

## Telephone

# R&D / Production Tester



Stand-alone CO Line Simulator and Telephone Tester  
Ideal for R&D and Manufacturing / QA Applications  
US and International Type I and II Caller ID Simulation  
Programmable Line Current and Ringing Voltage  
Five Tone and One Noise Generators  
Return Loss and V-I Measurement per RS-470B  
Integrated RMS and DC Meters  
Optional DTMF Digit Analysis  
Optional External Acoustic Fixture  
Front Panel, Remote, or Menu Operation



### Overview:

- The Rochelle Model 3500 Caller ID Telephone R&D/ Production Tester is a programmable central office line simulator
- The Model 3500 has specific application for R&D and automated production testing of Feature telephones with Caller ID, Call Waiting, and Visual Message Waiting.
- The Model 3500 features user-friendly software that allows the user to set CID messages and telephone service parameters.
- The Model 3500 includes a built-in 24 AWG artificial line, adjustable loop current, and a white noise generator to simulate real-life impairments.
- The Model 3500 has an RS-232 serial port for control from automated test programs written in languages such as C, Visual Basic or LabVIEW (with optional Remote Control package).
- The Model 3500 is compatible with all major US and international Caller ID standards.

### Features and Benefits:

- Stand-alone system combines a PC, a line simulator and a telephone tester.
- Programmable FSK signal generator (mark and space level, frequency and duration) and data entry allows complete simulation of Caller ID signals and messaging.
- Fully programmable DTMF and CAS generators (signal levels, frequency, duration, and twist) permit simulation of DTMF-based Caller ID and Type II Caller ID.
- An on-board noise generator allows performance testing under noisy line conditions.
- Audio input permits coupling of external speech, audio, or noise into the Model 3500.
- Audio output allows external monitoring and coupling to other instruments.
- PC/104 options available for DSP-based DTMF analysis and external GPIB control.
- Optional Acoustic Head for handset production testing.

## Central Office Simulation

- Line type Two-Wire, Loop Start
- Source AC Impedance Jumper-selectable 600 or 900 Ohms (+/- 25 Ohms)
- CO Voltage Floating +/- 48 VDC (+/- 2 V)
- Line Current Programmable from 10 to 80 mA (+/- 2 mA)
- Ringing Voltage 20 to 80 Hz, 15 to 80 Vac RMS (+/- 2 V)
- Loop Simulation 3Km (9840 ft) of 24 AWG, 6 Km of 24 AWG, or none

## FSK Generation

- FSK Transmitter Standards Bell 202 and ITU V.23
- Level Resolution and Accuracy 0 to -48 dBm in 1 dB Steps (+/- 1 dB)
- Frequency Resolution and Accuracy Programmable to Within +/- 5% of Nominal Standard Frequencies (+/- 1 Hz)

## CAS and DTMF Generation

- Level Resolution and Accuracy 0 to -48 dBm in 1 dB Steps (+/- 1 dB)
- Frequency Resolution and Accuracy Programmable to +/- 5% of Nominal (+/- 1 Hz)
- Duration Programmable from 40 to 200 mS

## Tone Generation

- Level Resolution and Accuracy +10 to -38 dBm in 1 dB Steps (+/- 1 dB)
- Frequency Range and Accuracy 150 Hz to 20 kHz (+/- 1 Hz)

## Noise Generation

- Type Flat (>20 KHz), Pseudo-Random
- Range 20 to 90 dBmC in 1 dB Steps

## Audio Input/Output

- Input Impedance 10 K Ohms
- Output Drive Up to 6 Watts into 8 Ohms

## Controller System

- Controller 486SX, 66 or 100 MHz
- Memory 2MB DRAM, 8MB DiskOnChip Flash (Expandable)

## Mechanical

- Size 10" by 4" by 13" (25 by 10 by 33 cm)
- Weight 10 lbs (4.5 Kg)
- Operating Temperature 32 F to 122 F (0 C to 50 C)

## Options

- DSP Module with DTMF Digit Analysis
- Remote Control (RS-232 or GPIB)
- Factory Automation Software
- External Acoustic Fixture

