NG-283

1-2200 MHz NOISE GENERATOR

TABLE OF CONTENTS

English

1-2200 MHz NOISE GENERATOR
NG-283

1 GENERAL

1.1 Description

The **NG-283** is a handheld broadband white gaussian noise generator, which is an ideal tool for testing coaxial networks, components and aligning coaxial cable at all frequencies between 1 and 2200 MHz.

This instrument is powered by a rechargeable Li-Ion battery or connecting to a electricity network. The **NG-283** allows the user to perform several actions in combination with a field meter or a spectrum analyser. Among the possible uses are: frequency response obtained both from active and passive circuits, impedance matching measurement and stationary wave ratio in association with a reflection bridge, and detection of abnormalities in transmission lines. These are some functions that the **NG-283** noise generator is a great help for.

English

1.2 Specifications

RF Signal	White Gaussian noise.
Frequency Range	1 MHz – 2200 MHz.
Power Output	80 dBμV (-29 dBm) / 8 MHz Bandwidth / 75 Ohms.
Spectral density	-98 dBm/Hz.
Total Power	< 0 dBm.
Flatness	± 2 dB from 1 to 2200 MHz.
POWER SUPPLY	
Battery	Li-Ion battery of 7,4 V.
Low Battery Indicator	LED light indicator.
Autonomy	5 h. Aprox. In SEQ mode.
External	
Voltage	12 V DC.
Power Consumption	12 W.
Network charging adaptor	90 V to 250 V, 50-60 Hz (included).

OPERATING ENVIRONMENTAL CONDTIONS

Altitude	Up to 2000 m.
Temperature range	From 0 to + 40 °C.
Max. Relative humidity	80% (up to 31 °C). Decreasing lineally up to 50 % at 40 °C.

MECHANICAL FEATURES

Dimensions	180 mm (W) x 95 mm (Hl) x 50 mm (D).
Weight	500 g (battery included).

ACCESORIOS INCLUIDOS

AA-012	Car lighter adapter.
AD-055	Adapt. F-BNC.
AD-057	Adapt. F-F.
AL-101B	Mains adapter 90-250 V AC.
CA-005	Power cable CEE-7.
DC-269	Carrying case.

ACCESORIOS OPCIONALES

DC-270	Transport suitcase.

RECOMMENDATIONS ABOUT THE PACKING

It is recommended to keep all the packing material in order to return the equipment, if necessary, to the Technical Service.

2 SAFETY RULES

2.1 General safety rules

* **The safety could not be assured if the instructions for use are not closely followed.**

* The external DC chareger is a **Class I** equipment, for safety reasons plug it to a supply line with the corresponding **ground terminal**.

  Use the mains adapter in **Overvoltage Category I** and **Pollution Degree 1** installations. To use **INDOOR**.

* When using some of the following accessories **use only the specified ones** to ensure safety:

  Rechargeable battery.
  Mains adapter.
  Power cord.

* Observe all **specified ratings** both of supply and measurement.

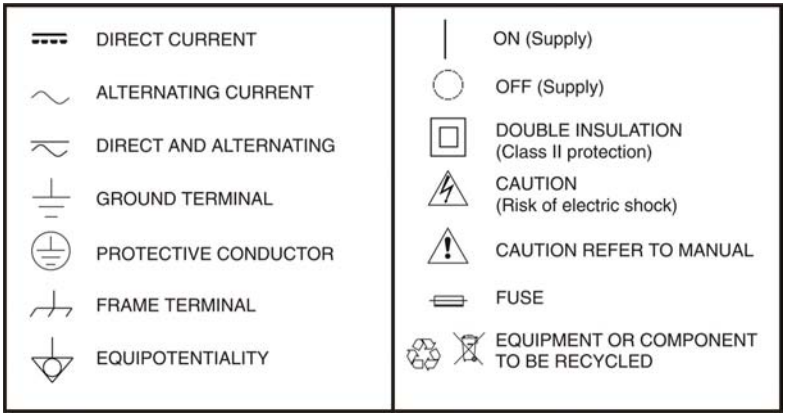
* Use this instrument under the **specified environmental conditions**.

  The user is not allowed to carry out the following maintenance operations:

  Any change on the equipment must be carried out exclusively by technical staff.

* Follow the **cleaning instructions** described in the Maintenance paragraph.

* Symbols related with safety:



English

2.2 Descriptive Examples of Over range Categories

Cat I Low voltage installations isolated from the mains.

Cat II Portable domestic installations.

Cat III Fixed domestic installations.

Cat IV Industrial installations.

3 INSTALLATION

3.1 Power Supply

The **NG-283** is a handheld instrument powered by a rechargeable Li-Ion battery. The instrument comes with a mains adapter which enables the **NG-283** to be plugged to the mains for operation and battery charging.

3.1.1 Operation Using the Mains Adapter

Connect the mains adapter to the **NG-283** through the external power connector [7] placed at the right side of the instrument. Then, connect the adapter to the mains to start up battery charging. Next, press the **ON/OFF** [3] key. Then the instrument starts working.

CAUTION

Before using the mains adapter make sure that it is the appropriate one for your mains voltage.

The mains adapter is designed for indoor use.

3.1.2 Battery Charging

Press the key **ON/OFF** [3] to start the instrument powered by the battery. When the battery is fully loaded, the **NG-283** has an autonomy aprox. of 5 hours of continuous work.

When the battery is flat, the instrument will not start up or, if working, will switch off. The **LOW BATT** indicator [1] will be lit whenever the battery charge is low. Then a charge process is required.

3.1.3 Battery charge

First switch off the **NG-283** in order to charge the battery. Then connect the power input to 12 V ⎓ [7] the mains adapter. Now connect the adapter to the mains. Now you can observe that the indicator **CHG** [4] is lit in amber which indicates the battery is charging. Charging time depends on the state of the battery. If the battery is flat, the battery charging time is 3 hours aprox. When battery is full loaded, the charge indicator **CHG** [4] changes to green.

English

3.1.4 Recommendations using the battery

If anticipating a long period of inactivity for your instrument, it is advisable to store it with the battery fully charged and at temperatures below 25 °C.

It is also advisable in these cases to carry out a cycle of charging/discharging and a subsequent half charge (i.e. 50 %) every 3 months.

3.2 Installation and Start-up

The **PROLITE-105** has been designed for its use as a portable device.

To switch on the instrument, press the key **ON / OFF**  [3].

4 USER INSTRUCTIONS

4.1 Description of Controls and Elements

Front pannel

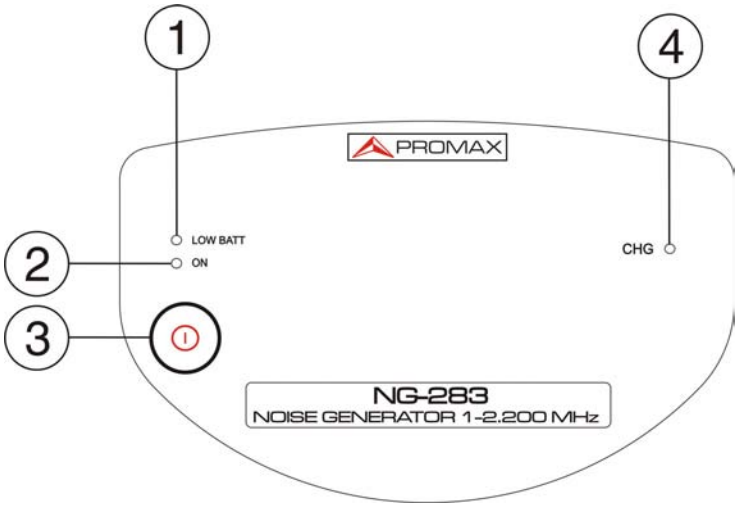


Figura 1.- Frontal view **NG-283**.

[1] LOW BATT **LOW BATTERY LED.**
It indicates that the battery power level is low and it is going to turn off.

[2] ON **ON LED.**
When this LED is lit indicates that is working.

[3] 
ON / OFF.
To turn it ON press this button.
To turn it OFF press this button for few seconds.

[4] CHG **CHARGE LED**
It indicates the battery charge status.
When it is in **AMBER** indicates that is charging.
When it is in **GREEN** indicates that is fully loaded.

English

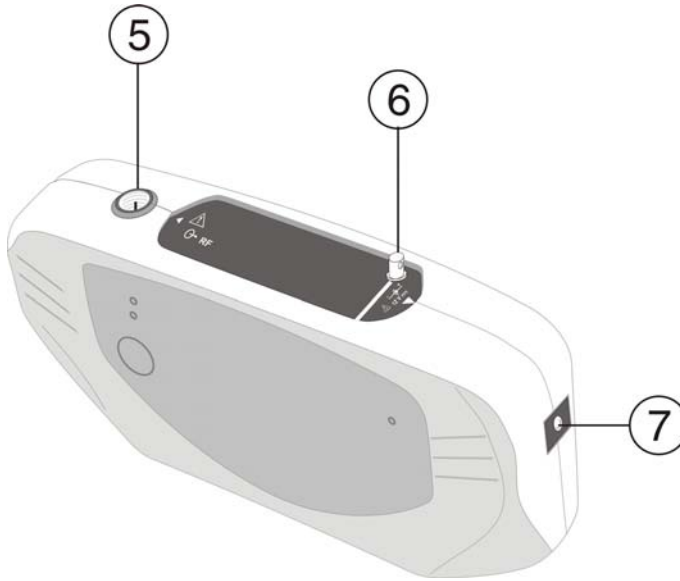


Figure2.- NG-283 Lateral view

[5]  **RF Signal Output.** Universal Connector for F/F or F/BNC adapter.

[6] Anchor point for wrist strap.

[7]  12 V External power input.

5 MAINTENANCE

This part of the manual describes the maintenance procedures and the location of faults.

5.1 Instructions for returning by mail

Instruments returned to repair or calibrate, either within or out of the guarantee period, should be send with the following information: Name of the Company, name of the contact person, address, phone number, receipt (in the case of coverage under guarantee) and a description of the problem or the service required.

5.2 Maintenance instructions

The maintenance steps to follow by the user consist of cleaning the cover and changing the battery. All other operations must be carried out by authorised agents or by qualified personnel.

5.2.1 Cleaning the cover.

CAUTION

Do not use scented hydrocarbons or chlorized solvents. Such products may attack the plastics used in the construction of the cover.

The cover should be cleaned by means of a light solution of detergent and water applied with a soft cloth. Dry thoroughly before using the system again.

CAUTION

To clean the contacts, use a dry cloth. Do not use a wet or damp cloth.

CAUTION

Do not use for the cleaning of the front panel and particularly the viewfinders, alcohol or its derivatives, these products can attack the mechanical properties of the materials and diminish their useful time of life.

English

5.3 Components which user can not replace

5.3.1 Not replaceable fuses by user

F1	**FUS 2,5 A**	**T 125 V**
F2	**FUS 7 A**	**T 125 V**