MX283027A
Wireless Network Device Test Software
Operation Manual
Operation

First Edition

- **For safety and warning information, please read this manual before attempting to use the equipment.**
- **Additional safety and warning information is provided within MS2830A Signal Analyzer Operation Manual (Mainframe Operation). Please also refer to this document before using the equipment.**
- **Keep this manual with the equipment.**

ANRITSU CORPORATION

Document No.: M-W3471AE-1.0

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MX283027A
Wireless Network Device Test Software
Operation Manual Operation

4 February 2011 (First Edition)

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CE marking

1. Product Model

Software: MX283027A Wireless Network Device Test Software

2. Applied Directive and Standards

When the MX283027A Wireless Network Device Test Software is installed in the MS2830A, the applied directive and standards of this unit conform to those of the MS2830A main frame.

PS: About main frame
Please contact Anritsu for the latest information on the main frame types that the MX283027A can be used with.

C-Tick Conformity Marking

Anritsu affixes the C-Tick mark on the following product(s) in accordance with the regulation to indicate that they conform to the EMC framework of Australia/New Zealand.

C-Tick marking

1. Product Model

Software: MX283027A Wireless Network Device Test Software

2. Applied Directive and Standards

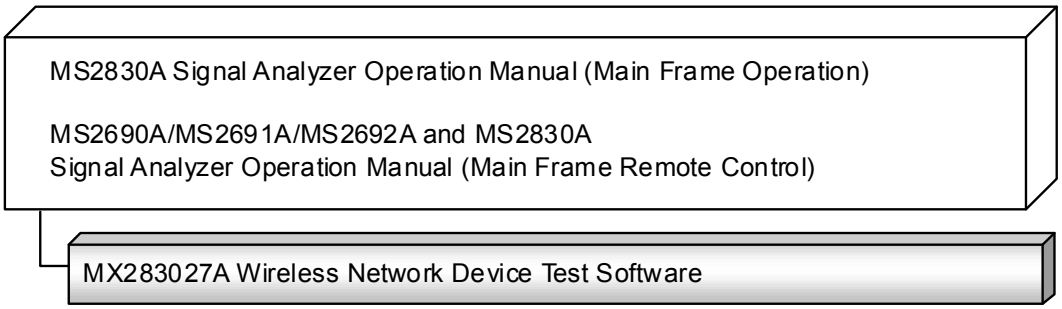
When the MX283027A Wireless Network Device Test Software is installed in the MS2830A, the applied directive and standards of this unit conform to those of the MS2830A main frame.

PS: About main frame
Please contact Anritsu for the latest information on the main frame types that the MX283027Acan be used with.

About This Manual

■ **Composition of Operation Manuals**

The operation manuals for the MX283027A Wireless Network Device Test Software are comprised as shown in the figure below.



- Signal Analyzer Operation Manual (Mainframe Operation)
- Signal Analyzer Operation Manual (Mainframe Remote Control)

These manuals describe basic operating methods, maintenance procedures, common functions, and common remote control of the signal analyzer mainframe.

- MX283027A Wireless Network Device Test Software (Operation)
  <This document>

This manual describes basic operating methods, and functions of the MX283027A Wireless Network Device Test Software.

Convention Used in This Manual

Throughout this document, the use of MS2830A Series is assumed unless otherwise specified.

In this document, [ ] indicates a panel key.

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IV.

Chapter 1 Overview

This chapter provides an overview of the MX283027A Wireless Network Device Test Software and describes the product configuration.

1.1 Product Overview

The MS2830A Signal Analyzer (hereinafter referred to as “this instrument”) enables high-speed, high-accuracy, and simple measurement of the transmission characteristics of terminals and modules for various types of mobile communications. The MS2830A is equipped with high-performance signal analyzer and spectrum analyzer functions as standard, with optional measurement software allowing modulation analysis functionality supporting various digital modulation modes.

The MX283027A Wireless Network Device Test Software (hereinafter referred to as “this application”) can be used to measure the RF characteristics of wireless terminals and devices by installing software options such as WLAN test software.

MS2830A-005/105 and MS2830A-006/106 is required to use the MX283027A on MS2830A.

1.2 Product Configuration

1.2.1 Standard configuration

Table 1.2.1-1 lists the standard configuration of the MX283027A.

Table 1.2.1-1 Standard configuration

Item	Model Name/Symbol	Product Name	Q'ty	Remarks
Application	MX283027A	Wireless Network Device Test Software	1	
Accessory	—	Installation CD-ROM	1	Application software, operation manual CD-ROM

1.2.2 Applicable parts

Table 1.2.2-1 lists the applicable parts for the MX283027A.

Table 1.2.2-1 Applicable parts

Model Name/Symbol	Product Name	Remarks
W3471AE	MX283027A Wireless Network Device Test Software Operation Manual (Operation)	English, printed version

Chapter 2 Preparation

This chapter describes the preparations required for using the application you are using. Refer to *MS2830A Signal Analyzer Operation Manual (Mainframe Operation)* for common features of the MS2830A not included in this manual.

2.1 Part Names

This section describes the panel keys for operating this application and connectors used to connect external devices. For general points of caution, refer to *MS2830A Signal Analyzer Operation Manual (Mainframe Operation)*.

2.1.1 Front panel

This section describes the front-panel keys and connectors.

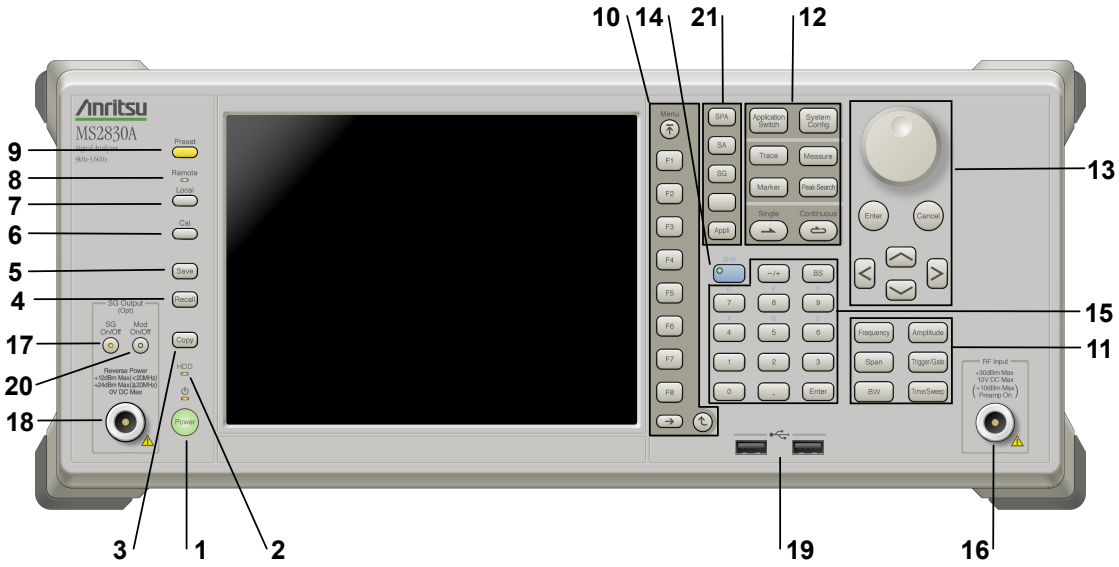
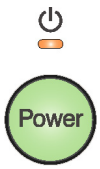


Figure 2.1.1-1 Front panel

1 

Power switch

Press to switch between the standby state (AC power supplied) and power-on state. The Power lamp lights orange at Standby and green at Power On. Press the power switch for about 2 seconds.

2 

Hard disk access lamp

Lights when accessing the internal hard disk

3 

Copy key

Press to capture display screen and save to file.

4 

Recall key

Press to recall parameter file.

5 

Save key

Press to save parameter file.

6 

Cal key

Press to display the Calibration menu.

7 

Local key

Press to return to local operation from remote control via GPIB, Ethernet, or USB (B), and enable panel settings.

8 

Remote lamp

Lights when in remote-control state.

9 

Preset key

Press to display the Preset menu. Resets parameters to initial settings.

10 

Function keys

Selects or configures function menu displayed on the right of the screen. The function menu is provided in multiple pages and layers.

The number on the bottom of the screen indicates the menu page number.

Next key

Press to go to the next page.

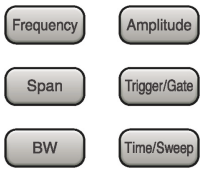
Back key

Press to go back to the previous layer within the function menu.

Top key

Press to go back to the uppermost (top) layer.

11



Main function keys 1

Press to set or execute main functions.

Executable functions vary with the current application.

Executable functions vary with the current application. When nothing happens with the press, it indicates that the application in use does not support the key.

Frequency Press to set frequency parameters.

Amplitude Press to set level parameters.

Span No function is assigned to this key.

Trigger/Gate Press to set trigger parameters

BW No function is assigned to this key.

Time/Sweep Press to set measurement item parameters.

12

Main function keys 2

Press to set or execute main functions.

Executable functions vary with the current application.

Executable functions vary with the current application. When nothing happens with the press, it indicates that the application in use does not support the key.

Application Switch Press to switch application.

System Config Press to display Configuration screen.

Trace Press to set the trace items or to switch the operation window.

Measure Press to set measurement item parameters.

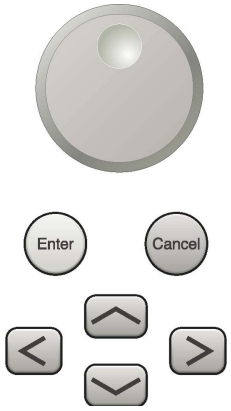
Marker Use when switching graph marker operation.

Peak Search Press to set parameters related to the peak search function.

Single Press to start single measurement.

Continuous Press to start continuous measurements.

13



Rotary knob/Cursor keys/Enter key/Cancel key

The rotary knob and cursor keys select display items or change settings.

Press Enter to set the entered or selected data.

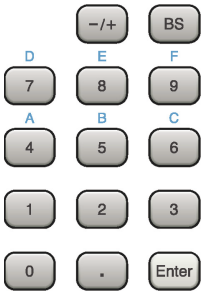
Cancel Press Cancel to cancel input or selected data.

14

Shift key

Operates keys with functions in blue characters on panel. Press the Shift key so the key lamp is green and then press the target key.

15



Numeric keypad

Enters numbers on parameter setup screens.

Press BS to delete the last entered digit or character.

[A] to [F] can be entered by pressing keys Shift to 4 while the Shift key lamp 9 is green.

16

RF Input connector

Inputs RF signal.

17

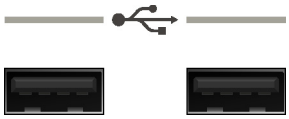
RF Output Control key

Press SG On/Off to switch on/off the modulation of RF signal when the Vector Signal Generator option is installed. The RF output control key lamp lights orange when the RF signal output is set to On.

18 RF Output connector

Output, when the Vector Signal Generator option is installed.

19 USB connector (type A)



Connect the accessory USB keyboard, mouse or USB memory.

20 Modulation control key

Press to switch on/off the modulation of  RF signal when the Vector Signal Generator option is installed. When modulation is on, the key lamp lights up green.

21 Application key

Press to switch between applications.

SPA key

Press to display the Spectrum Analyzer main screen.

SA key

Press to display the Signal Analyzer main screen, when Option 005/105 and 006/106 are installed.

SG key

Press to display the Signal Analyzer main screen, when Vector Signal Generator option is installed.

Blank key

Not used.

Appli key

When Auto is specified, the application selected by using the Application Switch is displayed. When Manual is specified, the pre-specified Application is displayed.
For details, refer to 3.5.4 “Changing application layout” in *MS2830A Signal Analyzer Operation Manual (Mainframe Operation)*.

2.1.2 Rear panel

This section describes the rear-panel connectors.

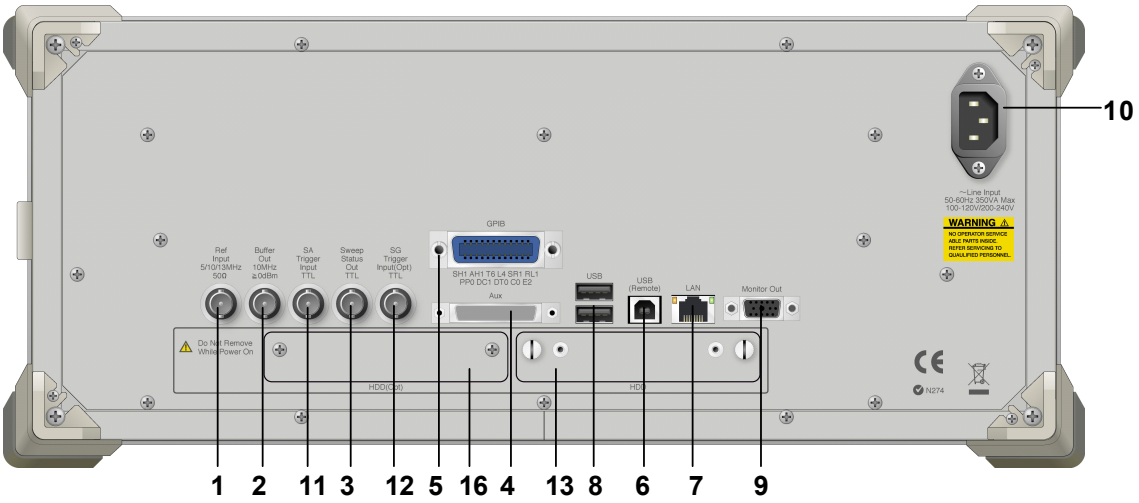


Figure 2.1.2-2 Rear panel

1 Ref Input 5/10/13MHz 50Ω

Ref Input connector (reference frequency signal input connector)
Inputs external reference frequency signal (5 MHz/10 MHz/13 MHz). It is for inputting reference frequency signals with higher accuracy than the instrument's internal reference signal, or for synchronizing the frequency of the mainframe to that of other equipment.

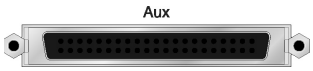
2 Buffer Out 10MHz ≧0dBm

Buffer Out connector (reference frequency signal output connector)
Outputs the internal reference frequency signal (10 MHz)It is for synchronizing frequencies between other equipment and the mainframe.

3 Sweep Status Out TTL

Sweep Status Out connector
Outputs signal when internal measurement is performed or measurement data is obtained.

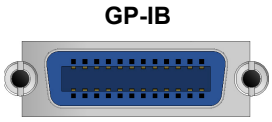
4



AUX connector

This is a complex connector for inputting an error rate measurement signal and inputting a baseband clock reference signal of the Vector Signal Generator (optional). See Table 2.1.1-1 for the internal pin assignment of the AUX connector.

5



GPIB connector

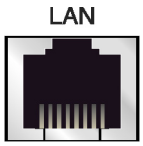
For external control via GPIB

6

USB connector (type B)

For external control via USB

7



Ethernet connector

Connects PC or Ethernet network.

8

USB connector (type A)

Used to connect a USB keyboard or mouse or the USB memory supplied.

9

Monitor Out connector

Connects external display.

10

AC inlet

Supplies power

11 SA Trigger Input TTL

SA Trigger Input connector

This is a BNC connector used to input the external trigger signal (TTL) for the SPA or SA application.

12 SG Trigger Input(Opt) TTL

SG Trigger Input connector

This is a BNC connector used to input the external trigger signal (TTL) for the vector signal generator option.

13 HDD

HDD slot

This is a standard hard disk slot.

14 HDD (Opt)

HDD slot for Option

This is a hard disk slot for the options.

Table 2.1.2-1 AUX connector

Function	Pin Number	Signal Name
SG	13	MARKER1
	11	GND
	38	MARKER2
	36	GND
	39	MARKER3
	16	GND
	42	PULS_MOD
	41	GND
	22	BB_REF_CLK
	20	GND

Do not connect anything to connectors not listed in Table 2.1.1-1, because they are interface connectors provided for device maintenance.

2.2 Signal Path Setup

As shown in Figure 2.2-1, connect the mainframe and the DUT using an RF cable, so that the signal to be tested is input to the RF Input connector.

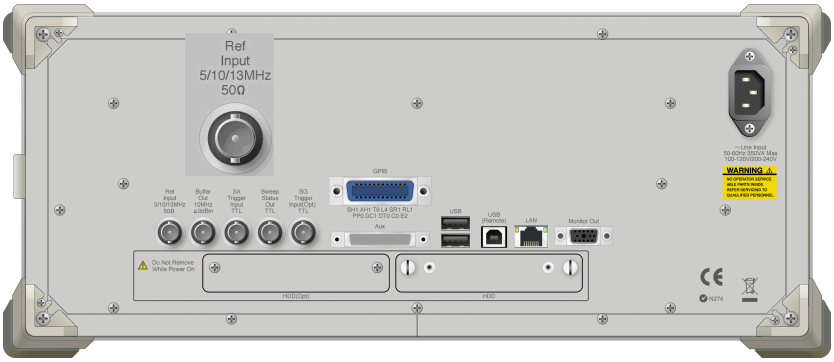
⚠ CAUTION

Do not input a signal that has an excessive level to MS2830A.

DUT

Figure 2.2-1 Signal path setup example

Set the 5 MHz/10 MHz/13 MHz reference signal from external sources, as required.



Reference frequency signal

Figure 2.2-2 External signal input

2.3 Application Startup and Selection

To use this application, it is necessary to load (start up) and select the application.

2.3.1 Launching application

The application startup procedure is described below.

Note:

The XXX indicates the application name currently in use.

■Procedure

1. Press System Config to display the Configuration screen.
2. Press F4 (Application Switch Settings) to display the Application Switch Registration screen.
3. Press F1 (Load Application Select), and move the cursor to "XXX" in the Unloaded Applications list.
   - If "XXX" is displayed in the **Loaded Applications** list, this means that the application is already loaded.
   - If "XXX" appears in neither the **Loaded Applications** nor **Unloaded Applications** list, this means that the application has not been installed.
4. Press F7 (Set) to load the application. If "XXX" is displayed in the **Loaded Applications list**, this means that the application is already loaded.

2.3.2 Selecting application

The selection procedure is described below.

■Procedure

1. Press Application Switch to display the Application Switch menu.
2. Press the menu function key displaying "XXX".
   - The application can also be selected with mouse, by clicking "XXX" on the task bar.

2.4 Initialization and Calibration

This section describes the parameter settings and the preparations required before starting measurement.

2.4.1 Initialization

After selecting this application, first perform initialization. Initialization should be performed in order to return the settable parameters to their default settings.

The initialization procedure is as follows.

■Procedure

1. Press Preset to display the Preset function menu.
2. Press F1 (Preset).

2.4.2 Calibration

Perform calibration before measurement. Calibration sets the level accuracy frequency characteristics for the input level to flat, and adjusts level accuracy deviation caused by internal temperature fluctuations. Calibration should be performed when first performing measurement after turning on power, or if beginning measurement when there is a difference in ambient temperature from the last time calibration was performed.

■Procedure

1. Press Cal to display the Application Cal function menu.
2. Press F1 (SIGANA All).

For details on calibration functionality only executable with the MS2830A, refer to *MS2690A/MS2691A/MS2692A Signal Analyzer Operation Manual (Mainframe Operation)*.

Chapter 3 Measurement

This section describes the measurement function, the parameter contents and the setting methods for this application.

3.1 Basic Operation

3.1.1 Screen layout

This section describes the screen layout of this application.

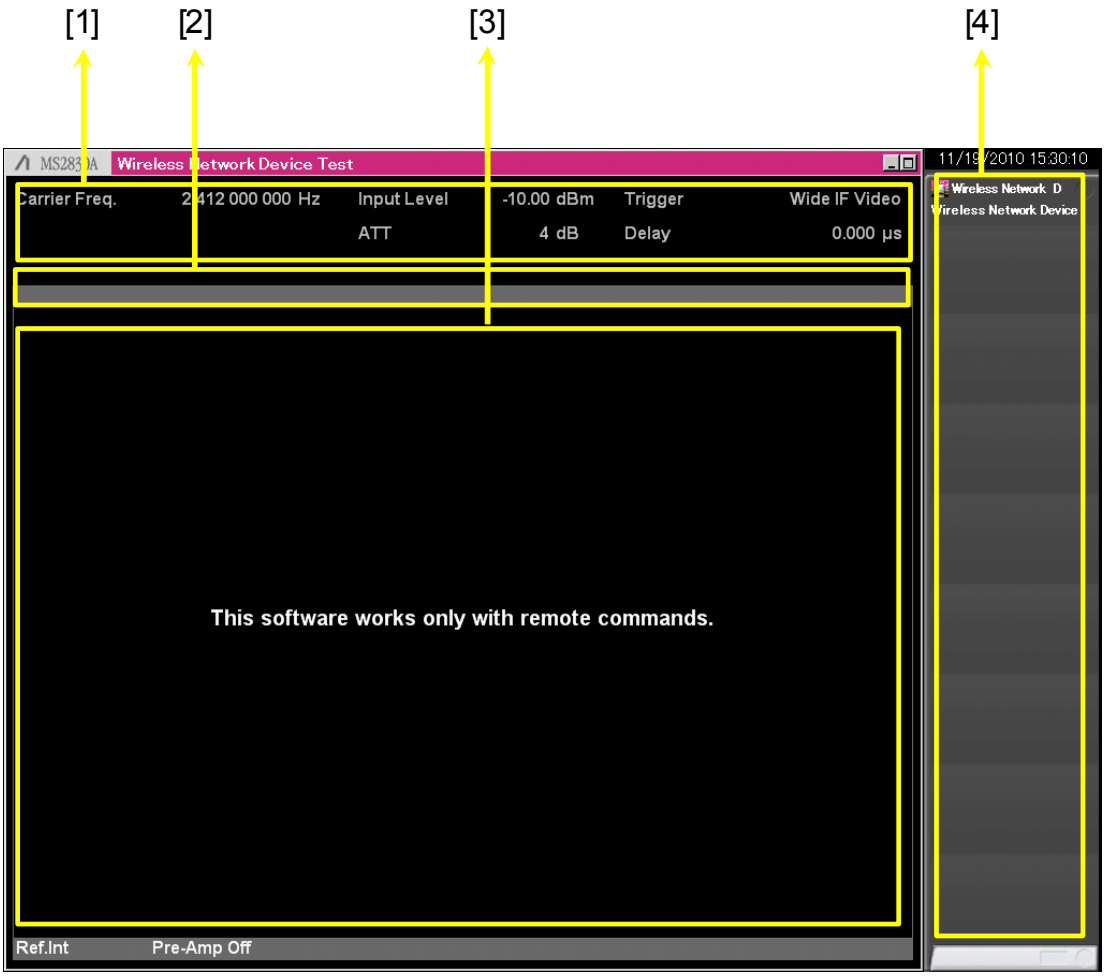


Figure 3.1.1-1 Screen layout

[1] Measurement parameter

Displays the specified parameter.

[2] Status message

Displays signal status.

[3] Result window

Displays the measurement results.

[4] Function menu

Displays the functions executable with function keys.

3.1.2 Function menu

While operating this application, the function menu related to the measurement functions cannot be used.

3.1.3 Performing measurement

Because this application itself does not have measurement functions, a software option must be installed in this application to perform measurement. For details about the measurement functions, see the operation manual for each software option.

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References are to page numbers.