



Multifunction Audio Analyzer

Features & Benefits

- Combines Distortion Analyzer, AC Level Voltmeter, Ratio Meter in one instrument
- Built-in audio frequency counter
- Easy to use: Fully automatic; no level setting, tuning or nulling
- Display level, frequency and THD simultaneously
- Self-calibrating
- Together with 850, can perform all BTSC recommended Proof-of-Performance measurements
- Excellent performance at a reasonable price

General Description

Monitoring the performance of TV stereo means more than just monitoring modulation.

TFT has introduced the 860 Multifunction Audio Analyzer for making all the Proof-of-Performance measure-

ments defined for BTSC stereo.

The analyzer is a plug-in module which meters with the 850 family of modulation monitors. Together they provide an essential, single, transportable package for monitoring and testing BTSC stereo performance.

The 860 can easily make such measurements as:

- Stereo channel separation
- Signal-to-noise ratio
- Frequency response
- Total harmonic distortion
- Subchannel FM deviation
- Pilot carrier frequency

Multiple Functions

The 860 can perform all the above measurements in a fraction of the time needed compared to using other pieces of test equipment. The ease of use and compact size of the 860 makes it ideal

for doing "quick checks", troubleshooting, full aural proofs on BTSC stereo systems, as well as normal system monitoring.

The analyzer combines the operation of an AC Level Voltmeter, a Distortion Analyzer, a Ratio Meter and a 100 kHz Audio Frequency Counter.

Quick, Easy Measurements

The analyzer takes signals directly from the 850, or from an external source. The 860 is easy to operate with a minimum number of controls, and a three function display.

The unit provides completely automatic measurement and display of signal level, audio frequency and THD. Automatic set level, tuning, nulling of the fundamental, and auto-ranging of the display all combine to permit extremely simple operation once a mode is

selected. Just apply the selected signal and read the results. DB ratio measurements may be referenced either to 774.6 mV (1 mW into 600 ohms), or to a chosen reference signal. The 0 dB reference memory remembers the selected level, and all subsequent measurements can be referenced to that level. The Model 860 enables THD measurements to be expressed in true RMS or average response.

The fundamental frequency range of the Model 860 is 10 Hz to 100 kHz, with harmonics measured out to 500 kHz.

Any one of the built-in filters (400 Hz High pass, 30 kHz low pass, 80 kHz low pass) may be switched in to the signal paths for preconditioning of the signal to be measures.

A monitor connector is provided to permit oscilloscope display of the input signal.

Specifications

INPUT SIGNAL

Input Range.....	200 μ V to 100 V (auto-ranging)
Impedance.....	100 K ohms, 2%
Max Input Voltage.....	100 V peak (front panel) 10 V peak (rear panel)

SIGNAL LEVEL MEASUREMENTS

Voltage-in Accuracy.....	$\pm(4\% + 2 \text{ counts})$ at $+40^\circ\text{C}$
10 Hz - 100 kHz.....	$\pm 0.5 \text{ dB}$ for dBm or dB ratio readings
Residual Noise.....	3.0 μ V (- 108 dBm) (with 400 Hz and 30 kHz filters on; inputs sorted; $+40^\circ\text{C}$)
FM Deviation.....	100 kHz/V $\pm(3\% + 2 \text{ counts})$ (available with 850 only)
AM Modulation.....	100 %/V $\pm(3\% + 2 \text{ counts})$ (available with 850 only)
THD Accuracy.....	Within 20% (2 dB) for harmonics $\leq 500 \text{ kHz}$
Residual THD + N.....	RMS Detection: 0.010% ($\leq 80 \text{ dB}$) AVG Detection: 0.008% ($\leq 82 \text{ dB}$)

MECHANICAL AND ENVIRONMENT

Power Consumption.....	16 Watts
Size.....	5.07" (12.9 cm) H x 6.00" (15.2 cm) W x 11.30" (28.7 cm) D
Net Weight.....	3.30 lbs. (1.5 kg)
Physical Configuration.....	Plug-in for TFT 850 series of products with direct rear panel edge-card interconnection. Front panel input connectors for use with external signals also provided
Display.....	2 line x 16 character LCD. 3 functions displayed with units. Over-range indicated by blank reading

DISPLAY SELECTIONS

Level	Freq./Ratio	THD
725	4.47	0.123
mV	kHz	%
↑	↑	↑
	kHz = Audio Frequency Counter	% = Percent THD
	dBr = Relative measurements for SNR, Channel Separation, etc.	dB = Level THD

mV = Signal level (auto ranging)
kHz = FM Deviation (with 850 only)
dBm = Power Level into 60 ohms
% = Percent AM Modulation(with 850 only)

