

MT8510B

Service Tester



W-CDMA and GSM terminal testing.





W-CDMA and GSM testing in 1 unit. Capable of measuring major Tx/Rx parameters with 1 unit.

Batch measurement via simple operations

The MT8510B Service Tester is a primary failure diagnosis tester for mobile terminals conforming to second-generation (GSM) and third-generation (W-CDMA) communication systems.

Mobile terminals, and mostly cellular phones, have become extremely popular and grown to be nearly indispensable for users. Therefore, the importance of the role that after-sales service plays in mobile terminal reliability is growing day by day.

The major benefits of the MT8510B are its simple operation, ensuring that expert knowledge about mobile terminals is not required, Automatic tests coverage of actual mobile terminal usage situations, and its support of network management via remote control.

The MT8510B can be used at any location related to the after-sales service of mobile terminals, ranging from cellular phone sales offices (service points) to repair/adjustment sites (service centers).

- Supports 2 communication systems: W-CDMA and GSM. Also capable of supporting an expanded W-CDMA frequency band*1 in the future.
- Capable of executing an end-to-end communication test between a cellular phone and non-wireless handset by installing the W-CDMA/GSM Voice Codec Option*2.
- Capable of executing Intersystem Handover control from W-CDMA to GSM.*3

*1: The MT8510B comes with hardware that has multi-band support. It can support multiple frequency bands, which are standardized in the W-CDMA system and expected to be used widely in the future, just by installing the corresponding software.

*2: This option is sold separately.

*3: Requires MX851000B, MX851050B, and MX851001B.

W-CDMA Test Capabilities

Transmission measurement	Maximum output power
	Frequency Error
	Open loop power control
	Inner loop power control
	Minimum output power*
	Error vector magnitude (EVM)
Reception measurement	BER
Call processing	Location registration, terminal call origination, network call origination, terminal release, network release
	UE Report (CPICH RSCP)

*: Requires MT8510B-14(24), MX851000B, MX851030B, and MX851050B.

GSM Test Capabilities

Transmission measurement	Transmission power
	Power vs time (template mask evaluation)*
	Frequency error
	Phase error (rms and peak)
Reception measurement	FER, BER
Call processing	Location registration, terminal call origination, network call origination, terminal release, network release
	Mobile terminal report monitor (reception level, reception quality)

*: Can be measured only when the up-link slot number is "1".

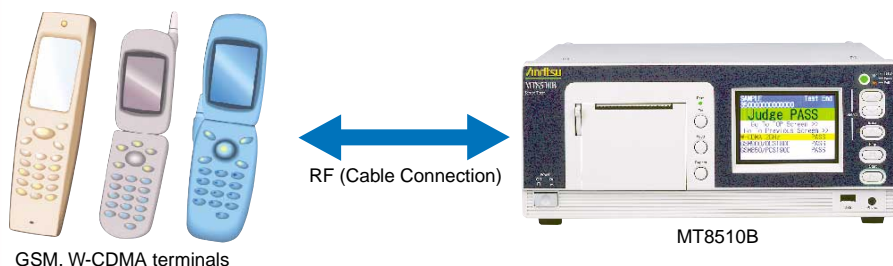


Features

Improves after-sales service

The MT8510B Service Tester provides the best solution for testing cellular phone terminals. RF characteristics, protocol, and voice tests can be executed for dual-mode mobile terminals that support both GSM and W-CDMA, as well as for mobile terminals dedicated to each communication system. By installing the dedicated software that supports GSM and W-CDMA in the MT8510B, and then using it in combination with the optional MA8120E, the MT8510B provides a testing environment similar to actual operating conditions that are experienced by the mobile terminal.

This compact, lightweight and easy-to-use tester is also suitable for failure diagnosis at the cellular phone shops of carriers or service centers of mobile terminal manufacturers, and contributes to facility cost reduction and after-sales service improvement.



Supports 2 communication systems

W-CDMA/GSM

The MT8510B Service Tester supports the GSM and W-CDMA world-standard second/third-generation mobile communication systems.

Supports multi-band

The MT8510B hardware's conforms with the multi-band specifications ensuring compliance with the frequency bands designated for future standardization in the W-CDMA system.

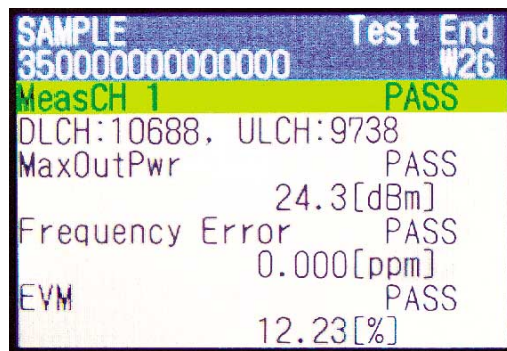
Supports Intersystem Handover control

W-CDMA and GSM sequence tests

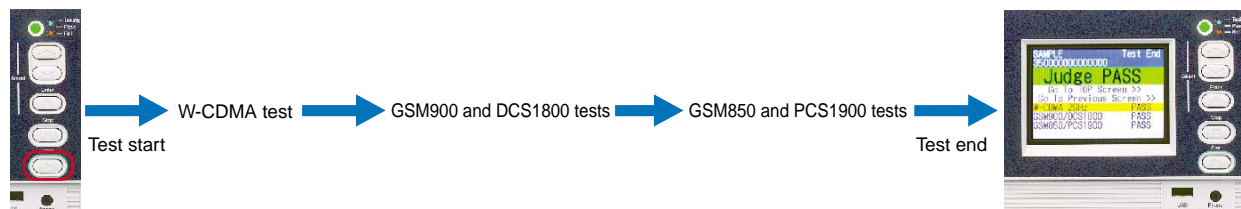
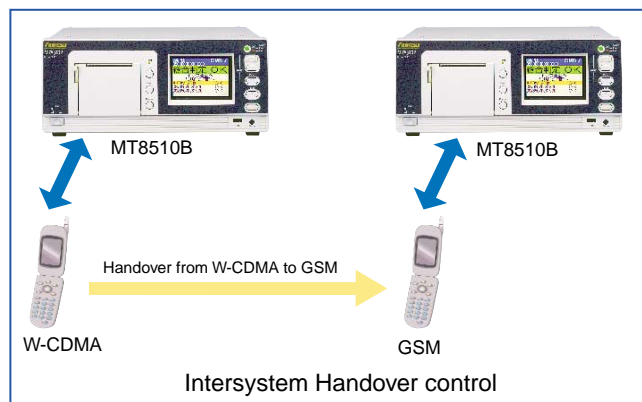
The MT8510B Service Tester can perform sequence tests easily by installing the dedicated software for W-CDMA and GSM together with test parameters contained in test information files for the appropriate sequence tests. However, the UE must support the W-CDMA and GSM auto-switch function or Intersystem handover control. The test information files can be created by MX851010B or MX851060B Remote Control Software.

Improved operability

The MT8510B Service Tester has improved operability and visibility by employing a large LCD panel.



Example of measured results



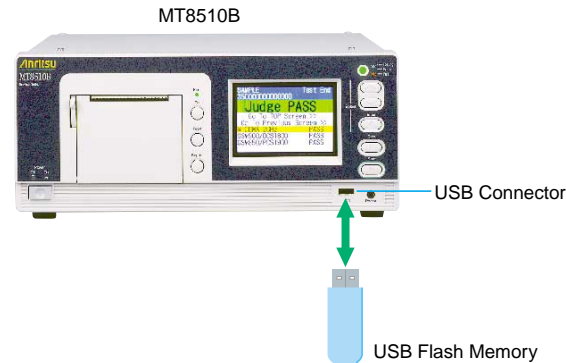
Press the Start button.

W-CDMA and GSM sequence test

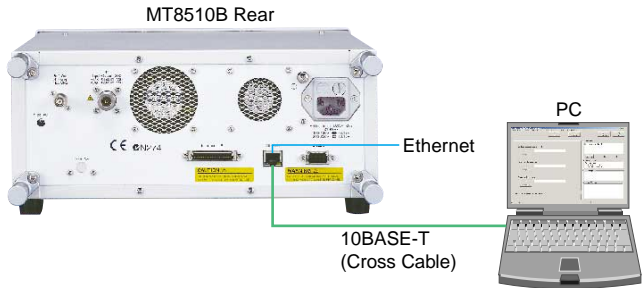


Software upgrades

The MT8510B is equipped with a USB connector on the front panel. This enables easy firmware upgrades as well as installation of call processing scenarios and test information files. The USB memory supplied as standard with the MT8510B. Software upgrades are also available via remote control from a PC.



Example of using USB Flash Memory



Example of using Remote Control PC

Test parameter files

The MT8510B Service Tester's test parameters can be changed/created easily via remote control from a PC. Test parameters can also deal with the differences between protocols of existing/new models derived from the 3GPP protocol standards update. Operators can therefore test mobile terminals just by selecting test parameters without having to be familiar with protocol standards.

"Save Test Result Log" function

The MT8510B can store test results in its mainframe when "Save" is selected in the "Save Test Result Log" function. The test results are stored in CSV format and can be recalled using a USB flash memory or a remote control PC.

	A	B	C	D	E	F
1	FormatVersion		1			
2	Test Date&Time	Group	UE Model	IMEI	Band Selection	Total Judgment
3	5/1/2005 19:21	SAMPLE1	UE1	3500000000000000	W-CDMA 2GHz	PASS
4	5/1/2005 19:23	SAMPLE1	UE1	3500000000000000	GSM900/DCS1800	PASS
5	5/1/2005 19:25	SAMPLE1	UE1	3500000000000000	GSM850/PCS1900	PASS
6	5/1/2005 19:27	SAMPLE1	UE2	3500000000000000	W-CDMA 2GHz	PASS
7	5/1/2005 19:30	SAMPLE1	UE3	3500000000000000	W-CDMA 2GHz	PASS
8	5/1/2005 19:32	SAMPLE2	UE4	3500000000000000	W-CDMA 2GHz	PASS
9	5/1/2005 19:34	SAMPLE2	UE5	3500000000000000	W-CDMA 2GHz	PASS
10	5/1/2005 19:36	SAMPLE2	UE6	3500000000000000	GSM900/DCS1800	PASS
11	5/1/2005 19:38	SAMPLE2	UE7	3500000000000000	GSM900/DCS1800	PASS
12	5/1/2005 19:40	SAMPLE2	UE8	3500000000000000	GSM900/DCS1800	PASS
13	5/1/2005 19:42	SAMPLE3	UE9	3500000000000000	GSM900/DCS1800	PASS
14	5/1/2005 19:44	SAMPLE3	UE10	3500000000000000	GSM850/PCS1900	PASS
15	5/1/2005 19:46	SAMPLE3	UE11	3500000000000000	GSM850/PCS1900	PASS
16	5/1/2005 19:48	SAMPLE3	UE12	3500000000000000	GSM850/PCS1900	PASS
17	5/1/2005 19:50	SAMPLE3	UE13	3500000000000000	GSM850/PCS1900	PASS

Example of test results *2

*2: Microsoft Excel is a registered trademark of Microsoft Corporation.



The MT8510B Service Tester operates as a pseudo base station in order to serve as a simple tester for mobile terminals. Using the MT8510B in combination with a shield box creates a testing environment similar to that of actual operating conditions.

Test contents

To accurately judge whether a mobile terminal is failing, it is important to make measurements in conditions where the mobile terminal is used just like it would be in the field.

Protocol test

The MT8510B acts as a pseudo base station when it connects/disconnects a call with the mobile terminal to judge call processing pass/fail correctly.

The MT8510B can perform judgments for all call processing functions including [Location Registration], [Call Origination], [Call Termination], [Network Release], and [UE Release].

Voice communication test

In the audio state, the voice input from the mobile terminal can be looped back (echo back) to a downlink signal.

This facilitates voice communication testing.

Performance test

In normal operation the mobile terminal and its actual base station are connected via RF (air coupling).

Therefore a full performance test must be executed under an equivalent environment.

The shield box equipped with an internal wideband antenna (MA8120E, sold separately) can be used this a performance test. This enables testing that includes the mobile terminal's antenna.

A performance test can also be performed by connecting the mobile terminal and the MT8510B using a cable.

To judge failure of the TX section of the mobile terminal, for example, the MT8510B can test open loop power control, maximum transmitter power, inner loop power control, modulation accuracy, and frequency stability during W-CDMA measurement. To judge failure of the RX section, it can execute a bit error rate (BER) test in a loopback state.

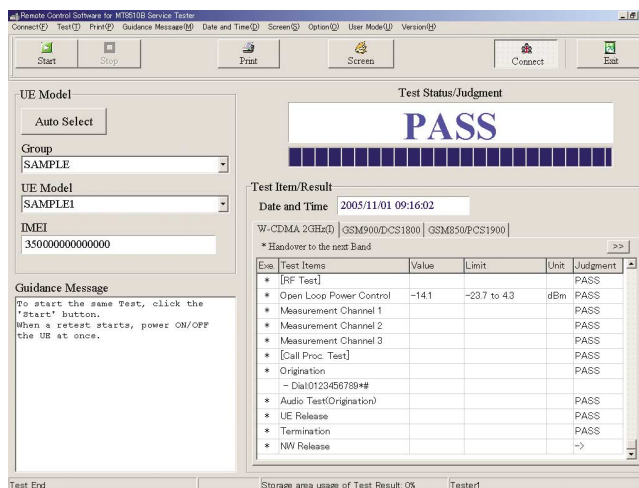
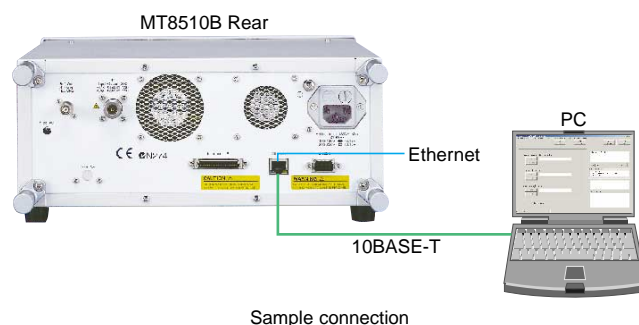
Selection of test items and judgment threshold values for each performance test can be created/saved as a test parameter *1 file by using the remote control software supplied as standard with the MT8510B.

*1: Anritsu provides test parameters upon request. Contact our salesperson for more detailed information.

Remote control using a network

When deploying the MT8510B at service points, service centers, or other service locations, it can be operated more efficiently by controlling it via a network.

Starting/stopping a test, settings for the MT8510B unit such as parameters, downloading firmware, and/or test information parameters for the MT8510B mainframe can be controlled remotely by installing the remote control software (supplied with the MT8510B as standard) by an external PC.



MX851010B Remote Control Software

Overview

Incorporates proven technology

The MT8510B incorporates the technical resources*1 of Anritsu's well-regarded MT8820A Radio Communication Analyzer and MD8480B Signalling Tester. So MT8510B can provide W-CDMA Call Processing testing with very high and proven quality.

Research Development
MD8480B Signalling Tester



Maintenance
MT8510B Service Tester



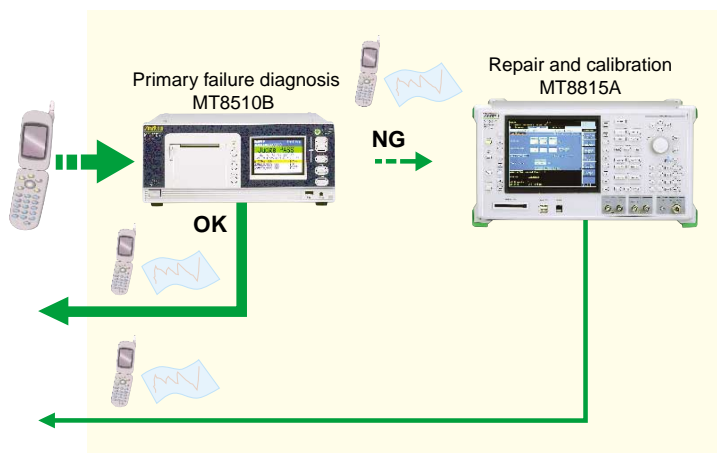
Manufacturing
MT8820A Radio
Communication Analyzer



*1: Attention: MT8510B cannot use the W-CDMA Call Processing software that operates with the MD8480B and the MT8820A

Maintenance Solution

Anritsu provides a complete maintenance solution for customers with the MT8510B for primary failure diagnosis and the MT8815A for repair and calibration.



Example: Service Center

Voice codec option (MT8510B-13)

— Combination with voice codec —

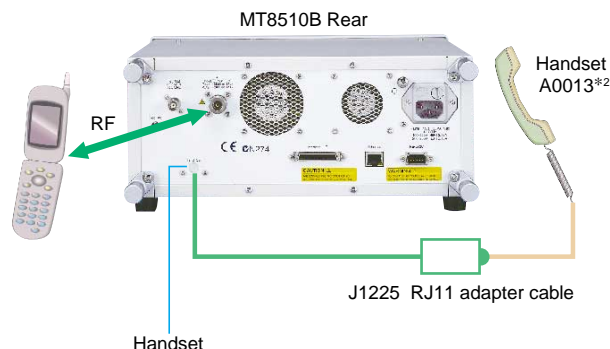
● Real-time voice encoding/decoding functions

The MX851000B-01 W-CDMA (MX851001B-01 GSM) Voice Codec software option adds real-time voice encoding/decoding functions to the W-CDMA (GSM) Measurement Software.

An end-to-end communication test using a non-wireless handset is available by installing the MX851000B-01 (MX851000B-01) option and the Option 13 Audio Board and connecting them with the MT8510B via the RJ11 adapter cable (J1225).

● End-to-end communication test

An end-to-end communication test between the MT8510B and the mobile terminal is available by connecting a non-wireless handset to the MT8510B. Connect the handset to the RJ11 connector on the RJ11 adapter cable (J1225), and connect the other end of the cable to the MT8510B (Handset) earphone jack.

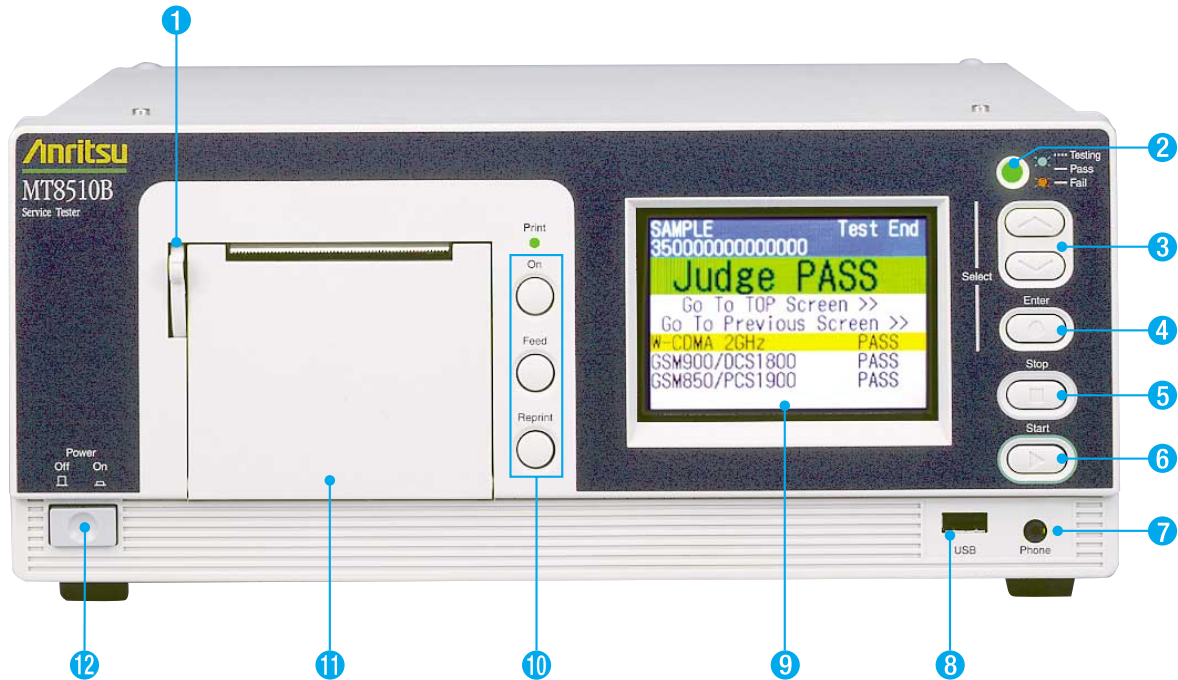


*2: The A0013 handset can be used with the MT8510B and MD8470A, but it cannot be used with the MT8510A, MT8820A, or MD8480B.

The A0012 handset can be used with the MT8510A, MT8820A, and MD8480B, but not with the MT8510B.

MT8510B Panel Layout

A test can be started just by pressing the Start key after selecting the mobile terminal model type on the MT8510B LCD panel. When the test is completed, the judgment results are displayed on the LCD panel and indicated by an LED, and printed out from the built-in printer.



- 1 Printer cover open/close lever:** Used for replacing printer paper.
- 2 Test status/judgment lamp:** Indicates the test status.
- 3 Up/Down keys (▲▼):** Used to select a setting.
- 4 Enter key (○):** Used to confirm the settings.
- 5 Stop key (□):** Used to stop the test.
- 6 Start key (▶):** Used to start a test.
- 7 Earphone jack:** Used when executing a voice test.
A dedicated cable*1 is required for connecting to this jack.

- 8 USB connector:** Used to connect USB memory for loading measurement conditions and for updating software.
- 9 Color TFT LCD panel:** Displays the selected parameters and test results.
- 10 Printer setting buttons:** Used to turn the printer On/Off, to feed the paper, and to reprint the test results.
- 11 Built-in printer:** Used to print out the test results.
- 12 Power key:** Used to turn the power On/Off.

*1: Contact an Anritsu Service and Sales office for details.



- 13 Earphone jack for handset connection (Handset):** Can be used when the Voice Codec option is installed. Used to connect the RJ11 adapter cable (J1225).
- 14 RF I/O connector (RF Input/Output):** Used for RF measurement of the mobile terminal.
- 15 Mobile terminal control connector (Interface UE):** 50-pin DX-type connector
- 16 100BASE-TX/10BASE-T connector (Ethernet):** Used when controlling the MT8510B remotely with the dedicated remote control software.



General	Frequency range	<p>MX851000B W-CDMA Measurement Software</p> <p>Transmission frequency (Downlink)</p> <p>2110.0 to 2170.0 MHz [W-CDMA (I)]</p> <p>1930.0 to 1990.0 MHz [W-CDMA (II)]</p> <p>1805.0 to 1880.0 MHz [W-CDMA (III)]</p> <p>869.0 to 894.0 MHz [W-CDMA (V)]</p> <p>875.0 to 885.0 MHz [W-CDMA (VI)]</p> <p>Reception frequency (Uplink)</p> <p>1920.0 to 1980.0 MHz [W-CDMA (I)]</p> <p>1850.0 to 1910.0 MHz [W-CDMA (II)]</p> <p>1710.0 to 1785.0 MHz [W-CDMA (III)]</p> <p>824.0 to 849.0 MHz [W-CDMA (V)]</p> <p>830.0 to 840.0 MHz [W-CDMA (VI)]</p> <p>MX851001B GSM Measurement Software</p> <p>Transmission frequency (Downlink)</p> <p>869.0 to 894.0 MHz (GSM850)</p> <p>921.0 to 960.0 MHz (R-GSM900)</p> <p>925.0 to 960.0 MHz (E-GSM900)</p> <p>935.0 to 960.0 MHz (P-GSM900)</p> <p>1805.0 to 1880.0 MHz (DCS1800)</p> <p>1930.0 to 1990.0 MHz (PCS1900)</p> <p>Reception frequency (Uplink)</p> <p>824.0 to 849.0 MHz (GSM850)</p> <p>876.0 to 915.0 MHz (R-GSM900)</p> <p>880.0 to 915.0 MHz (E-GSM900)</p> <p>890.0 to 915.0 MHz (P-GSM900)</p> <p>1710.0 to 1785.0 MHz (DCS1800)</p> <p>1850.0 to 1910.0 MHz (PCS1900)</p>
	Frequency resolution	100 kHz step
	Input impedance	Impedance: 50 Ω , VSWR: 1.5, Connector: N type
	Transmission output (downlink)*1	<p>Output level</p> <p>Level range: -110 to -45 dBm</p> <p>[When MX851030B is installed]</p> <p>-110 to -20 dBm</p> <p>Resolution: 0.1 dB</p> <p>RF signal generator accuracy: ± 1.5 dB</p> <p>[When MX851030B is installed]</p> <p>± 1.5 dB (output level ≤ -45 dBm)</p> <p>± 2.0 dB (-45 dBm < output level ≤ -20 dBm, W-CDMA Uplink input level $\leq +25$ dBm)</p>
	Reception input (uplink)*1	<p>MX851000B: -30 to +28 dBm (W-CDMA Uplink average power)</p> <p>[When MX851030B is installed]</p> <p>-60 to +28 dBm (W-CDMA Uplink average power)</p> <p>MX851001B: -30 to +35 dBm (GSM Uplink average power in burst)</p> <p>[When MX851030B is installed]</p> <p>-60 to +35 dBm (GSM Uplink average power in burst)</p> <p>Level measurement accuracy: ± 1.0 dB (+0 dBm \leq input level)</p> <p>± 1.2 dB (-20 dBm \leq input level < +0 dBm)</p> <p>± 1.5 dB (-30 dBm \leq input level < -20 dBm)</p> <p>[When MX851030B is installed]</p> <p>± 1.0 dB (+0 dBm \leq input level)</p> <p>± 1.2 dB (-20 dBm \leq input level < +0 dBm)</p> <p>± 1.5 dB (-30 dBm \leq input level < -20 dBm)</p> <p>± 2.0 dB (-60 dBm \leq input level < -30 dBm, output level ≤ -45 dBm)</p>
	Modulation accuracy*1	<p>MX851000B: Residual vector error: $\leq 6.0\%$ rms (+0 dBm \leq input level)</p> <p>[When MX851030B is installed]</p> <p>$\leq 6.0\%$ rms (-20 dBm \leq input level)</p> <p>MX851001B: Residual Phase error: $\leq 1.5^\circ$ rms (GSM850, R-/E-/P-GSM900),</p> <p>$\leq 2.0^\circ$ rms (DCS1800, PCS1900)</p> <p>(+0 dBm \leq input level)</p> <p>[When MX851030B is installed]</p> <p>$\leq 1.5^\circ$ rms (GSM850, R-/E-/P-GSM900)</p> <p>$\leq 2.0^\circ$ rms (DCS1800, PCS1900)</p> <p>(-20 dBm \leq input level)</p>
Display		<p>LCD: Size: 3.8 inch</p> <p>Number of dots: 320 \times 240</p> <p>LED: Testing (lighting), Pass (Green color), Fail (Red color)</p>
Built-in printer		Measured date/time, model name, and serial number can be printed on test log
External interface		<p>100BASE-TX /10BASE-T: RJ-45</p> <p>UE Control Connector: DX50 TYPE</p> <p>USB Connector: USB A TYPE</p>
Power supply		100 to 120/200 to 250 Vac (-15/+15%, 250 V max.), 47.5 to 63 Hz, ≤ 70 VA
Dimensions and mass		Within 326 (W) \times 138.5 (H) \times 355 (D) mm (excluding projections), 5.5 kg or less
Environmental conditions		<p>Operating temperature and humidity: 0 to +50°C, 95% (no condensation)</p> <p>Storage temperature and humidity: -20 to +60°C, 95% (no condensation)</p> <p>EMC</p> <p>EN61326: 1997/A2 2001 (Class A), EN61000-3-2: 2000 (Class A),</p> <p>EN61326: 1997/A2: 2001 (Annex A)</p> <p>LVD</p> <p>EN61010-1: 2001 (Pollution degree 2)</p>
Others		Selftest function

*1: Temperature conditions +10 to +40°C

• **MX851000B W-CDMA Measurement Software, MX8510xxB W-CDMA Call Processing Software**

Function test	Call processing	Location registration, call origination, call termination, UE release, network release
	Audio test	Voice test by signal loopback at the MT8510B.
Performance test*1	Maximum output Power	Pass/Fail judgment for the maximum output Tx power of the UE -30 to +28 dBm (W-CDMA Uplink average power) [When MX851030B is installed] -60 to +28 dBm (W-CDMA Uplink average power) Measurement level accuracy : ± 1.0 dB (+0 dBm \leq input level) ± 1.2 dB (-20 dBm \leq input level < +0 dBm) ± 1.5 dB (-30 dBm \leq input level < -20 dBm) [When MX851030B is installed] ± 1.0 dB (+0 dBm \leq input level) ± 1.2 dB (-20 dBm \leq input level < +0 dBm) ± 1.5 dB (-30 dBm \leq input level < -20 dBm) ± 2.0 dB (-60 dBm \leq input level < -30 dBm, output level \leq -45 dBm)
	Open loop power control	Pass/Fail judgment for open loop Tx power of UE
	Inner loop power control	Pass/Fail judgment for Tx power control of UE
	Modulation accuracy	Pass/Fail judgment for transmission modulation accuracy of UE Residual vector error : $\leq 6.0\%$ (rms) (0 dBm \leq input level) (-20 dBm \leq input level, When MX851030B is installed)
	Frequency stability	Pass/Fail judgment for Tx output frequency stability of UE Measurement accuracy : ≤ 10 Hz (-10 dBm \leq input level) (-30 dBm \leq input level, When MX851030B is installed)
	Reference sensitivity	Pass/Fail judgment by measuring bit error of UE at the low field strength reception.
	CPICH RSCP	Pass/Fail judgment of CPICH RSCP which the UE measured.
	[When MX851030B is installed] Minimum output power	Pass/Fail judgment by measuring bit error of UE at the low field strength reception. Reception level range -60 to +28 dBm (W-CDMA Uplink average power) Measurement level accuracy ± 1.0 dB (+0 dBm \leq input level) ± 1.2 dB (-20 dBm \leq input level < +0 dBm) ± 1.5 dB (-30 dBm \leq input level < -20 dBm) ± 2.0 dB (-60 dBm \leq input level < -30 dBm, output level \leq -45 dBm)

*1: Temperature conditions +10 to +40°C

• **MX851001B GSM Measurement Software**

Function test	Call processing	Location registration, call origination, call termination, MS release, network release
	Audio test	Voice test by signal loopback at the MT8510B.
Performance test*2	Tx Power	Pass/Fail judgment for the output Tx power of the MS -30 to +35 dBm (GSM Uplink average power in burst) [When MX851030B is installed] -60 to +35 dBm (GSM Uplink average power in burst) level accuracy : ± 1.0 dB (+0 dBm \leq input level) ± 1.2 dB (-20 dBm \leq input level < +0 dBm) ± 1.5 dB (-30 dBm \leq input level < -20 dBm) [When MX851030B is installed] ± 1.0 dB (+0 dBm \leq input level) ± 1.2 dB (-20 dBm \leq input level < +0 dBm) ± 1.5 dB (-30 dBm \leq input level < -20 dBm) ± 2.0 dB (-60 dBm \leq input level < -30 dBm, output level \leq -45 dBm)
	Power vs time	Pass/Fail judgment for burst waveform of MS Dynamic range : ≥ 40 dB (+0 dBm \leq input level) ≥ 40 dB (-20 dBm \leq input level, When MX851030B is installed)
	Modulation accuracy	Pass/Fail judgment for transmission modulation accuracy of MS Residual phase error : $\leq 1.5^\circ$ (rms) (GSM850, R-/E-/P-GSM900) $\leq 2.0^\circ$ (rms) (DCS1800, PCS1900) (+0 dBm \leq input level) (-20 dBm \leq input level, When MX851030B is installed)
	Frequency stability	Pass/Fail judgment for transmission Tx output frequency stability of MS ≤ 10 Hz (-10 dBm \leq input level) (-30 dBm \leq input level, When MX851030B is installed)
	Reference sensitivity	Pass/Fail judgment by measuring reception error of MS at the Ref. Sensitivity low field strength reception.
	MS Report	The display and Pass/Fail judgment of Rx level and Rx quality which the MS measured.

*2: Temperature conditions +10 to +40°C

• **MX8510B-13 Voice Codec Board, MX851000B W-CDMA Measurement Software
MX851050B W-CDMA Call Processing Software, MX851000B-01 W-CDMA Voice Codec**

Voice Codec	AMR 12.2 kbps
Handset level adjustment	Handset microphone volume levels: 6 steps Handset speaker volume levels: 6 steps
Input/output connector	Phone jack (rear panel) Can be converted to modular connector by using RJ11 adapter cable (J1225).
Input impedance Output impedance	≥ 10 k Ω ≤ 2 k Ω
Environmental conditions	Same as main frame (MT8510B)

• **MX8510B-13 Voice Codec Board, MX851001B GSM Measurement Software
MX851001B-01 GSM Voice Codec**

Voice Codec	EF3
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*: Handset level adjustment, Input/output connector, Input impedance, Output impedance, and Environmental conditions are the same as W-CDMA Voice Codec.



Hardware

- The MT8510B-13 Voice Codec Board is optional hardware that brings real-time voice encoding and decoding for W-CDMA and GSM.
- The MT8510B-14 Wide Dynamic Range Board is optional hardware that enables a wide input/output range for W-CDMA and GSM.

Software

- **W-CDMA Measurement Software (MX851000B)**
MX851000B is used to test W-CDMA UE (requires MX851050B W-CDMA Call Processing Software).
- **W-CDMA Call Processing Software (MX851050B)**
MX851050B is used to test W-CDMA UE call processing (requires MX851000B).
- **W-CDMA Voice Codec (MX851000B-01)**
The MX851000B-01 W-CDMA Voice Codec is optional software that brings real time voice encoding and decoding to the W-CDMA Measurement Software and achieves end-to-end communication testing with a non-wireless handset (requires MT8510B-13(23), MX851000B, MX851050B, A0013, and J1225).
- **GSM Measurement Software (MX851001B)**
MX851001B is used to make GSM measurement tests.
- **GSM Voice Codec (MX851001B-01)**
The MX851001B-01 GSM Voice Codec is optional software that brings real time voice encoding and decoding to the GSM Measurement Software and achieves end-to-end communication testing with a non-wireless handset (requires MT8510B-13(23), MX851001B, A0013 and J1225).
- **Wide Dynamic Range (MX851030B)**
The MX851030B Wide Dynamic Range is optional software that enables a wide input/output range for W-CDMA and GSM. W-CDMA Measurement with Dynamic Range option supports Minimum Output Power Measurement (requires MT8510B-14(24); MX851000B and MX851050B for W-CDMA, MX851001B for GSM).

Configuration Examples

Option / Software Component	MX851000B W-CDMA Measurement Software	MX851000B-01 W-CDMA Voice Codec	MX851001B GSM Measurement Software	MX851001B-01 GSM Voice Codec	MX851050B W-CDMA Call Processing Software*1	MX851030B Wide Dynamic Range	MT8510B-13 Voice Codec Board	MT8510B-14 Wide Dynamic Range Board	P0027 W-CDMA/GSM Test USIM	UE connecting Cable
W-CDMA/GSM Test Set	1	—	1	—	1	—	—	—	1	1
W-CDMA Test Set	1	—	—	—	1	—	—	—	1	1
W-CDMA Test set (Support Voice Codec)*2	1	1	—	—	1	—	1	—	1	1
W-CDMA Test set (Support Wide Dynamic Range)*3	1	—	—	—	1	1	—	1	1	1
GSM Test Set	—	—	1	—	—	—	—	—	1	1
GSM Test Set (Support Voice Codec)*2	—	—	1	1	—	—	1	—	1	1
GSM Test Set (Support Wide Dynamic Range)*3	—	—	1	—	—	1	—	1	1	1

*1: MX851050B is needed to connect to W-CDMA UE.

For W-CDMA terminal connectivity, contact your Anritsu sales representative.

*2: W-CDMA Voice codec testing requires MT8510B-13(23), MX851000B, MX851050B, MX851000B-01, A0013 Handset, and J1225 RJ11 Adapter Cable.

GSM Voice codec testing requires MT8510B-13(23), MX851001B, MX851001B-01, A0013 Handset, and J1225 RJ11 Adapter Cable.

*3: Please check input/output range for specification. And W-CDMA Measurement with Wide Dynamic Range option supports Minimum Output Power Measurement.

* : Numbers in above table indicate the quantity of HW/SW required.

Ordering Information

Please specify the model/order number, name and quantity when ordering. UE connection coaxial cable and test USIM sold separately.

Model/Order No.	Name
MT8510B	— Mainframe — Service Tester
	— Standard accessories — Power cord, 2.6 m : 1 pc Fuse, 3.15A : 1 pc LAN cable (CAT5, cross) : 1 pc Z0618 Thermal paper for printer : 1 set (5 rolls) P0026 USB flash memory 128 : 1 pc W2499AE MT8510B operation manual*1 (CD-ROM) : 1 copy MX851010B Remote Control Software*1,*2 (Japanese, CD-ROM) : 1 copy MX851060B Remote Control Software*1,*2 (English, CD-ROM) : 1 copy MT8510B-14 Wide Dynamic Range Board*3
	— Options — MT8510B-13 Voice Codec Board MT8510B-23 Voice Codec Board Retrofit MT8510B-24 Wide Dynamic Range Board Retrofit*3

*1: All in one CD-ROM

*2: Operating environment : The MT8510B can be controlled remotely by a LAN-connected PC.

Control PC operation:

OS: Windows® (2000/XP), CPU: Intel Celeron® 400 MHz or faster, Memory: 64 MB or more, Hard disk: 25 MB or more (free space required to install software), Display resolution: 800 × 600 dots or more

*3: MT8510B-14 has been a standard option that MT8510B are shipped with until Nov. 2005.

*4: For W-CDMA terminal connectivity, contact your Anritsu sales representative.

Model/Order No.	Name
MT8510B-ES310 MT8510B-ES510	— Maintenance service — Extended warranty service (Three years) Extended warranty service (Five years)
MX851000B	— Software — W-CDMA Measurement Software (requires MX851050B)
MX851000B-01	W-CDMA Voice Codec (requires MT8510B-13, MX851000B, and MX851050B)
MX851001B MX851001B-01	GSM Measurement Software GSM Voice Codec (requires MT8510B-13 and MX851001B)
MX851030B	Wide Dynamic Range (requires MT8510B-14; MX851000B and MX851050B for W-CDMA, MX851001B for GSM)
MX851050B	W-CDMA Call Processing Software*4 (requires MX851000B) CD-ROM
P0027	— Application parts — W-CDMA/GSM Test USIM
J1110B	LAN cable (CAT5, straight)
J1158A	UE interface cable, 1.5 m
J1159A	Coaxial cord, 1.5 m
BA-A858	Coaxial adapter (N-P•SMA-J)
A0013	Handset
J1225	RJ11 adapter cable (For connecting between MT8510B and A0013)
W2498AE	MT8510B Operation Manual (booklet)

• Windows/Windows2000/WindowsXP is a registered trademark of Microsoft Corporation.

• Celeron is a registered trademark of Intel Corporation.

Related Products

MA8120E Shield Box



Upper: MA8120E
(separate product)
Lower: MT8510B

Model/Order No.	Name
MA8120E	— Mainframe — Shield Box
B0560A	— Standard accessories — UE multi holder : 1 pc
W2651AE	MA8120E Operation Manual : 1 copy
J1150D	— Application parts — Coaxial cord (N-P • N-P, 170 mm)
J1266A	Control I/F cable [DX50 • DX50, 170 mm, for external measurement equipment connection cable (control signal line)]

*1: MA8120E Shield Box is sold separately.

Please refer to the individual catalog of the MA8120E Shield Box for details.

*2: UE connection cable and Test USIM are sold separately.

MT8815A Radio Communication Analyzer



Model/Order No.	Name
MT8815A	— Mainframe — Radio Communication Analyzer
HB28B064C8H	— Standard accessories — Power cord, 2.6 m : 1 pc
CA68ADP	CF card (64 MB) : 1 pc
W2458AE	PC card adapter : 1 pc
	MT8815A/20A operation manual (CD-ROM) : 1 copy

*1: MT8815A Radio Communication Analyzer is sold separately.

Please refer to the individual catalog of the MT8815A Radio Communication Analyzer for details.

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MA8120E

Shield Box



Shield Box Suitable for Testing Mobile Phones

- The internal wide-band antenna (800 to 2500 MHz) enables testing of W-CDMA, cdma2000®, GSM, PDC, and PHS mobile terminals as well as Wireless LAN, *Bluetooth*®, and other such mobile devices using an air connection.
- Both air and coaxial connections between mobile phones and the MA8120E are available.
- UE multi holder can hold various shape UEs, allowing air connection measurements in proper position.

cdma2000® is a registered trademark of the Telecommunications Industry Association (TIA – USA).

The *Bluetooth* word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Anritsu Corporation is under license. Other trademarks and trade names are those of their respective owners.

Specifications

Frequency	800 to 2500 MHz	
Shield performance	≥ 60 dB	
Antenna coupling amount	≥ -25 dB	
Interface	External	RF connector: N type Control connector: DX50 type
	Internal	RF connector: SMA type Control connector: DX36 type
Dimensions and mass	Within 330.8 (W) x 181 (H) x 393 (D) mm (excluding protrusion) 7 kg or less	
Environment conditions	Temperature: 0 to +50°C (operating), -20 to +60°C (storage)	

Ordering information

Please specify model/order number, name, and quantity when ordering.

Model/Order No.	Name
MA8120E	Mainframe Shield Box
B0560A W2651AE	Standard accessories UE multi holder : 1 pc MA8120E operation manual : 1 copy
J1150D J1150G J1151B	Application parts Coaxial cord (N-P · N-P, 170 mm) Coaxial cord (N-P · N-P, 3 m) Control cable for PC USB cable externally connected to MA8120E, used in combination with J1215A (sold separately) UE I/F cable (for W-CDMA mobile phone connection inside MA8120E, control signal)*1 UE I/F cable with RF (for W-CDMA mobile phone connection inside MA8120E, control signal and RF)*1 Connecting cable for RS232C Serial cable externally connected to MA8120E, used in combination with J1311A/B (sold separately) Terminal I/F cable [DX36 · USB A TYPE FEMALE, for USB connection inside MA8120E, used in combination with J1151B (sold separately)] Control I/F cable [DX50 · DX50, 170 mm, for external measurement equipment connection cable (control signal line)] Connecting cable for RS232C DX36 · Dsub (9pin, J-type), 100mm, Serial cable internally connected to MA8120E Connecting cable for RS232C DX36 · Dsub (9pin, J-type), 300mm, Serial cable internally connected to MA8120E
J1153A J1155A J1157B	
J1215A	
J1266A	
J1311A	
J1311B	
J1312 Z0820A	Optional parts DX-50-CV1 Plug cover case*2 Rubber band (for B0560A)

*1: The W-CDMA UE connector complies with EIAJ STD.

*2: In case of using MA8120A's connecting cable for MA8120E, cover for DX-50-CV need to change DX-50-CV1.

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