

MULTI-SERVICE TIMS (Transmission Impairment Measuring Set). The 806A supports a wide range of services including: POTS, DATA, DDS, DSL (ISDN basic rate), and T1 via HDSL. It measures: LEVEL, DELAY, FREQUENCY, NOISE, NOISE with TONE, S/N RATIO, NOISE to GROUND, IMPULSE NOISE, IMPULSE NOISE with TONE, and IMPULSE NOISE to GROUND per **IEEE Standard 743-1995**. The 806A is easy to operate from the front panel (or from a personal computer) and it has AUTO-TEST capability for VF, DSL and HDSL facilities. It is also accurate, rugged and economical

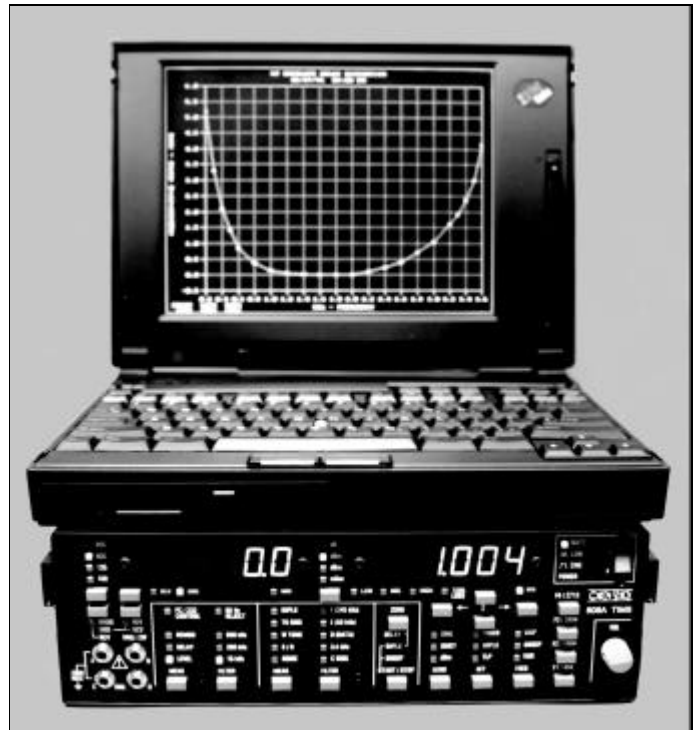
STRAIGHTAWAY DELAY Expanded use of 2 Wire transmission (FAX, Modem, ISDN DSL, and HDSL) has accentuated the need for a 2 Wire, STRAIGHTAWAY Envelope Delay Distortion (EDD) Measurement. The 806A introduces a new, Patented EDD Technique which: handles VF, DSL, and HDSL Frequencies; measures on a 2 wire basis; is comparable to, and compatible with the Standard 4 Wire EDD Measurement.

Extended Round Trip Delay was added to facilitate alignment of delay lines in **Simulcast Radio Systems**.

NOISE is measured with one of eight weighting filters. Noise-to-ground (or Power Influence) is measured directly using standard test leads. A 1010 Hz Notch Filter is provided to measure NOISE-with-TONE, Signal to Noise Ratio, or Signal to Total Distortion Ratio.

FILTER	APPLICATION
C MSG	POTS Voice Traffic
D filter	POTS modem or fax
3.4 kHz	POTS power line / ringing interference
15 kHz	POTS Level, Delay, EDD / Program Noise
1010 Notch	POTS S/N Ratio / Noise, S/N on PCM
E Filter	ISDN (DSL) Level and Noise / DDS
F Filter	HDSL Level and Noise, S/N Ratio
200 kHz	ISDN (DSL) and DDS Attn Dist, EDD
500 kHz	HDSL Level, Attenuation Distortion, EDD

CONTROLS Front panel controls are simple and utilize large bright LED displays and indicators which are grouped for ease of use. The 806A comes with software that runs under DOS or Windows. The PC communicates with the test set through an RS-232 Port which is located on the side or rear of the test set.



The Portable 806A includes: a rechargeable battery, padded field case, two miniature phone plug / clip test leads, an RS-232 PC Cable, PC Software, Operating Manual, and an AC Power Cord. The battery powers the test set for 8 hours.

The Rack Mounted 806AR has the I/O brought out on jacks on the front panel and spade lugs on the rear panel. 115 VAC Power standard. 230 VAC, -24 or -48 VDC options available.

SPECIFICATIONS 806A TIMS / 806AR TIMS

LEVEL

Dynamic Range
 -80 to +24 dBm 15 kHz, 200 kHz-600/900
 -70 to +24 dBm 200 kHz, 500 kHz
 -20 to +20 dB TLP offset

Freq. Range 20 Hz to 300 kHz
 Resolution 0.1 dB
 Detector Average or RMS, Selectable
 Accuracy

+24 dBm	±0.5 dB	±0.2 dB	±0.5 dB	±1 dB
-40 dBm	±0.5 dB	±0.5 dB	±1.0 dB	±2 dB

20Hz 200Hz 15kHz 200kHz 300kHz
 1002 to 1022 Hz / 0 to -19 dBm: ±0.1 dB

Filters Hum Reject, IN/OUT High Pass, -60 dB at 60 Hz
 15 kHz Flat, VF Low Pass, -3 dB at 15 kHz
 200 kHz, Wide Band Low Pass, -3 dB at 200 kHz
 500 kHz, Extra WB Low Pass, -3 dB at 500 kHz

FREQUENCY

Count Range 20 Hz to 300 kHz
 Level Range -50 to +24 dBm - 15 kHz Bandwidth
 -40 to +24 dBm - 200 kHz Bandwidth
 -30 to +24 dBm - 500 kHz Bandwidth

Resolution 1 Hz to 30 kHz, 10 Hz to 300 kHz
 Accuracy ±1 Hz to 30 kHz, ±10 Hz to 300 kHz

NOISE, NOISE w TONE

Dynamic Range 10 to 114 dBm or -80 to +24 dBm for
 C MSG, 3.4 kHz, D, E, 15 kHz Filters
 20 to 114 dBm or -70 to +24 dBm for
 200 kHz, F, 500 kHz Filters

Holding Tone -40 to +10 dBm / 995 to 1025 Hz
 Resolution 0.1 dB
 Detector RMS
 Accuracy ±1 dB

S/N RATIO (S/TD RATIO, signal to total distortion)

Dynamic Range 10 to 50 dB (excludes E and F Filters)
 Holding Tone -40 to +10 dBm / 995 to 1025 Hz
 Resolution 0.1 dB
 Accuracy ±1 dB

NOISE to GROUND (Power Influence)

Dynamic Range 30 to 140 dBm, or -60 to +50 dBm
 40 to 140 dBm, -50 to +50 dBm -F / 500 kHz

Resolution 0.1 dB
 Accuracy ±1 dB

3-LEVEL IMPULSE NOISE, IMPULSE NOISE w TONE

Dynamic Range 30 to 115 dBm - C, D, 3.4, 15 kHz Filters
 40 to 115 dBm - 200 kHz, E, F Filters
 50 to 115 dBm - 500 kHz Filter
 Impulse w Tone excludes E and F Filters

Thresholds 3 /LOW, MID (+4 dB), HI (+8 dB)
 Accuracy ± 1 dB
 Count Capacity 32,000
 Count Rate 8, 100 Counts/Second
 Holding Tone -40 to +10 dBm / 1002 to 1022 Hz
 Loss of TONE Measurement halted, auto resume

TRANSIENT TIMER

Timer Set 1 Minute Steps up to 8 Hours
 Resolution 1 Second
 Accuracy ± 1 Second

EXTENDED ROUND TRIP DELAY

Dynamic Ranges 0 to 1,000,000 uSec, 0 to 3,000,000 uSec
 Resolution 1 uSec
 Accuracy ±5 uSec

ENVELOPE DELAY

Dynamic Range -3000 to +9000 uSec
 Frequency Range 200 Hz to 300 kHz
 RCV Level -40 to +20 dBm
 SEND Level -40 to +7 dBm
 Modulation 50% AM, 83 1/3 Hz
 Resolution 1 uSec
 Accuracy ±10 uSec
 Operating Modes 2W Straightaway - Patented 22 tone ,
 Local, Forward / Return Reference
 Remodulation Forward / Return Reference

GENERATOR

Dynamic Range -41 to +10 dBm
 Resolution 0.1 dB Steps
 Accuracy ±0.1 dB -19 to 0 dBm, ±0.2 dB -1 kHz
 Freq. Range 20 to 300 kHz
 Resolution 1 Hz - to 4 kHz, 10 Hz - to 30 kHz,
 100 Hz - to 300 kHz

Accuracy 1 Hz to 10 kHz, 30 Hz to 300 kHz,
 Flatness 0.2 dB to 15 kHz, 1 dB to 300 kHz
 TH Distortion -50 dB - 1004 Hz, -40 dB - 20 Hz to 300 kHz
 Quick Freq's 4 Programmable Frequency Keys
 Auto Sweep:VF, DSL, HDSL / 500 kHz

INPUT / OUTPUT PORTS

Quantity 2 Measure / Dial Ports - Portable: A/C, B/D
 Rack Mount: A, B Ports on front and rear
 Operation 2 Wire, 4 Wire
 Impedance 100, 135, 600, 900 Ohms
 Independent RCV / SEND Selection

Return Loss 135, 600, 900 30 dB / 100 15 dB
 Receive Bridge Less than .2 dB
 Hold Dual, 23 ma Nominal

GENERAL

MONITOR Speaker with Volume Control
 DIAL Parallel Bantam Jacks for Dial / Talk
 TEMP Operate +0 to +50 C / Store -40 to +71 C
 PC CONTROL Serial Port: RS-232 / 9 pin D Connector,
 POWER 115 VAC +/-10%, Option: 100 or 230 VAC
 806 Battery Run: 8 Hrs. / Recharge: 8 Hrs.

PORTABLE

9.0 x 11.0 x 3.5 Inches
 229 x 279 x 89 mm
 WEIGHT 9.0 lbs. / 4.1 kg. including Battery

RACK MOUNT

7.5 x 19.0 x 1.7 Inches
 191 x 483 x 43 mm
 WEIGHT 5.0 lbs. / 2.3 kg.

WARRANTY

All Convex products are warranted to be free of manufacturing defects for a period of one year from the date of shipment. No other warranties are expressed or implied. Convex Corporation is not liable for consequential damages.

PRODUCT REPAIR SERVICE

Post warranty repair service is available for Convex products. Where there is no observable mechanical damage, the Model 806A or 806AR will be repaired and/or recalibrated for a fixed fee. Otherwise, Convex will advise as to the nature and cost of repair and, subject to customer instructions, will promptly repair and return the product.