

**AFFORDABLE ANALOG TESTING IN A RUGGED, HAND-HELD PACKAGE.**

# ATS 2 Enhanced Audio Test Set

The ATS 2 is a full feature audio test set in a portable, hand-held package. The set facilitates the installation and maintenance of leased or dial-up circuits and equipment connected to the public switched networks. Designed to comply with IEEE and Bell specifications, the ATS 2 is capable of performing all basic analog transmission measurements plus Impulse Noise, Signal-to-Noise and P/AR tests. The ATS 2 can also function as a telephone handset on 2- and 4-wire circuits, with dial, hold, talk and listen capabilities.

- Menu driven
- Impulse Noise and Signal-to-Noise tests
- DTMF or pulse dialing
- MF dialing optional
- Tests to IEEE and Bell specifications



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# ATS 2 Enhanced Audio Test Set

## SEND MODES

### QUIET TERMINATION

Signal generator disconnected from output

**Output Noise** < -80 dBm

### SEND FREQUENCY

**Range:** 50 Hz to 5 kHz

**Resolution:** 1 Hz

**Accuracy:** ±0.03%

**Direct Entry:** Numeric keypad

**Stepping:** ±1, 10 and 100 Hz

**Fixed frequencies:** 1004 Hz, 2713 Hz and programmable auxiliary tone

**Slope tones:** 404 Hz, 1004 Hz, and 2804 Hz  
10 seconds per tone

**Auto step:** Programmable start, stop, step size and step duration

**P/AR signal:** 16 phase related frequencies

**Distortion:** 50 Hz to 200 Hz < -45 dB  
200 Hz to 5 kHz < -50dB

**SF skip:** 2450 Hz to 2750 Hz

### SEND LEVEL

**Range:** ±10 dBm to -50 dBm  
(0 dBm maximum for P/AR)

**Resolution:** 0.1 dB

### ACCURACY

**50 Hz TO 200 Hz:** ±0.5 dB

**200 Hz TO 5 KHz:** ±0.2 dB

**1004 Hz:** ±0.1 dB from 0 to -19 dBm

**Direct entry:** Numeric keypad

**Stepping:** ±0.1 and 1 dB

### FLATNESS

**50 Hz to 200 Hz:** ±0.5 dB

**200 Hz to 5 kHz:** ±0.2 dB

## MEASURE MODES

### LEVEL/FREQUENCY

**Level range:** +10 dBm to -65 dBm

**Resolution:** 0.1 dB

### ACCURACY

**50 Hz to 200 Hz:** ±0.5 dB

**200 Hz to 5 kHz:** ±0.2 dB

**1004 Hz:** ±0.1 dB from 0 to -19 dBm

**Detector:** Averaging

**Display modes:** Absolute or relative with respect to input level

**Frequency range:** 20 Hz to 10 kHz

**Resolution:** 1 Hz

**Accuracy:** ±1 Hz

### BACKGROUND NOISE

**Range:** 10 to 99 dBm

**Resolution:** 1 dB

### ACCURACY

**20 to 99 dBm:** ±1 dB

**10 to 20 dBm:** ±2 dB

**Filters:** C-Message, 3 kHz flat, C-Notch

**Detector:** True RMS

**Display modes:** Absolute or relative with respect to input level

**Notch filter:** 995 to 1025 Hz > 50 dB rejection

**Loss of tone:** < -40 dBm

### SIGNAL TO NOISE

**Signal range:** +10 dBm to -40 dBm

**Noise range:** 10 dBm to 90 dBm

**Ratio range:** 10 to 50 dB

**Resolution:** 1 dB

**Accuracy:** ±1 dB

**Detector:** Average for level and true RMS for noise

**Display modes:** Absolute or relative with respect to current measurement

**Notch filter:** 995 to 1025 Hz > 50 dB rejection

**Loss of tone:** < -40 dBm

### IMPULSE NOISE

**Threshold range:** 30 to 100 dBm

**Resolution:** 1 dB

**Accuracy:** ±1 dB

**Count rate:** 7 per second

**Count timer:** 1 to 99 minutes or continuous

**Count range:** 0 to 9999

**Filters:** C-Message, 3 kHz flat, C-Notch

**Notch filter:** 995 to 1025 Hz > 50 dB rejection

**Loss of tone:** < -40 dBm

**Loss of tone counter:** 0 to 9999

### P/AR RATING

**Range:** 0 to 120 P/AR

**Resolution:** ±1 PAR unit

### ACCURACY

**30 to 110:** ±2 P/AR units

**0 to 120:** ±4 P/AR units

**Input level range:** 0 to -40 dBm

**Detector:** Average

## DIAL MODES

### MANUAL DIAL

**Dial method:** DTMF or pulse with optional MF

**DTMF signals:** Full supervisory tone set, including A,B,C, and D

**Redial:** Up to last 16 digits

### AUTODIAL

**Memory:** 10 locations, each capable of holding up to 16 digits

**Dial method:** DTMF or pulse with optional MF

**DTMF signals:** Full supervisory tone set, including A,B,C, and D

## GENERAL

### INPUT/OUTPUT

**Line:** 2-wire or 4-wire

**Connectors:** RJ11C modular jack and dual miniature phone jack (0.173" diameter on 0.312" centers, mates with ADC PJ777 or Switchcraft TT253) 150 volts

**DC blocking** Reverse send and receive

**Normal/Reverse switch:** Electronic, 24 ma.

**Hold circuit:** 600 or 900 ohms

**Impedance:** Bridge or terminate

**Termination:** < 0.2 dB

**Bridging loss:** > 30 dB

**Return loss:** > 80 dB at 60 Hz

**Longitudinal balance:** > 70 dB at 540 Hz  
> 60 dB at 4 kHz

### POWER

**Batteries:** Rechargeable nickel-cadmium

**Battery life:** 6 hours minimum per charge, one-half hour minimum after battery low indication

**Recharge time:** 4 hours maximum with unit turned off

**AC operation:** 115/230 vac, 50/60 Hz

**Auto shut-off:** 15 minutes after last key depression

### PHYSICAL

**Push-to-talk:** Built-in condenser microphone

**Monitor:** Adjustable volume, switchable between send and receive

**Display:** 2 line by 16 character LCD

### DISPLAY UPDATE

**Normal:** 5 times per second

**Damped:** 2 times per second

**Size:** 10" L x 4" W x 2 1/8" H

**Weight:** 2 1/4 lbs (1 Kg)

**Operating temperature:** 0° C to 50° C

**Storage temperature:** -20° C to 90° C

**Humidity:** 10% to 90% relative humidity noncondensing



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