TOWER SERIES

PiMPro TOWER SERIES

PRECISION PASSIVE INTERMOD ANALYZER

Communication Components, Inc. (CCI) **PiMPro Tower Series** is the first truly portable family of Passive Intermod (PIM) Analyzers. It has real world 40 W × 2 output power capability and can run on battery power for over three hours. The **Tower Series** demonstrates the perfect synergy of CCI's world class in-house engineering design expertise for both filters and amplifiers. Each light weight compact unit is protected by a reinforced backpack case which can easily strap to a climber's back for top-of-the-tower performance testing. The unit can be safely secured to most any tower structure with its integrated industrial grade clips. The **Tower Series** features a superior quality bright TFT capacitive 8 inch screen, that provides a more friendly user interface.

CCI's simple GUI combined with a powerful CPU make for fast measurement acquisition and site data storage. The portable construction, designed with durable ruggedness and reliability first and foremost, **PiMPro Tower Series** will prove to be a good investment for years to come.

The **PiMPro Tower Series** excellent measurement sensitivity (-135 dBm) as well as its ability to set transmit tone levels down to 24 dBm (100 mW) × 2 makes it the perfect resource for convention cell sites as well as in-building Distributed Antenna System (DAS) requirements.

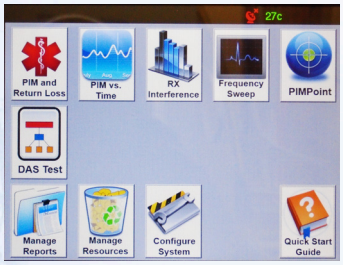
Features:

- Single port measurement of Return Loss, PiMPoint and Distance to Fault without additional hardware
- Easy to operate with look and feel of a smart phone
- Comfortable "Backpack" style carrying case
- Large bright capacitive 8 inch screen
- GPS antenna for site location stamping on test reports
- Real world 40 W × 2 PIM testing capability
- Unique DAS test capability using unit's receiver functions
- Wi-Fi control using smart phone or tablet computer
- Fast battery recharge when connected to AC power
- Auto calibration feature

Measurement Features

Measurement

Measurement Method	One Port, Reverse PIM
Real Time PIM	3rd & 5th PIM
PIM vs Time	3rd & 5th PIM
PIM Location (PIMPoint)	Distance in Feet or Meters with VP Settings
RX Interference	Receive Only Mode-Noise Floor Measurement
Frequency Sweep	Frequency Response

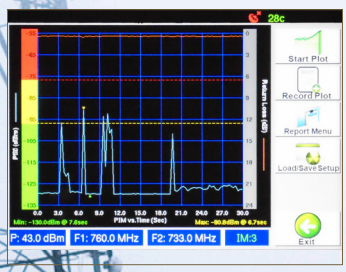


Main Screen

Main boot-up screen shows all measurement features in graphic icon format. Selecting the appropriate icon opens associated measurement screen. This screen also provides access to the complete system configuration, report management screen as well as access to an abbreviated user manual.

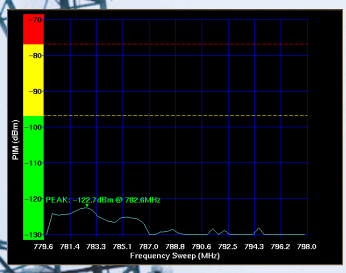
PIM & Return Loss

PiMPro's main measurement screen provides instantaneous PIM measurement in both dBc or dBm. The large display flashes to annunciate the presence of RF power at the output connector. Pass/Marginal/Fail Limits, Output Power, Frequency and IM settings originate from this screen. **PiMPro's** unique Return Loss diagnostic feature at high transmit (TX) power, quickly points out open cables.



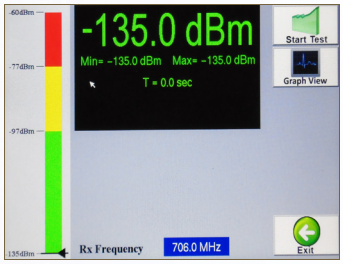
PIM vs Time Measurement

The PIM vs Time dynamic measurement mode features a graphical representation of PIM as a function of time. Time scale can be set from 10 seconds to 4 minutes. Return Loss feature is also available on this screen.



Frequency Sweep

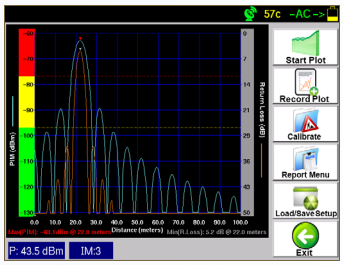
PiMPro displays a swept receive (RX) PIM range by sweeping the TX carriers from end to end within the set frequency band. PIM frequency response is displayed, exposing the worst case PIM level and the contributing frequencies. Users can immediately transfer the graph to the PIM vs Time feature and run a new test to isolate the causes of the specific PIM.



DAS Measurement

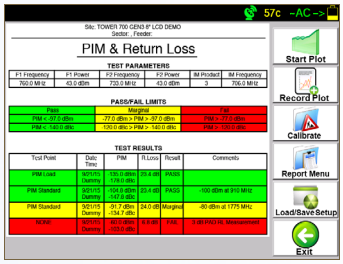
TX Function: Generates in the radio's DL frequency a low power single tone anywhere within in the DAS network (usually from the head-end) to evaluate RF connectivity and path losses. With two hours of TX time a technician can roam a DAS installation with a spectrum analyzer and detect systemic RF anomalies

RX Function: Used as a receiver tool to evaluate best areas within a given location to position DAS antennas. Using a simple Yagi or planar antenna for external interference evaluation, a DAS antenna can be optimally positioned to locations where external interference is lowest.



Simultaneous DTF and PiMPoint Measurements

After a simple calibration procedure using: Low PIM Load, PIM Standard and Open / Short Standards, the unit allows simultaneous measurements (superimposed on the same screen) of Distance to Fault and **PiMPoint** (PIM vs. Distance). All done from a single port, no need to disconnect to a separate measurement port.



Report Generator

Report data for all measurement modes can be stored in either, HTML or PDF file format. Users can concatenate a limitless series of measurements with different sector, feeder, color codes, as one single PDF file. Reports can be saved in **PiMPro's** internal memory or to external USB memory from the unit's front panel.

Battery accessibility takes seconds to swap.

Clips to secure unit at tower top.

PiMPro Tower Series

Model Number	Transmit (TX) Frequency MHz	Receive (RX) Frequency MHz
700	732–766	698–722 (L)
		779.5–804.5 (U)
700A	758–803	703–748
800	791–821	832–862
850	869–894	824–849
900	925–960	876–915
Dual Band 1821	1805–1880	1710–1785
		1920–1980
1900	1930–1990	1850–1910
Dual Band1921	1930–1990	1870–1910
	2110–2155	1710–1755
2600	2620–2690	2500–2570

Specifications

Transmitter	Frequency Accuracy	< 5 ppm
	Power Accuracy	0.3 dB
	Frequency Step Size	200 KHz
	Power Resolution	0.1 dB
	Adjustable Power Range	24 to 46 dBm x 2 (250 mW to 40 W x 2)
Receiver	Residual Intermod Level	-122 dBm (Typical -125 dBm)
	Measurement Sensitivity	-135 dBm
	Noise Floor	-136 dBm
	Reverse Power Protection	13 dBm (20 mW) continuous
Measurement Mode	Measurement Method	One Port, Reverse PIM
	Real Time PIM	3rd & 5th PIM
	PIM vs Time	3rd & 5th PIM
	PIM Location (PIMPoint)	Distance in Feet or Meters with VP Settings
	RX Interference	Receive Only Mode-Noise Floor Measurement
	Frequency Sweep	Frequency Response
System	Battery Operation	>3 hours (Full Charge)
	Power	AC & DC (AC: 90-256 V, 50-60 Hz)
	Alarms	Audio & Visual
	Display Size & Type	8.0" [203.2 mm] Capacitive TFT (Industrial Grade)
	Data Ports	3–USB 2.0, 1–Ethernet LAN Port
	Remote Control	WiFi Enabled (802.11)
Electrical	Battery Power	28 VDC
	Battery Capacity	5.8 AH
	Battery Type	Li-Polymer Removable Battery Pack
	Max Power Consumption	<340 W
Mechanical	Weight	18.0 lbs [8.5 kg] to 27.0 lbs. [12.5 kg] depending on model
	RF Output Connector	7-16 DIN Female
	Dimensions (W x H x D)	14" x 9" x 4.5" [350 x 230 x 114 mm]
	Operating Temperature	-10–45°C, 14–117°F, 95% RH
	Storage Temperature	-30–60°C, -27–140°F, 85% RH
Accessories	Accessories Included	DC Adapter, Operation Manual
	Available Accessories	Operational accessories available individually or in convenient Universal Kit configurations.

PiMPro Tower, Universal Accessory Kit & Transport Case

Order Information

PiMPro Tower Series Portable Analyzers

	Model	Bands	
	PiMPro Tower 700	LTE 700L	LTE 700U
	PiMPro Tower 700A	LTE 700 APT	
	PiMPro Tower 800	LTE 800	
	PiMPro Tower 850	Cellular 850	
	PiMPro Tower 900	GSM 900	
Dual Band	PiMPro Tower1821	GSM 1800	UMTS 2100
	PiMPro Tower1900	PCS 1900	
Dual Band	PiMPro Tower1921	PCS 1900	AWS 2100
	PiMPro Tower 2600	AWS 2600	

PiMPro Tower Series Analyzer System Package

Includes one each PiMPro Tower unit (any model), Accesory Kit, Transport Case
PiMPro Tower 700 SP
PiMPro Tower 700A SP
PiMPro Tower 800 SP
PiMPro Tower 850 SP
PiMPro Tower 900 SP
PiMPro Tower 1821 SP
PiMPro Tower 1900 SP
PiMPro Tower 1921 SP
PiMPro Tower 2600 SP

PiMPro Tower Series Options

Option 11	GPS Capability
Option 21	DTF Measurement, includes open/short standard
Option 31	Wi-Fi Control via Tablet or Smartphone App

PiMPro Tower Series Accessories

Transport Case PPT-TC

PIM Standard PP-AK-PSTAN

PIM Load PP-AK-LOAD

Accessory	Part Number
PiMPro Tower Transport Case	PPT-TC
PiMPro Tower Accessory Kit	PPT-AK
Low PIM Jumper Cable DIN M	PP-AK-CBL-DMDM
Low PIM Jumper Cable DIN M to DIN F	PP-AK-CBL-DMDF
PIM Standard -80 dBm	PP-AK-PSTAN-80
Low PIM Load	PPT-AK-LOAD
7-16 DIN Male to D Male Adaptor	PP-AK-DMDM
7-16 DIN Female to D Female Adaptor	PP-AK-DFDF
7-16 DIN Male to N Female Adaptor	PP-AK-DMNF
7-16 DIN Male to N Male Adaptor	PP-AK-DMNM
Torque Wrench	PP-AK-TORW
Adjustable Wrench	PP-AK-ADJW
Small 32 mm wrench for DIN 7-16	PP-AK-FIXW
Rechargeable Battery	PPT-AK-BATT
Battery Charger	PPT-AK-CHRGR
PiMPro Tower Accessory Kit Case	PPT-AK-CASE

**All accessory Kit Components and cables have low PIM connectors, with PIM level <-122 dBm*

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Communication Components Inc. (CCI) is one of the fastest growing providers of basestation enhancement products and services. Our innovative solutions are designed and installed to allow service providers to get the most out of their basestation investments. With 25 years experience as a wireless technology service provider, and our worldwide network of manufacturing and service centers, **CCI** is poised to deliver the expertise, technology, and reliability to meet all your basestation enhancement needs.

Contact an area representative today.

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PiMPro is also available from these fine independent industry partners.

For additional product ordering information contact your area Communication Components Inc. account representative or independent distributor.