

Agilent Technologies

Agilent Advisor – Transmission Impairment Measurement Set Technical Specification



Add TIMS Testing to the Agilent Advisor J2527A

A new Transmission Impairment Measuring Set – Continuing the Agilent Technology tradition of excellence

The J2527A TIMS interface for the Agilent Advisor provides basic analog tests to qualify circuits for voice and data. Operation of the J2527A is based on the industry standard family of TIMS products: 4934A, 4935A and 4936A.

When the J2527A TIMS interface is attached to the J2300C/ D Series Advisor using an undercradle, the datacom specialist has full decoding of LAN and WAN protocols, bit error rate measurements and transmission impairment measurements – all under one handle.



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The J2527A TIMS interface includes the following features:

- 50 Hz to 200 kHz operation
- Level/frequency
- Noise and noise-to-ground
- Noise-with-tone and signal-to-noise
- 3-level impulse noise
- P/AR
- IEEE 743-1984 and CCITT compliance
- Microsoft® Windows® user interface based upon operation of the 4934A, 4935A and 4936A
- Easy to use interface. Selections not appropriate to the designated measurement are greyed-out to avoid inadvertent errors.

Microsoft is a U.S. registered trademark of Microsoft Corp.

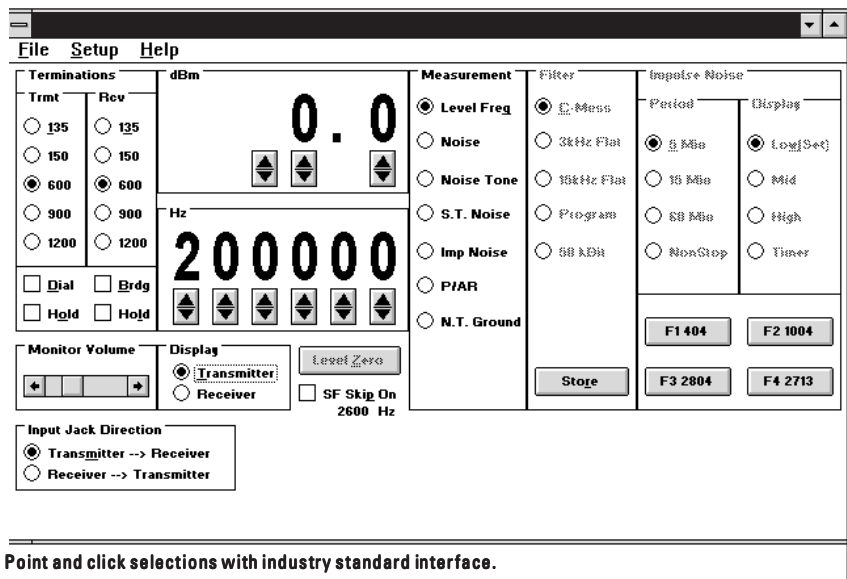
Windows is a U.S. registered trademark of Microsoft Corp.



The J2527A includes WECCO 310 cables, operating manual, and software.



The J2527A easily attaches to the Advisor. The entire assembly can be placed in an optional carrying case.



Point and click selections with industry standard interface.

Specifications

Except where otherwise stated, the following parameters are warranted performance specifications. Parameters described as “typical” or “normal” are supplemental characteristics which provide a useful indication of typical, but non-warranted, performance characteristics.

Measurement methods meet IEEE Std 743-1984

Transmitter Frequency

Range	Resolution	Accuracy
50 to 99999 Hz	1 Hz	+/- 50 ppm
100 to 200 kHz	10 Hz	+/-120 ppm

Additional Transmitter Functions

SF Skip: Transmitter skips 2600 +/- 150 Hz.

Four Pre-set Frequencies: Normally 404, 1004, 2804 and 2713 Hz.

User can temporarily change these and the SF Skip center frequency.

Receiver Frequency

Range	Resolution	Accuracy
50 to 9999 Hz	1 Hz	+/- 1Hz
10 to 200 kHz	10Hz	+/- 10Hz

Transmitter Level

Range: -40 to +13 dBm.

Resolution: 0.1 dB.

Accuracy at 1004 Hz, 0 to -19 dBm:

Typically +/-0.1 dB.

Flatness (dB relative to 1004 Hz):

Level (dBm)	Frequency (Hz)					
	20	200	15k	60k	85k	200k
+10 to +13	+1 -2.5*	+/- 0.2*	+/- 0.5*	+/- 0.7*	+/- 1.5*	
-40 to +10	+/- 1.0	+/- 0.2	+/- 0.5	+/- 0.5	+/- 1.5*	

**Typical*

Distortion (dB down from fundamentals)

Level (dBm)	Frequency (Hz)			
	50	100	4k	200k
+ 10 to +13	20 typ		45typ	45 typ
0 to +10	20 typ		55	45
-30 to 0	40 typ		50	40
-40 to -30	40		50	35 typ

At 1004 Hz, 0 dBm: THD typically > 62 dB down from fundamental.

Receiver Level

Range: - 50 to + 13 dBm.

Resolution: 0.1 dB.

Detector Type: Average.

Accuracy (dB):

Level (dBm)	Frequency (Hz)					
	50	200	15k	60k	85k	200k
+ 13 to -40	+/- 0.5	+/- 0.2	+/- 0.5	+/- 0.5	+/- 2.0*	
-40 to -60	+/- 0.6*	+/- 0.4*	+/- 0.8*	+/- 1.0*	+/- 2.0*	

**Typical*

At 1004 Hz, - 20 to + 13 dBm: +/- 0.1 dB.
Receiver accuracy is specified from 500 Hz when using the 135 or 150Ω terminations.

Message Circuit Noise

RECEIVER (Transmitter: off and terminated).

Range: 10 to 100 dBm (135 and 150Ω: 17 to 100 dBm).

Resolution: 1 dB.

Detector Type: Quasi-RMS.

Accuracy: +/-1 dB from 10 to 100 dBm

Filters: C-Message, 3 kHz Flat, 15 kHz Flat, Program , 50 kbit

Noise-with-Tone

RECEIVER (Transmitter: 1004 Hz tone).
Notch Filter: > 50 dB rejection from 995 to 1025 Hz.

Range: (at 600, 900 and 1200Ω): 10 to 100 dBm.

Resolution: 1 dB.

Accuracy: +/- 1 dB from 20 to 100 dBm,

+/- 3 dB from 10 to 20 Brn

Detector Types: Quasi-RMS

Signal-to-Noise Ratio

RECEIVER (Transmitter: 1004 Hz tone).
Signal Level Range (600, 900 and 1200Ω): - 40 to + 13 dBm.

Ratio Range: 10 to 45 dB.

Ratio Resolution: 1 dB.

Accuracy (signal -30 to + 10 dBm), S/N 10 to 40 dB: +/- 1 dB; S/N 40 to 45 dB: +/- 2dB.

Detector Types (noise): Quasi-RMS;
(tone): Average.

3-Level Impulse Noise

TRANSMITTER C-Msg or 3 kHz Flat receive filter selected: 1004 Hz tone. Any other receive filter: off and terminated.

RECEIVER

Level Range: - 40 to + 13 dB.

Notch Filter: > 50 dB rejection from 995 to 1025 Hz.

Threshold Ranges (at 600Ω): Low 30 to 100 dBm, Mid and High 4 and 8 dB higher respectively, up to 100 dBm.

Threshold Accuracy: +/- 1 dB over the following ranges: with C-Msg or 3 kHz Flat **filter:** 40 to 100 dBm; with Program **filter:** 60 to 100 dBm.

Loss of Holding tone: “-” sign in right display, latching.

Count Timer: Nominally 5, 15, 60 minutes or non-stop.

Count Range: 0 to 9999.

Max Count Rate: Nominally 8 per second.

Hold Circuits: 2, each drawing 24 mA nominal.

AC Power Requirement: Nominally 100 to 240 V RMS, 50 to 60 Hz, 20VA max.

Temperature Range

Operating: 5° C to + 40° C

Storage: - 25° C to + 60° C

Weight 7.8 kg (with J2301A)

Dimensions

12.2H x 30W x 29D cm

4.9H x 12W x 11.5D in

(with J2301A)

Noise-to-Ground

RECEIVER (Transmitter: off and terminated).

Range: (at 600, 900 and 1200Ω): 50 to 120 dBm.

Resolution: 1 dB.

Accuracy: +/- 1.5 dB.

Filters and Detector: See message circuit noise.

P/AR

TRANSMITTER

Signal: 16 frequencies in range 140 to 3890 Hz.

Level Range: - 40 to 0 dBm.

Resolution: 1 dB.

RECEIVER

P/AR Range: 0 to 120 units, otherwise +/- 4 units

Resolution: 1 unit.

Accuracy (30 to 110 units): +/- 2 units.

Level Range: - 40 to + 0 dBm (135 and 150Ω: - 30 to + 0 dBm)

Resolution: 1 dB.

General

Maximum DC Blocking: 200V nominal.

Impedances: Nominally 135, 150, 600, 900 and 1200Ω. Transmit and receive impedances are independently selectable.

Receiver Return Loss (600, 900 and 1200Ω: 50 Hz to 4 kHz): typically > 30 dB.

Bridging Loss (up to 20 kHz):

Typically < 0.2 dB.

Longitudinal Balance: (typical) > 80 dB at 60 Hz, > 70 dB at 540 Hz, > 60 dB up to 4 kHz, decreasing at 6 dB per octave up to 20 kHz.

Related Literature

Advisor LAN	Product Overview	5980-0990E
Advisor WAN	Product Overview	5967-5566E
Advisor ATM	Product Overview	5968-1437E
Advisor ATM/WAN	Technical Specifications	5980-0786E
Advisor Reporter	Technical Specifications	5968-6188E
Advisor	Brochure	5980-1093E

Warranty

Hardware: 3 years
Software: 90 days replacement only

Agilent Technologies manufactures the J2527A under a quality system approved to the International Standard ISO 9002 (BSI Registration Certificate No. FM 24426).

Contact us with FaxBack

By Returning This FaxBack Page,
with the following required
information, you can facilitate your
initial contact to speak with a
Customer Care Representative

Fax to: 1-303-662-2038

OR...

E-mail to: csp_telesales@agilent.com

Visit our web site

www.agilent.com/comms/onenetworks

First Name _____
Last Name _____
Company Name _____
Job Title _____

Business Mailing Address _____

City _____
State/Province _____
Country _____
Zip Code _____

E-Mail Address _____

Phone Number _____
(incl. area/country code)

Fax Number _____

Do you have a budget set for this application?

- Yes
 No
 In process

What is your time frame to implement this product?

- 30 days 180 days
 90 days Other – (please define) _____

Product(s) of Interest

- The Agilent Advisor** – Integrated, High-Performance Troubleshooting for:
 ____ Advisor LAN
 ____ Advisor WAN
 ____ Advisor ATM
- The LAN Analyzer** – Scaleable Ethernet and Token Ring Test Solutions
- Telegra Fax Test** – Fax Protocol and Low Generation Analysis
- Telegra Voice Quality Tester** – Detailed Voice Analysis for Clarity, Echo and Delay using
 PSQM and PAMS
- Telegra Voice and Fax over IP** – Protocol Analysis
- FASTest** – Automated Service Verification for PSTN and IP Networks

**What is the main problem you
need to solve on your network?**



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Notes:

This Product is Y2K Compliant

Agilent Ordering Information

J2300D Advisor WAN
J2527A TIMS undercradle and software.

Options

001 ITU-T solution with 820/1020 Hz tone.
1A3 Telcordia CLEI code.

CLEI for Bell Operating Companies: For Bellcore Common Language Equipment Identification (CLEI) labeling, order Option 1A3.

Option summary

Option	Description
001	Replaces North American Features and Connectors with CCITT; 820/1020 Hz Holding Tone: Deletes Test Cords
W30	2 years additional hardware service
1A3	Bellcore CLEI compliance

Accessories for the J2527A

18182A 1.5m (60-inch) test cord with 310 male connector and alligator clips
J2305A Soft carrying case

By internet, phone or fax, get assistance with all your Test and Measurement needs.

Online assistance:

<http://www.agilent.com/find/assist>

United States:
(Tel) 1 800 452 4844

Canada:
(Tel) 1 877 894 4414
(Fax) (905) 206 4120

Europe:
(Tel) (31 20) 547 2323
(Fax) (31 20) 547 2390

Japan:
(Tel) (81) 426 56 7832
(Fax) (81) 426 56 7840

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(Fax) (61 3) 9272 0749

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(Fax) (64 4) 495 8950

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5965-1526E