 850	Low	-	-	10.50	15.29
	Mid	-	-	7.50	14.51
	High	-	-	8.50	13.58
WCDMA 900	Low	9.00	7.49	-	-
	Mid	9.00	6.77	-	-
	High	8.00	7.34	-	-
WCDMA 1900	Low	-	-	10.50	9.55
	Mid	-	-	12.50	10.23
	High	-	-	15.50	9.33
WCDMA 2100	Low	10.50	8.78	10.50	8.78
	Mid	11.00	9.44	11.00	9.44
	High	8.50	12.58	8.50	12.58



## Go/NoGo Testing: Attenuation Factors

### 1.3.2 Loss Values – Direct Line

Band	Channel	Attenuation	
		Rx	Tx
GSM 850	All	0.8	0.8
GSM 900	All	0.8	0.8
GSM 1800	All	1.3	1.3
GSM 1900	All	1.3	1.3
WCDMA 850	All	1.3	1.3
WCMA 900	All	0.8	0.8
WCDMA 1900	All	1.5	1.5
WCDMA 2100	All	1.5	1.5



## 2 Revision History

Rev.	Date	Changes / Comments
1	2010-Aug-13	Initial release