



PIM 31
Passive Intermodulation
Analyzer 2 x 20W

Quick Start Guide



Taking performance to a new peak

PIM31 Quick Start Guide

The Boonton PIM31 is a high performance instrument that allows users to make reliable, highly accurate measurements of passive intermodulation, in systems and components. Read the guide thoroughly before using the instrument to become familiar with its controls, interface and safety concerns.

This document provides a brief summary of the PIM31's basic operation. For more detailed information, see the User's Manual.



Safety and Caution Summary



SAFETY:

- INSTRUMENT MUST BE GROUNDED (must be connected to an electrical ground at the power outlet)
- DO NOT OPERATE THE INSTRUMENT IN AN EXPLOSIVE ATMOSPHERE
- KEEP AWAY FROM LIVE CIRCUITS
- DO NOT SUBSTITUTE PARTS OR MODIFY INSTRUMENT
- NON IONIZING RADIO FREQUENCY RADIATION HAZARD
- ELECTRIC SHOCK HAZARD

CAUTION:

- Please check the power requirements as per the product specifications.
- Ensure at least 2" of clearance around the fan intake on the front panel and bottom vents.
- Before powering the unit on make sure there are no indications of exposure to extensive force such as dents, torn off pieces or loose parts in the case.
- DO NOT touch connectors of components with bare fingers.
- DO NOT switch on RF power without a load or antenna attached.
- DO NOT operate the PIM31 in an active system.
- DO NOT connect or disconnect any component of the test setup with RF power switched on.
- DO NOT operate test system and load without connector savers.
- DO NOT mount components directly on the PIM31.
- DO NOT bend cable tighter than 40 cm / 16" of diameter.
- DO NOT over-torque the RF Port connector and accessories.
- DO NOT use sharp devices on the touch screen.
- To maintain the optimal performance of the PIM31 unit, prevent exposure to unnecessary force, keep accessories clean and dry, and regularly check for wear and tear.

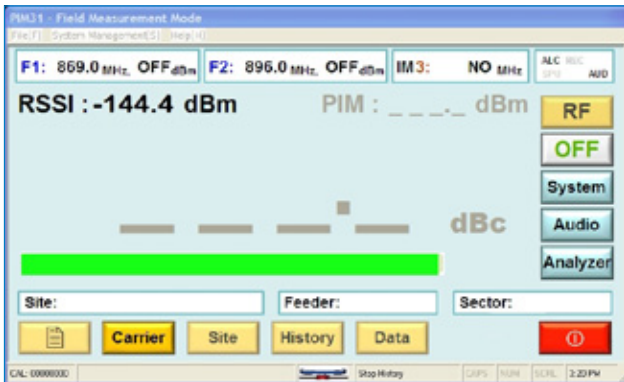
PIM31 Series Packing List

The following standard items are included with the unit :

- PIM 31 Series Passive Intermodulation Test System
- Line Cord with 90 degree connector
- USB mouse and USB roll-up keyboard
- 3 connector savers
- Low PIM cable 3m (10ft)
- Low PIM load 50W
- Torque wrench

Power up the PIM 31 unit & preparation

1. Ensure that the main outlet has proper grounding.
2. Switch on the PIM31 main power switch on the backside of the unit.
3. Wait 5 seconds before switching on front power button. (This allows time for the protection circuitry to enable all PIM 31 modules properly).
4. Push Start Button on at the front panel.



The system will boot up automatically and show the user interface in Field Mode.

Turning off the PIM 31

It is not recommended to power down by "Pulling the plug" or switching off the Main Switch on the back panel. Follow the recommended procedure as below:

- Exit the UI by pressing the red exit button. Respond to the pop-up menu's choice Yes / No to power the system down.

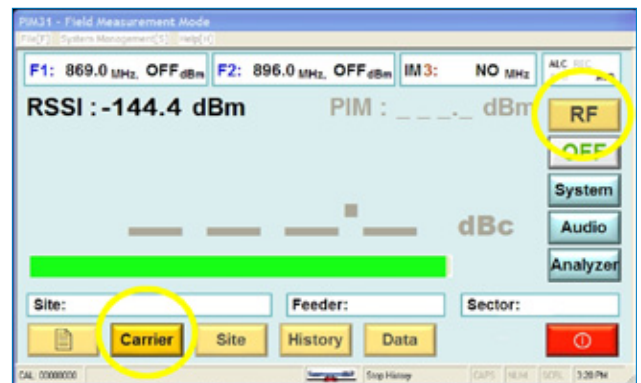


- Or shut down the unit by simply pressing the power button on the front panel.

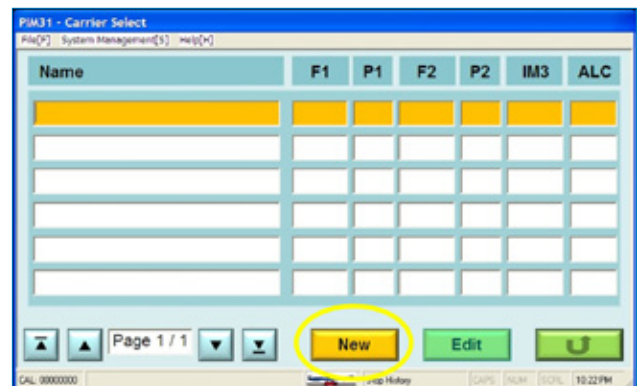
Getting Started & Verification

The following instructions walk through a basic operation and functionality tests to verify that the unit is working properly.

1. Mount connector saver to RF Port and Load (if not already mounted)
2. Connect Low PIM cable to the Test system (Note: always connect the test cable to the instrument first, before connecting to the DUT)
3. Now the RF Button is visible but inactive. Power levels and frequencies of the carrier signals must be set in order to activate the RF button. To do so, pushing the "Carrier" button displays a list of Carrier signal settings.



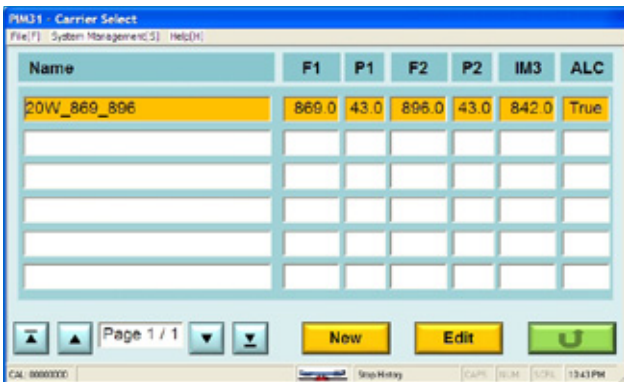
4. Since this is the first boot up, the list is empty. To enter carrier parameters, push "New" on the Carrier Select screen. Enter a Carrier name, frequencies and power levels.



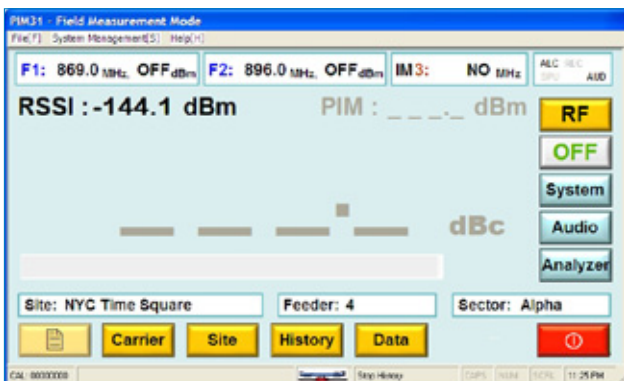
- With a growing list of carriers, meaningful carrier names help to identify the settings: Example 20W_869_896 indicates: power of the signals is 20W, and the frequencies used are 869 MHz and 896MHz.



- Every entry or change needs to be confirmed by pushing the "Enter" button. Once entries are complete, return to the "Carrier List" by pushing the green Return button.



- Now enter detailed base station or measurement setup information. Once completed, return to the initial Field Mode Screen.

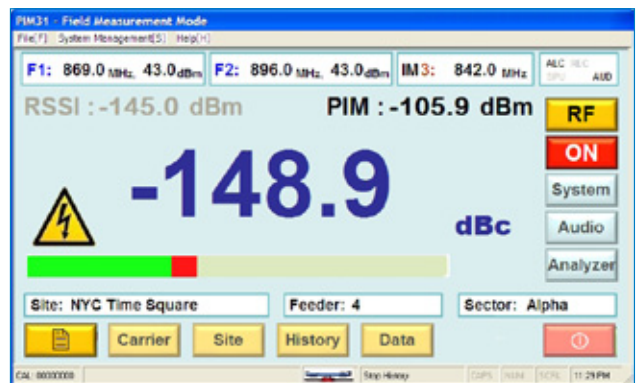


- The selected Site (Test) information is now visible in the appropriate fields and the RF Button is now active.

- By pressing the RF Button, the system initializes, and starts measuring PIM.



- A second push of the RF button stops measurements and transmission of RF signal carriers. The last PIM reading is held and shown in grey.



- If satisfied with the results using the provided test cable and load, the unit may now be used for actual testing. Verify that RF is OFF and disconnect the test cable and load.

- Now connect the end terminal of the system under test to the RF Port of the PIM 31 and start PIM measurements from the real system.

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