

**MS8609A-32
Maximum Input Level
Extension
(For MS8609A)
Operation Manual**

First Edition

**Read this manual before using the equipment.
To ensure that the equipment is used safely, read the
"For Safety" in the MX860901A/B W-CDMA Measure-
ment Software Operation Manual first.
Keep this manual with the equipment.**

**Measurement Solutions
ANRITSU CORPORATION**

Safety Symbols

To prevent the risk of personal injury or loss related to equipment malfunction, Anritsu Corporation uses the following safety symbols to indicate safety-related information. Insure that you clearly understand the meanings of the symbols BEFORE using the equipment. Some or all of the following five symbols may not be used on all Anritsu equipment. In addition, there may be other labels attached to products which are not shown in the diagrams in this manual.

Symbols used in manual

DANGER  This indicates a very dangerous procedure that could result in serious injury or death if not performed properly.

WARNING  This indicates a hazardous procedure that could result in serious injury or death if not performed properly.

CAUTION  This indicates a hazardous procedure or danger that could result in light-to-severe injury, or loss related to equipment malfunction, if proper precautions are not taken.

Safety Symbols Used on Equipment and in Manual

The following safety symbols are used inside or on the equipment near operation locations to provide information about safety items and operation precautions. Insure that you clearly understand the meanings of the symbols and take the necessary precautions BEFORE using the equipment.



This indicates a prohibited operation. The prohibited operation is indicated symbolically in or near the barred circle.



This indicates an obligatory safety precaution. The obligatory operation is indicated symbolically in or near the circle.



This indicates warning or caution. The contents are indicated symbolically in or near the triangle.



This indicates a note. The contents are described in the box.



These indicate that the marked part should be recycled.

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Overview of the MS8609A-32 Maximum Input Level Extension

The MS8609A-32 Maximum Input Level Extension (Option 32) is intended to expand the functions of the MS8609A Digital Mobile Radio Transmitter Tester that comes with the MX860901A/ MX860901B W-CDMA Measuring Software installed.

The external attenuator conventionally required for maximum transmission power measurement of the terminal used mainly for W-CDMA has been installed inside of the main unit (MS8609A). This improves convenience of use and reduces the possibility of measuring instrument damage due to excess input.

Product Specifications

Main Unit

Mounting of Option 32 will change the specifications for the following items:

Maximum tolerance level	+30 dBm (1 W) continuous wave average power
Power meter functions	
Level range	-14 to +26 dBm
Amplitude	
Level measurement	
Level measurement range	Average noise level to +30 dBm
Maximum input level	Continuous wave average power: +30 dBm
Reference level	
Setting range	Log scale: -100 to +40 dBm or equivalent level Linear scale: 22.4 μ V to 22.4 V
Reference level accuracy	After calibration, when the frequency is 50 MHz, span is 1 MHz while the input attenuator, resolution bandwidth, video bandwidth and sweep time are set to Auto: ± 0.75 dB (+0.1 to +30 dBm) ± 0.5 dB (-49.9 to 0 dBm) ± 0.75 dB (-69.9 to -50 dBm) ± 1.5 dB (-80 to -70 dBm)

MX860901A/ MX860901B (W-CDMA Measurement Software)

Mounting of Option 32 will change the specifications for the following items:

Modulation/frequency measurement Measurement level range	-60 to +26 dBm (average power): when pre-amplifier is Off
Code domain analysis Measurement level range	-60 to +26 dBm (average power): when pre-amplifier is Off
Amplitude measurement Measurement level range Transmission power measurement Measurement range	-60 to +26 dBm (average power): when pre-amplifier is Off After level calibration using the internal power meter (automatically performed by pressing the key) -14 to +26 dBm (average power): when pre-amplifier is Off -14 to +10 dBm (average power): when pre-amplifier is Off
Occupied frequency bandwidth measurement Measurement level range	-60 to +26 dBm (average power): when pre-amplifier is Off
Adjacent channel leakage power measurement Input level range	-10 to +26 dBm (average power): when pre-amplifier is Off
Spurious measurement Input level range (Transmission power)	0 to +26 dBm (average power): when pre-amplifier is Off

Measurement

For basic operations, refer to paragraph "Power Meter" of "Section 3 Measurement", in the "MX860801A/B MX860901A/B W-CDMA Measuring Software (for MS8608A/MS8609A) Operation Manual."

Mounting of Option 32 will change the measurement range as follows:

In the power meter screen,

Measurement range

-14 dBm, -4 dBm, +6 dBm, +16 dBm, +26 dBm

Setting method

Same as conventional method. Refer to paragraph "Power Meter" of "Section 3 Measurement", which is on a separate volume.

Precautions for Use

Option 32 extends the maximum input level from the conventional +20 dBm to +26dBm. The maximum tolerable level is +30 dBm. However, Do not perform "Adjust Range" when inputting signals exceed +26 dBm in all measurement screens.

When a signal exceeding +26 dBm is inputted in the following measurement screens, excluding the Power Meter screen, the alarm message "Input Level Over" appears. This message simply provides an alert on the input level. There is no effect on the measurement results.

- Code Domain analysis for Modulation Analysis
- Transmitter Power
- Adjacent Channel Power
- Spurious Emission
- Power Meter

Never input a signal exceeding +30 dBm. It will damage the interior of the unit.

The external control commands for the power meter function are the same as conventional ones. However, read the measurement range shown above for the Input RF Level for RNG1 to RNG5.

