

Anritsu WLAN tester MT8860C quick manual

Anritsu Corporation

Notice before start.

- Before use this tool, please install below things.
 - 1) NI 4882273.exe
 - 2) VISA430full.exe
- Before connection between DUT and MT8860C, it needs below procedure.
 - 1) DUT side: Power save mode **“disable”**
 - 2) After set IP, you have to set the **default page of DUT.**

Connection method

Test Configuration

Wireless Test | Signal Generator | **System Utilities**

LANLook

Software Version: 12.0
LANLook 12 Production

MT8860C Remote | System Settings | Diagnostics

Remote Interface
 GPIB LAN

Remote Protocol
 488.2 VISA

Remote Connection - GPIB

Select Instrument from List: 2

Enter GPIB Address:

Remote Status 1

LANLook is running in Simulation Mode.

Make a remote connection to an MT8860C using the controls above before configuring wireless test modes for live operation.

Power Profile

	Start (ms)	Stop (ms)	Pk (dBm)	Avg (dBm)	Rise (us)	Fall (us)
G1	-0.050	0.100				
G2	0.200	0.350				

	Time (ms)	?Time (ms)	Power (dBm)	?Power (dB)
A				
B				

Spectral Profiles

	L2	L1	U1	U2
Power (dBm)				

	Freq (MHz)	?Freq (MHz)	Power (dBm)	?Power (dB)
A				
B				

IQ Constellation

Symbol: All (0)

QPSK

EVM Results

Min	Average	Max	% rms
			dB

Chip Clock Error

Hz
 ppm

IQ

Offset (dB)	Phase (deg.)	Mag. (%)
<input type="text"/>	<input type="text"/>	<input type="text"/>

Frequency Error

kHz
 ppm

If you want to use LAN communication, you have to set control PC IP as below.

IP: 192.168.168.1
 Subnet: 255.255.255.0

Connection method (LAN)

The screenshot displays the Anritsu LANLook software interface. The main window is titled "Anritsu LANLook" and contains several panels. The "Test Configuration" panel on the left shows the "LANLook" logo and version information. Below it, the "MT8860C Remote" panel is active, showing "Remote Interface" set to LAN, "Remote Protocol" set to VISA, and "Remote Connection - LAN" settings. The "Enter IP Address or Hostname" field is highlighted with a red box and contains the value "192.168.168.2". The "Remote Status" panel indicates that the connection is established.

The "PER Fixed Level" panel on the right shows a graph of Packet Error Rate (%) versus Measurement Number. The graph area is yellow and contains the following text:

If you want to use LAN, you have to set

Host PC
IP: 192.168.168.1
Subnet: 255.255.255.0

MT8860C
IP: 192.168.168.2

And need **cross-over cable**

The "PER Test Numeric Results" panel at the bottom shows a table with the following columns: Meas No., ΔMeas No., PER (%), and ΔPER (%). The table has two rows, A and B, and all cells are empty.

The status bar at the bottom of the interface shows the following information:

Network Status: Disconnected SSID: MT8860C BSSID: A854B26D8D1C WLAN REF MN8861A: Not Found No Tests Running

Basic step and Beacon setting

The image displays a software interface for configuring wireless tests. It is divided into several sections:

- Test Configuration:** Contains tabs for **Wireless Test** (1), **Signal Generator**, and **System Utilities**.
- Wireless Settings:** A red box highlights the following fields: **Standard:** 802.11b, **Test Mode:** Network (2), **Channel #:** 6 (2437 MHz), **Power Level:** -50 dBm, **Data Rate:** 11 Mbps, and **DUT Tx Pwr:** 30 dBm.
- Network Setup:** Includes tabs for **Rx Testing** and **Tx Testing**. Under **MT8860C Role**, the **Infrastructure (AP)** radio button is selected (3). **Network Settings** (4) shows **SSID:** MT8860C. A **Beacon Configuration...** button (5) is highlighted with a red box, and a red arrow points from it to the **Beacon Configuration** dialog box.
- Power Profile:** A graph showing **Power level (dBm)** vs **Time (ms)**. A table below it shows parameters for G1 and G2.
- Spectral Profiles:** A graph showing **Power level (dBm)** vs **Relative Frequency**. A table below it shows parameters for Gate1 and Gate2.
- Beacon Configuration Dialog Box (6):** A red box highlights the **Operational Rate Set:** Multiple Rates. Other settings include **Beacon Interval:** 0 x1024 us, **Preamble:** Long, and three checked options under **Power Save Settings** (7):
 - include more data indication in Traffic Indication Map (TIM) element
 - include more data indication in data frames
 - include more data indication in beacon framesThe **Country Information Element** section has **Include in Beacon & Probe Response Frames** checked (8). The **ERP Information Element** section has **Include in Beacon & Probe Response Frames** checked (9). The **OK** button is highlighted with a red box (9).
- EVM Results:** A table with columns for **Min** and **Average**.
- IQ:** A table with columns for **Offset (dB)** and **Phase (deg.)**.

IP setting

The screenshot displays the 'Test Configuration' interface, divided into several sections:

- Wireless Test:** Includes 'Wireless Settings' with fields for Standard (802.11b), Test Mode (Network), Channel # (6 [2437 MHz]), Power Level (-50 dBm), Data Rate (11 Mbps), and DUT Tx Pwr (30 dBm).
- Network Setup:** Contains 'MT8860C Role' (Infrastructure (AP) selected), 'Network Settings' (SSID: MT8860C), and a red box around the 'IP Properties...' button.
- IP Properties Dialog:** A modal window with 'Assign IP Address to DUT Automatically' unchecked. It shows 'Device Under Test' with IP 12.168.1.100 and 'MT8860C' with IP 12.168.1.101. A red box highlights the 'Auto Set Base IP Addr.' button.
- Power Profile:** A graph showing power level (dBrn) vs time (ms) with two pulses labeled G1 and G2.
- Spectral Profiles:** A graph showing power level (dBrn) vs relative frequency for Gate1 and Gate2.
- IQ Constellation:** Shows a QPSK constellation diagram.
- EVM Results and IQ:** Tables for Error Vector Magnitude and IQ parameters.

Red annotations include a red arrow pointing from the 'IP Properties...' button in the Network Setup section to the IP Properties dialog box.

In case of Android DUT, it should be set by fixed IP address.

Path loss setting

Anritsu LANLook - Running in Simulation Mode

File Configure Tools Help

Test Configuration

Wireless Test | Signal Generator | System Utilities

Wireless Settings

Standard: 802.11b
Test Mode: Network
Channel #: 6 (2437 MHz) | Power Level: -50 dBm
Data Rate: 11 Mbps | DUT Tx Pwr: 30 dBm

Network Setup | Rx Testing | Tx Testing

MT8860C Role

Ad-Hoc (MT8860C creates) | Infrastructure (AP)
 Ad-Hoc (MT8860C joins) | Infrastructure (STA)

Network Settings

SSID: MT8860C
Beacon Configuration... | IP Properties...

Device Tree

Create Network | Get MAC Addresses | Connect

Path Loss Settings... | Network Advanced Info

Run Once | Run Continuous | Stop

Path Loss Settings

Data Entry Mode

Tx and Rx | Tx Only | Rx Only

Path Loss Data

Channel: 6 (2437 MHz) | Path Loss: 1.0 dB

Add | Update | Delete | Delete All

Path Loss Table (2.4 GHz band)

Channel	Tx Loss (dB)	Rx Loss (dB)
6	1.0	1.0

Enable Path Loss Correction | OK

Connection between DUT and MT8860C

The screenshot displays the 'Test Configuration' window, which is divided into several sections:

- Wireless Test** (selected):
 - Standard: 802.11b
 - Test Mode: Network
 - Channel #: 6 (2437 MHz)
 - Power Level: -50 dBm
 - Data Rate: 11 Mbps
 - DUT Tx Pwr: 30 dBm
- Network Setup** (selected):
 - MT8860C Role:**
 - Ad-Hoc (MT8860C creates)
 - Infrastructure (AP)
 - Ad-Hoc (MT8860C joins)
 - Infrastructure (STA)
 - Network Settings:**
 - SSID: MT8860C
 - Buttons: Beacon Configuration..., IP Properties...
 - Device Tree:**
 - A red box highlights the top of the device tree.
 - A red arrow points to the text: "After push no.1, you can find DUT on Device Tree box. Then progress 2->3 step."
 - Buttons 1, 2, and 3 are highlighted with red boxes:
 - 1: Create Network
 - 2: Get MAC Addresses
 - 3: Connect
 - Buttons: Path Loss Settings..., Network Advanced Info...
- Control:**
 - Buttons: Run Once, Run Continuous, Stop

Rx testing

File Configure Tools Help

Test Configuration

Wireless Test | Signal Generator | System Utilities

Wireless Settings

Standard: 802.11b
Test Mode: Network
Channel #: 6 (2437 MHz) | Power Level: -50 dBm
Data Rate: 11 Mbps | DUT Tx Pwr: 30 dBm

1

Network Setup | **Rx Testing** | Tx Testing

Packet Type

Unicast 2 | MAC Address: 123456ABCDEF
 Broadcast

Packet Structure

Data Length: 1000 Bytes | Payload: 0101
Interval: 1000 ms | Preamble: Long

Measurements

Measurement Type: PER | # Packets: 100 3

Fixed Level | **Sensitivity Search** 4

Start Level: -60 dBm | Stop Level: -100 dBm 5
Step: 1 dB | Threshold: 95 %

Path Loss Settings... | Rx Advanced Settings...

Run Once 6 | Run Continuous | Stop

PER Sensitivity Search

Packet Error Rate (%)

DUT Rx Level (dBm)

	Power	?Power	PER (%)	?PER (%)
A				
B				

PER Test Numeric Results

	Power	?Power	PER (%)	?PER (%)
A				
B				

You can check the PER on right side.

Tx testing

The screenshot shows the 'Test Configuration' window with several sections:

- Wireless Test:** Standard: 802.11b, Test Mode: Network, Channel #: 6 (2437 MHz), Power Level: -50 dBm, Data Rate: 11 Mbps, DUT Tx Pwr: 30 dBm.
- Network Setup:** Rx Testing tab selected. A red box labeled 'Tx Testing' is next to it. A button labeled 'Tx Characteristics...' is highlighted with a red box and labeled '2'. A red arrow points from this button to the 'Tx Characteristics' dialog box.
- Analysis Configuration:** Input Level Range: Range 1 (0 to 30 dBm) is highlighted with a red box and labeled '6'. Below it, 'Auto configure based on Tx Characteristics' is highlighted with a red box and labeled '5'.
- Measurement Window Configuration:** Window 1: Power Profile, Window 2: Spectral Profiles, Window 3: IQ Constellation. 'Run Continuous' is highlighted with a red box.
- Power Profile:** A graph showing Power level (dBm) vs Time (ms) with two pulses. A table below it shows:

	Start (ms)	Stop (ms)	Pk (dBm)	Avg (dBm)	Rise (us)	Fall (us)	Time (ms)	?
G1	-0.050	0.100					A	
G2	0.200	0.350					B	
- Tx Characteristics Dialog:** Transmission Type: Framed, Frame Type: Data (highlighted with a red box and labeled '3'). Packet Structure: Data Length: 1000 Bytes (8512 Payload Chips), Payload: 0101, Interval: 5 ms, Preamble: Long. An 'OK' button is highlighted with a red box and labeled '4'.
- IQ Constellation:** Symbol: All (0), QPSK constellation diagram shown.
- EVM Results:** Table with columns: Min, Average, Max, % rms dB.
- IQ:** Table with columns: Offset (dB), Phase (deg.), Mag. (%).

Additional text in the image:

- A red box labeled '1' is next to the 'Tx Testing' tab.
- A red box labeled '3' is next to the 'Tx Characteristics' dialog title bar.
- A red box labeled '4' is next to the 'OK' button in the dialog.
- A red box labeled '6' is next to the 'Input Level Range' dropdown.
- Text: 'You can select Data or ACK type in step 3.'
- Text: 'After 6 step, please select "Auto range high"'