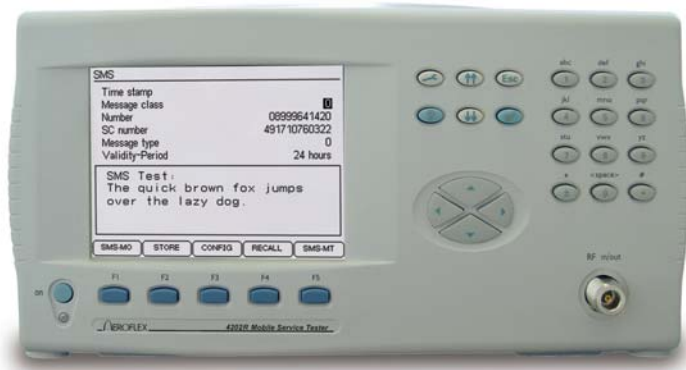


# 4202S Mobile Service Tester

**AEROFLEX**  
A passion for performance.



## Highlights

- Triple-band testing/GSM 850 (optional)
- High sensitivity in service (async) mode:  $-40$  dBm
- Large dynamic range for I/Q alignment:  $>60$  dB
- Specific manufacturer options for dedicated tests, for example AM Signal Generator or AM Suppression measurement
- Easy-to-use interface in English, German, French, Italian, Portuguese and Chinese
- Provides software updates on the Internet

## What's the Fastest Way to Get a Comprehensive Picture?

The Aeroflex 4202S Mobile Service Tester is the ideal solution for mid-level service activities, for example, performing board swaps, module exchanges and subsequent RF alignment. It provides fast and accurate RF measurements and offers a full range of features, including voice, data and the SMS functions of dual-band and triple-band mobile handsets.

The Mobile Service Tester 4202S is designed to meet the requirements of service centers and manufacturers who want to perform scientific post-fault analysis and diagnoses.

The 4202S also offers high level and measurement accuracy, along with one of the highest sensitivity levels in its class, and a large dynamic range for I/Q alignment allowing optimal tuning of phones.

The Aeroflex 4202S is designed for the test and alignment of mobile phones in service centers and for final testing by manufacturers:

For the test of AM Suppression, an AM Signal Generator Option is available.

The Result Upload Option allows test results to be transferred to virtually any location in the corporate network with a push of a button.

Built-in AUTOTESTs allow the execution of automatic test routines and give the user a pass/fail verdict at the end of the AUTOTEST to make testing simpler and easier.

The Manual or Fault Find mode distinguishes two different operating modes. The Synchronous mode allows standard signaling, that is the location update, call set-up procedures, in order to get a phone onto a traffic channel and perform RF testing.

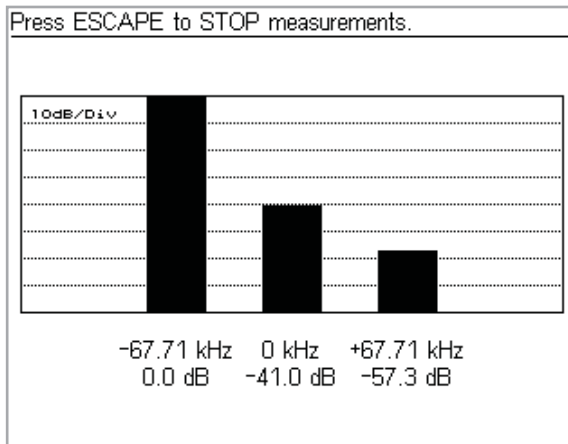
The Asynchronous mode is dedicated to the Service mode, where phones are controlled by a manufacturer's service software. This mode is used to align mobile phones.



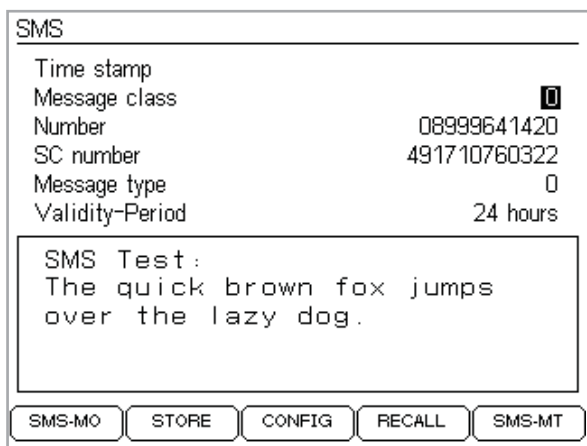
To take testing even further, the 4202S offers testing of short message service.

The Data mode is intended to test data modems that do not support standard traffic channels but only data channels for RF testing.

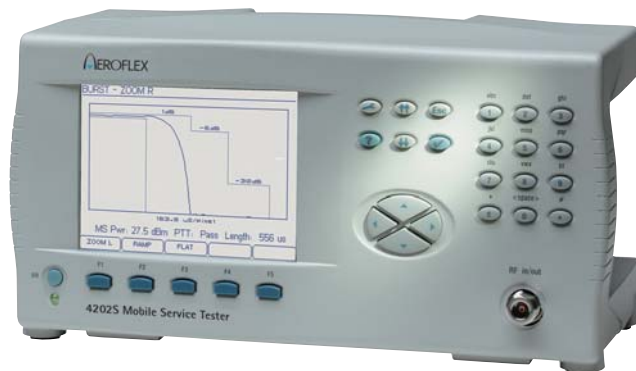
For the very latest specifications visit [www.aeroflex.com](http://www.aeroflex.com)



The large dynamic range of 60 dB for I/Q alignment allow for optimal tuning of phones. The bar graphs are clearly visible and the numbers provide accurate results.



The SMS test capabilities of the 4202S offer analysis of the most crucial parameters used for SMS, such as Service Center Number, Validity Period and Message Class. This allows a service technician to pinpoint possible problems in the transfer of short messages.



## SPECIFICATIONS

### BASIC RF DATA

#### Input/output Impedance

50 Ω

#### VSWR

<1.3

#### RF Input/Output

N-type, female

#### Internal Reference Frequency

13 MHz

#### Aging

10<sup>-6</sup>/year

#### External Ref. Input

BNC-type, female

5/10/13 MHz

### RF GENERATOR

#### Frequency Ranges

GSM 900, E-GSM, GSM-R

(channels 1 – 124; 0, 975 – 1023; 955 – 974)

GSM 1800 (channels 512 – 885)

GSM 1900 (channels 512 – 810)

GSM 850 (optional) (channels 128 – 251)

#### Reference Frequency Accuracy (without external reference oscillator)

<10<sup>-6</sup>

#### Output Level Accuracy For Levels –110 to +38 dBm

<0.9 dB

#### Operating Temperature Range

+20°C to +30°C

#### Output Level Range

GSM 850/900 –38 to –117 dBm

GSM 1800/1900 –44 to –117 dBm

#### Resolution

0.1 dB

### RF ANALYZER

#### Frequency Ranges

GSM 900, E-GSM, GSM-R (channels 1 – 124; 0, 975 – 1023; 955 – 974)

GSM 1800 (channels 512 – 885)

GSM 1900 (channels 512 – 810)

GSM 850 (optional) (channels 128 – 251)

#### FREQUENCY ERROR MEASUREMENT

##### Measurement Range

±10 kHz off carrier

##### Usable Range

±45 kHz

**Measurement Accuracy**

GSM 850/900	<15 Hz
GSM 1800/1900	<25 Hz

**POWER LEVEL MEASUREMENT****Measurement Range**

Burst mode	-20 to +39 dBm
CW mode	-20 to +33 dBm
Async burst mode	-40 to +39 dBm

**Measurement Accuracy**

<0.9 dB

**Dynamic Range**

Power/time template	>40 dB
I/Q alignment mask	>60 dB

**PHASE ERROR MEASUREMENT****Measurement Range**

1.5° to 20° rms

**Measurement Accuracy**

GSM 850/900	<0.8° rms
GSM 1800/1900	<1.4° rms

**Timing Advance Accuracy**

¼ bit

**GENERAL DATA**

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**Serial Interface**

D-Sub 9, female  
4800, 9600, 19 200, 38 400 Bd

**Printer Interface**

D-Sub 25, female

**Mains Voltage Range (AC)**

100 to 250 V

**Mains Voltage Frequency**

50 to 60 Hz

**Power Consumption**

17 W

**Storage Temperature**

-30°C to +50°C

**Operating Temperature**

+15°C to +35°C

**Size**

310 x 170 x 165 mm (12.2 x 6.7 x 6.5")

**Weight**

2.4 kg (5.3 lbs.)

**STANDARD DELIVERY**

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4202S Mobile Service Tester

Manual pack 4200

1103 USIM & GSM SIM Card

Power cable

Centronics cable

RS-232 cable

## ORDERING DETAILS

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Aeroflex 4202S Mobile Service Tester	AG 101 302
Upgrade 4201S to 4202S	AG 248 500
4202S AM Signal Generator package (incl. option)	AG 101 352
4271 AM Signal Generator option	AG 248 507
4271 AM Signal Generator upgrade	AG 248 506
4260 GSM 850 option	AG 248 418
4280 GSM 850 Upgrade Kit	AG 248 404
4272 Result Upload option	AG 897 136
4273 Detuning option	AG 248 505
4274 DC option	AG 204 094
4275 Remote Power option	AG 248 748
4281 External Battery Kit	AG 205 014
1500 Battery Charger	AG 204 097
Battery Module	AG 205 012
4261 GPRS Go/NoGo option	AG 897 185
4262 GPRS Measurement option	AG 897 186

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Our passion for performance is defined by three attributes represented by the icons pictured above: solution-minded, performance-driven and customer-focused.