

# JRC

## GSM MOBILE STATION TESTER NJZ-917BJ

Expanded capability of low-cost test solution  
for GSM mobile-phone repair



### Expanded capability

- Added dual-band hand-over test capability
- Extended PCS1900 frequency band
- Increased DC source voltage range to 11V
- Expanded six traffic-channel test in Automatic test mode
- Simplified user interface
- Added GPRS Mode test capability

### Versatile

- Flexibility for performing a variety

of mobile phone service tasks, from go/no go, module-level repair to after repair adjustments

- Tx/Rx, spectrum, power, and dc current measurements to quickly locate faults, and at the same time power the phone through the dc connection
- After repair adjustment tools to help fine tune mobile stations to the manufacturer specification
- Easy operation and management with a simple, intuitive user

interface and a PC card reader for loading test conditions and product upgrades

### Reliable

- Accurate, reliable troubleshooting with  $\pm 0.6\text{dB}$  peak power measurement accuracy
- JRC worldwide service and support



*Japan Radio Co., Ltd.*

## Specifications Summary

### RF Signal Generator

**Frequency Range :**

935MHz to 960MHz (GSM downlink)  
 925MHz to 960MHz (E-GSM downlink)  
 1805MHz to 1880MHz (DCS1800 downlink)  
 1930MHz to 1990MHz (PCS1900 downlink)

**Frequency Resolution :**

200kHz, at channel frequency

**Frequency Accuracy :**

same as reference

**Output Level Range :**

-110dBm to -50dBm

**Output Level Accuracy :**

$\pm 1.0$ dB at GSM/E-GSM ( $\pm 0.6$ dB, typical at 25°C)  
 $\pm 1.3$ dB at DCS 1800 ( $\pm 0.6$ dB, typical at 25°C)  
 $\pm 1.5$ dB at DCS 1900 ( $\pm 0.8$ dB, typical at 25°C)

**Output Level Resolution :** 0.5dB

**Modulation :** 0.3 GMSK

**Phase Error :**  $< 3^\circ$  rms typical

**Peak Phase Error :**  $< 6^\circ$  peak typical

### RF Analyzer

**Frequency Range :**

890MHz to 915MHz (GSM uplink)  
 880MHz to 915MHz (E-GSM uplink)  
 1710MHz to 1785MHz (DCS1800 uplink)  
 1850MHz to 1910MHz (PCS1900 uplink)

### Transmitter Carrier Peak Power Measurement

**Range :**

-20dBm to +39dBm  
 (0.3 GMSK at burst/continuous or CW)

**Accuracy :**

For GSM900E/E-GSM/DCS1800  
 $\pm 1.0$ dB at  $\geq 0$ dBm  
 $\pm 2.0$ dB at  $< 0$ dBm  
 ( $\pm 0.5$ dB typical at all power ranges at 25°C)  
 For PCS1900  
 $\pm 1.3$ dB at  $\geq 0$ dBm  
 $\pm 2.0$ dB at  $< 0$ dBm  
 ( $\pm 0.6$ dB typical at all power ranges at 25°C)

**Resolution :** 0.2dB

### Power Ramp Measurement

**Range :**

-11dBm to +39dBm (0.3 GMSK at burst)

**Accuracy :**

$\pm 0.6$ dB typical at 25°C  $\pm 5^\circ$  at  $\geq 0$ dBm  
 $\pm 1.6$ dB typical at 25°C  $\pm 5^\circ$  at  $< 0$ dBm

**Resolution :** 0.2dB

**Dynamic Range :**  $\geq 40$ dB typical

### Phase and Frequency Error Measurement

**Input Level Range :**

-11dBm to +39dBm

**Input Phase Error Range :**

$0^\circ$  to  $20^\circ$  (0.3 GMSK at burst)

**Phase Error Measurement Accuracy :**

$= < 1.5^\circ$  rms at phase error  $\geq 2.5^\circ$   
 $= < 6.0^\circ$  peak at phase error  $\geq 2.5^\circ$

**Frequency Error Measurement Range :**

$\pm 9$ kHz (0.3 GMSK at burst/continuous or CW)

**Frequency Error Measurement Accuracy :**

(Average of 10 measurements) :  
 $\pm (12\text{Hz} + \text{frequency reference accuracy})$  at  $< 33$ dBm input at  $25 \pm 5^\circ$   
 [ $\pm (8\text{Hz typical})$ ] GSM/E-GSM  
 $\pm (25\text{Hz} + \text{frequency reference accuracy})$  at  $< 30$ dBm input at  $25 \pm 5^\circ$   
 $\pm (15\text{Hz typical})$ ] DCS1800/PCS1900

### DC Power Supply

**Range :** 3VDC to 11VDC

**Resolution :** 0.1V

**Accuracy :** 0.1V at 100mA load

**Maximum Current :** 1A, peak 2A at 3.0V to 9.0V  
 peak 1.5A at 9.1V to 11V

**Ripple Noise :** 60mV p-p typical

### DC Current Measurement

**Range :** 3mA to 1000mA

**Accuracy :**  $\pm (3\text{mA} + 2\%)$ 

### General Specifications

**Size :** 350(W)  $\times$  150(H)  $\times$  350(D)mm

**Weight :** 10kg

**Power Voltage :** 88V to 264V

**Power Frequency :** 47Hz to 63Hz

**Power Consumption :**  $= < 135\text{VA}$

• Specifications may be subject to change without notice

For further information, contact:



Since 1915

**Japan Radio Co., Ltd.**

URL <http://www.jrc.co.jp/>

**Main Office:** Nittochi Nishi-Shinjuku bldg.  
 10-1, Nishi-Shinjuku 6-chome  
 Shinjuku-ku, Tokyo 160-8328, Japan  
 Telephone: +81-3-3348-3853  
 Facsimile: +81-3-3348-3935

**Overseas Branches :** Seattle, Amsterdam

**Liaison Offices :** Taipei, Manila, Jakarta, New York,  
 Piraeus

ISO9001, ISO14001 Certified