



VALUE PACKED BUILT-IN FEATURES!

- ✓ 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 Pack

Full Duplex, Loaded With Features...At A Sensible Price!

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. 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! RF counter range is 100 kHz to 1.0 GHz!

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 3 kHz test tones, as well as both CTS and DPL encode tones.

BATTERY OPERATION

One long-life Li-Ion battery pack is included to provide over one hour of operation. Two additional battery packs can be easily plugged into the rear compartment to triple the battery life.



COM3010 Service Monitor 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 -40dB to 0dB of SINAD
IF Freq. Counter: Measures frequency error to 1Hz 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.
Attenuator Output: -30dB sample port from load for external equipment
RSSI Meter: 90dB of range on receiver side, -30dBm to -120dBm
Warranty: One-year parts and labor with extended Ramsey Technical Support and dedicated COM3010 user forum access

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: ± 0.5 dB, 500kHz to 1GHz, ± 2 dB 100kHz to 500kHz
Units: dBm, μ V, mV
Leakage: Better than 1 μ V, 2 turn loop, 1" diameter at 1"
Spurious Harmonics: Less than -30dBc above 1MHz
Non-harmonics: -50dBc typical
FM Modulation: ± 75 kHz max in 0.1Hz steps
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: ± 5 %
Distortion: Less than 5%
Modulation Internal: 0.1Hz - 3 kHz
Modulation External: 0.1Hz to 999.9Hz at ± 75 kHz default deviation, variable from .1Hz to 2kHz deviation
CTS Encode: from .1Hz to 2kHz deviation
DPL Encode: ± 500 Hz, all supported codes

RECEIVE MODE

Frequency: 100kHz to 1.0GHz in 10Hz steps
Sensitivity: Less than 1 μ V
FM Demod: 0 - 7 kHz, 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

Low Range: 100kHz - 70MHz
 Sensitivity less than 5mV under 50MHz, less than 10mV above 50MHz, 1Hz and 10Hz resolutions
High Range: 70MHz - 1GHz
 Sensitivity less than 10mV 70MHz to 200MHz, less than 6mV above 200MHz to 1.0GHz, 10Hz and 100Hz resolutions with divide by ten prescaler
 Receiver sensitivity, range limited to bandwidth of current set receiver frequency ± 10 kHz, 1Hz, and 10Hz resolutions
IF Frequency:

AUDIO COUNTER

Frequency Range: 1Hz-3000Hz
Gates: 10 Sec variable gate for 1 sec quick updates
Sensitivity: 10mV at demod audio, (± 30 Hz deviation)

GENERAL

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, 50/60 Hz; built in Li-Ion battery
Stand: Bottom mounted tilt-bail stand included
Case Color: Mist gray epoxy powder coat
Supplied Accessories: 110VAC EIA cord, BNC-BNC test cable, whip antenna, one BP3010 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)

COM3010

Full Duplex Communications Service Monitor, 100kHz - 1.0GHz, includes One 1-Hour Li-Ion Battery Pack



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