Quick Start Guide

Before turning the tester on ensure that nothing is connected to the TEST PORT and that the external DC is connected, if required.

1. Press the green ON / OFF button **momentarily** to switch the test set on.
   a. The digital display will scroll through model, serial number and version messages and information relating to the frequencies used by the tester. If no external DC power is connected the message **Batt Pwr Only** is displayed.
   b. The tester will then self-calibrate and display the background noise **PIM** value in **dBc**, this being the default display while the tester is in the standby RF off mode.
   c. Pressing the **MENU** button now sets the unit to the default **RF OFF** mode, from which different menu choices may be selected.

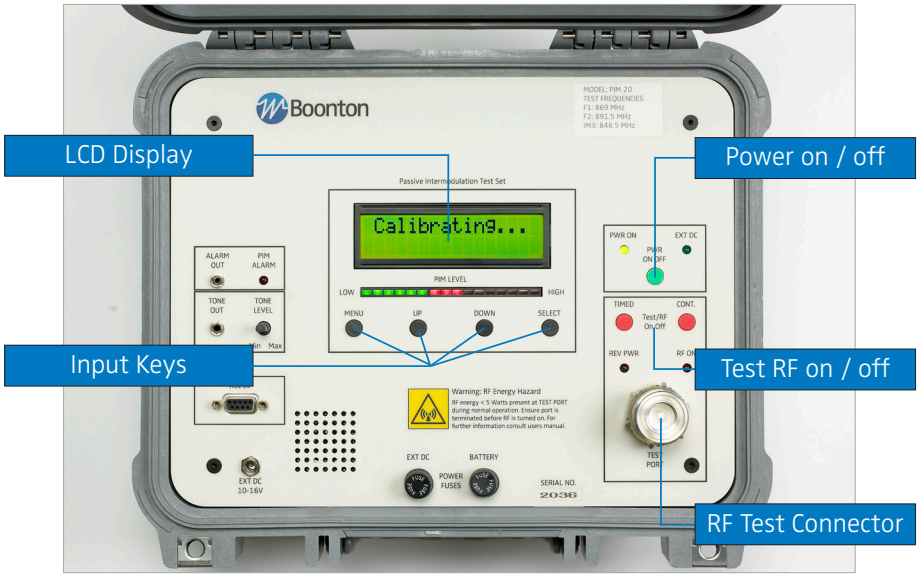
2. Connect the device or cable to be tested to the TEST PORT
   a. Press either of the red **Test/RF On / Off** buttons to turn on the two RF test tones.

   CAUTION: When the RF ON lamp is lit, RF energy is present at the TEST PORT, so ensure this port is correctly terminated while RF is on.

   Note: The two red **Test/RF On / Off** buttons have different functions; the **TIMED** button will turn the RF test tones on for a pre-selected period of time, typically used to reduce the potential of RF exposure and to conserve battery life. The **CONT** button will switch the RF test tones on continuously and a second button push is required to switch off the RF tones. The desired TIMED period is set via the SETUP menu.

3. Read the PIM result.
   a. In default mode the result is displayed on the digital display as a negative PIM level in dBc (i.e. level below the RF test tone level). A secondary bar display is also provided as a quick visual indication. The red and green indicators display the results in dBm from -123 dBm to -80 dBm. At the maximum output of +33 dBm (2 W) per carrier, this is equivalent to -156 dBc to -113 dBc. Each display segment corresponding to approximately 2.7 dB. The changeover from red to green occurs at -140 dBc.
   b. The numeric dBm display (in place of the default dBc) is available under the DISPLAY Menu.
   c. An audible indication of PIM level is also provided. Audio tone can be changed from a sliding tone to beeps via the Setup menu, and audio level is adjusted by the TONE level control on the front panel.

4. Switching the tester OFF.
   a. Once your testing is complete, the tester may be switched off by pressing the green **PWR ON / OFF** button for a minimum of 5 seconds.



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Additional Functions & Information

Battery

a. The battery will provide a minimum of 20 minutes of tester operation when fully charged and the RF carriers are set to a continuous +33 dBm output. Measurement with timed RF signals extends the operation time significantly.

b. PIM Test Set can be charged with the AC power supply or with the 12 V vehicle supply. Both are standard accessories that come with PIM 20. **Important**: Do not start the car while the 12 V car supply is connected to PIM 20. Voltage spikes can cause damage to the test system.

Additional Functions

a) Different display and test settings can be accessed via the MENU and SELECT buttons.

b) Any one of the three menu items can be scrolled with the MENU button and selected with the SELECT button.

c) The UP and DOWN buttons are only used to increment setting within the SETUP menu.

d) When working within the menus a **Quick Escape** back to the **default RF OFF** display is possible by holding the MENU button down and pressing SELECT button 3 times.

MENU STRUCTURE – FIRST LEVEL

Start with default **'RF OFF'** display, then press MENU once to reach DISPLAY or twice to reach SETUP.

MENU STRUCTURE – SECOND LEVEL

From DISPLAY press SELECT then press MENU to cycle through the following items:

1.	Rx RSSI	Displays receiver sensitivity in dBm, typically -126 dBm*
2.	PIM	Displays the units of measurement of PIM in dBc
3.	F1 Fwd PA Pwr	Displays the units of measurement for power of F1 as 0 dBm
4.	F2 Fwd PA Pwr	Displays the units of measurement for power of F2 as 0 dBm
5.	F1 Return Loss	Displays the units of measurement of F1 return loss as 0 dBm
6.	F2 Return Loss	Displays the units of measurement of F2 return loss as 0 dBm
7.	Battery Volts	Displays internal battery volts,12 V*
8.	Input Volts (Ext DC)	Displays battery volts being applied to EXT DC connector
9.	4.0 Volts (internal rail)	Displays internal 4 Volt Rail, 4 Volts*
10.	5.0 Volts (internal rail)	Displays internal 5 Volt Rail, 5 Volts*
EXIT:		To return to default **RF OFF** hold MENU button down and press SELECT once.

*If measurement deviates from this approximate value, call for service.

From SETUP press SELECT; press MENU to cycle through the following items:

1.	F1/F2 Power Lvl	Can be adjusted from +20 to +33 dBm using UP/DOWN keys (model dependent).
2.	Rev Pwr Alarm	Sets threshold at which Reverse Power Alarm indicator and output triggers, alerts user to incorrect set up or termination.
3.	PIM Alarm Level	Sets threshold at which PIM Alarm indicator and output triggers, provides user with alternate high PIM indications.
4.	Tone Type	Changes audio tone from Sliding to Beep using UP/DOWN keys.
5.	Tone Adj	Adjusts frequency of tone to suit user using UP/DOWN keys.
6.	Tx On time	Adjusts the RF 'ON' period for TIMED RF from 10 to 600 seconds in 10 second intervals using UP/DOWN keys.
7	Audible Threshold	Sets threshold at which audio tone is activated
EXIT:		To return to default **RF OFF** hold MENU button down and press SELECT twice.