

COM3010 RF Communications Service Monitor



VALUE PACKED SERVICE MONITOR WITH BUILT-IN PERFORMANCE!

- ✓ 100kHz to 1.0GHz, Full Duplex!
- ✓ Built-in Power Meter & Dummy Load!
- ✓ Built-In Frequency Counter!
- ✓ Built-In Sweep Generator!
- ✓ Built-In SINAD Meter!
- ✓ Built-In Calibrated RSSI Meter!
- ✓ Built-In RS232 Control
- ✓ Built-In Lithium Ion Battery Packs

THE HISTORY

In 1986 we introduced the COM3 Communications Service Monitor. Rivaling the performance and features of communications service monitors selling for \$10K and more, the COM3 broke the \$2,000 price barrier! For the very first time Ramsey Electronics® made it economically possible for every service vehicle to have their own service monitor! From 1986 until 2003 the Ramsey COM3 became THE STANDARD for low cost, performance packed service monitors with over 5,000 of them put into operation throughout the 2-way radio, pager, and other communications industries.

That legacy continues today with the Ramsey COM3010. The COM3010 is our latest, full duplex service monitor designed from the ground up to give you the best features available at a price that can't be beat! We asked the owners of those 5,000 COM3's what they would like to see in a brand new Service Monitor. We took a long hard look at the competitive units available and came up with the best of both worlds! The COM3010 provides some of the greatest features available in a service monitor today, at a fraction of the cost of the competition.

THE RIGHT CHOICE!

The COM3010 is a full featured communications service monitor engineered and designed to provide highly accurate measurement and monitoring of communications equipment from 100kHz to 1.0GHz with 0.1ppm accuracy. Full duplex design enables independent and separate measurement and testing of transmitter and receiver circuits simultaneously making it the ideal service monitor for the radio technology of today...and tomorrow! All functions are selected with simple commands and selections on the Elastomeric touch keypad and are displayed on high contrast dual vacuum fluorescent graphical displays. For those on-site measurements, all graphical displays can be "zoomed" to full size to see them across the room! And of course, battery operation is standard to make field use a breeze!

BUILT-IN POWER METER

Perfect for the two way radio user. Simply key the transmitter while the radio is connected to the generator output for an instantaneous reading of RF output power in either watts or dBm. Yes, we said key the radio into the generator output! The COM3010 incorporates automatic reverse power protection rated at 100 watts with a built-in dummy load. No more burned up pads, no separate wattmeter, and no more worries.

BUILT-IN FREQUENCY COUNTER

Not sure of the radio frequency? Don't want to plug it into a programmer to interrogate the memory? Even worse, don't want to take it apart to look at the channel elements or crystals? No problem, just key the transmitter. The built-in frequency counter will display the frequency! Counter range is 100kHz to 1.0GHz!

SELF-CALIBRATING RSSI METER

A calibrated Receive Signal Strength Indicator meter makes the COM3010 perfect for testing filter designs and performance as well as cable characteristics. Such tests are made simple with the availability of user memories. 100 groups of 100 memories allow the storage of a large number of test setups for quick and easy retrieval.

RECEIVER SINAD METER

Working on a receiver? Check the true SINAD sensitivity of the receiver with the built-in SINAD meter. Also provides audio loop-back for the equipment being tested. A separate SINAD meter is no longer required.

AM/FM MODULATION

The COM3010 receives and displays both AM and FM modulation for transmitter testing. The signal generator generates both AM and FM modulation with both internal and external sources. The built-in audio generator provides .1Hz to 3kHz test tones, as well as both CTS and DPL encode tones.

PORTABLE BATTERY OPERATION

Besides universal 100-240VAC 50/60Hz power, the COM3010 also operates as a portable unit and includes one long-life plug-in Li-Ion battery pack for over one hour of operation. Two additional battery packs can be easily plugged into the rear compartment to triple the battery life!

DETAILED SPECIFICATIONS

FEATURES

Display: 2 vacuum fluorescent graphical displays, 16x140 pixels
 Memories: 100 sequences of 100 registers plus system memories
 Sweep Features: Linear, octave, and decade of up to 10,000 points
 Scanner Mode: Allows scanning through a sequence of 100 stores
 SINAD Meter: Displays reading from -30dB to 0dB of SINAD
 Freq. Counter: Measures frequency error to 1 Hz in three counter modes
 Battery Meter: Displays charge left in batteries
 Reverse Protection: Generator output protected, switches into 100W internal load and automatically displays power in dBm or watts.
 Power Meter: Displays power from +23dBm to +50dBm, $\pm .5$ dB (200mW-100W)
 Attenuator Output: -30dB sample port from load for external equipment
 RSSI Meter: 80dB of range on receiver side, -40dBm to -120dBm
 Warranty: One-year parts and labor with extended Ramsey Technical Support

GENERATE MODE

Frequency: 100kHz to 1.0GHz in 1Hz steps
 Freq. Accuracy: ± 0.1 ppm standard
 RF Output Level: -140dBm to 0dBm in 0.1dBm steps
 Level Accuracy: ± 1 dB, 500kHz to 1GHz, ± 2 dB 100kHz to 500kHz
 Units: dBm, uV, mV
 Leakage: Better than 1uV, 2 turn loop, 1" diameter at 1"
 Spurious Harmonics: -30dBc typical
 Non-harmonics: -50dBc typical
 FM Modulation: ± 75 kHz max in 0.1Hz steps to 1kHz, 10Hz steps to 10kHz, 100Hz steps to 75kHz
 FM Bandwidth: 0.1Hz - 75kHz
 Accuracy: ± 0.1 ppm (inherently tied to reference frequency)
 AM Modulation: 0 - 75% in 1% steps to -100dBm, 0-50% to -140dBm
 AM Bandwidth: 10Hz - 10kHz
 Accuracy: $\pm 5\%$
 Distortion: Less than 5%
 Modulation Internal: 0.1Hz - 3kHz
 Modulation External: 0.1Hz - 3kHz digital and analog selectable, auto leveling, auto off
 CTS Encode: 0.1Hz to 999.9Hz at ± 75 kHz default deviation, variable from .1Hz to 2.5kHz deviation
 DPL Encode: ± 500 Hz, all supported codes

RECEIVE MODE

Frequency: 100kHz to 1.0GHz in 10Hz steps
 Sensitivity: Less than 2uV below 512MHz
 Less than 3uV above 512MHz
 FM Demod: 0 - 6kHz, 0 - 4kHz
 AM Demod: 0-100%
 CTS Decode: In AF frequency count
 Frequency Error: 0-1MHz, two methods of bargraph and count
 AF Demod output: 1Vp-p for 7kHz deviation
 Gates: 0.1 sec, 1 sec

FREQUENCY COUNTER

Frequency Range: 100kHz - 1GHz
 Low Band Sensitivity: Less than 10mV under 70MHz, 1Hz and 10Hz resolutions
 High Band Sensitivity: Less than 10mV, 70MHz - 1GHz, 10Hz and 100Hz resolutions with divide by ten prescaler
 IF Frequency: Receiver sensitivity, range limited to bandwidth of current set receiver frequency ± 10 kHz, 1Hz, and 10Hz resolutions

AUDIO COUNTER

Frequency Range: 60Hz - 3000Hz
 Gates: 10 Sec variable gate for 1 sec quick updates
 Sensitivity: 35mV at demod audio, (± 750 Hz deviation)

GENERAL

UPC: 871183002958
 Receiver input: Has diode protection and fused components
 Controls: Elastomeric keypad
 Dummy Load: 100W 30dB feed-through attenuator with sample port on rear, 25% duty cycle full power
 RS232 Control: Serial interface provides external function control and automated calibration
 Primary power: 100-240VAC, .6A, 50/60Hz; built in Li-Ion battery
 Stand: Bottom mounted tilt-ball stand included
 Case Color: Mist gray epoxy powder coat
 Supplied Accessories: 110VAC EIA cord, BNC-BNC test cable, whip antenna, one BP3010A Li-Ion battery
 Dimensions: 6" H x 11.9375" W x 14.75" D (152.4mm H x 303.31mm W x 374.65mm D)
 Weight: 14 lbs (6.5kg)
 Carrying Case: Optional padded black Cordura case with strap available



Rear Panel with Triple Li-Ion Battery Slots



Plug-In BP3010A Li-Ion Battery Pack



COM3010 in Optional CC3010 Cordura Case