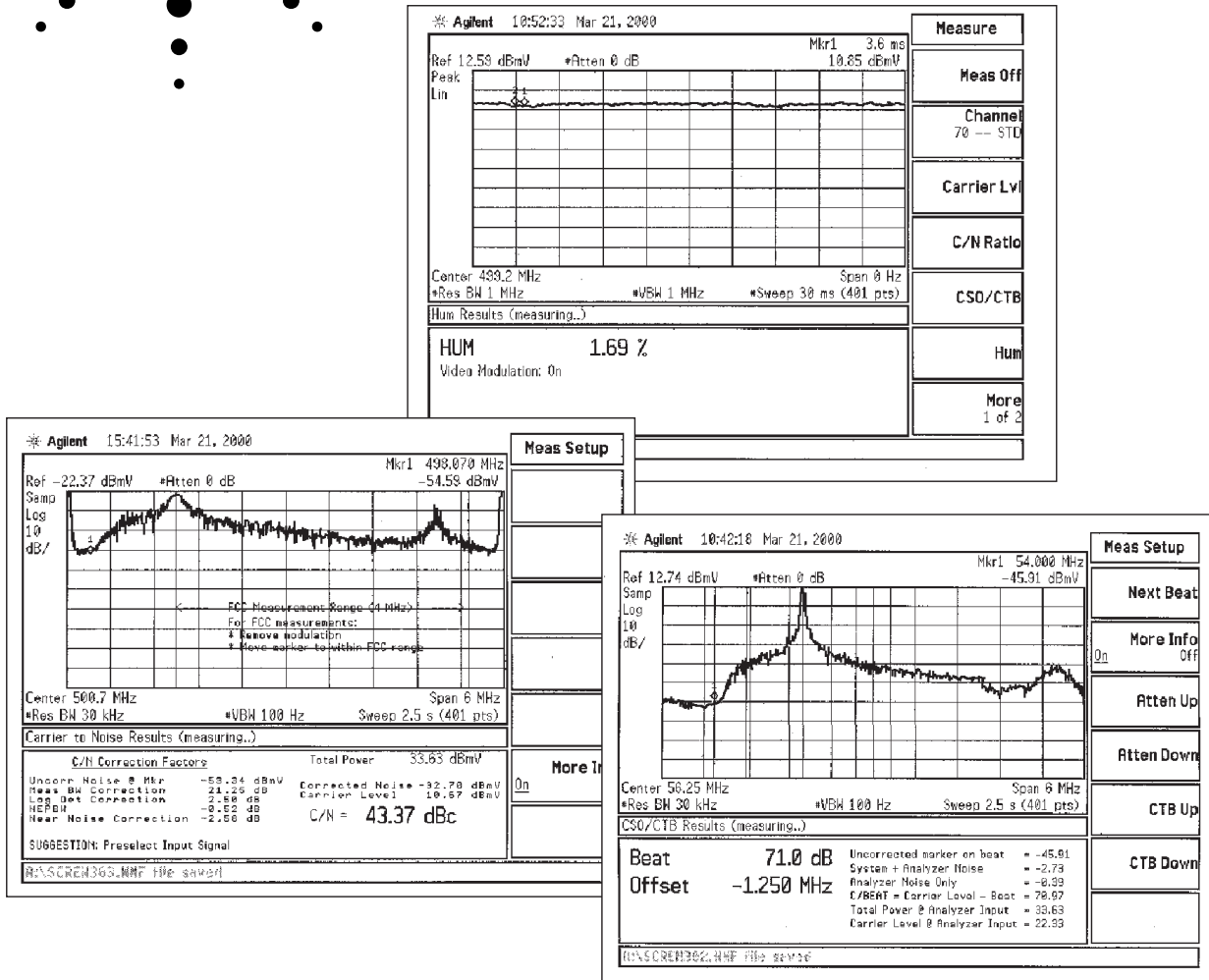


Agilent Cable TV Service and Installation Analyzer

Rugged, Affordable and Portable Full Featured Spectrum Analyzer
Product Overview

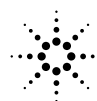


ESA E4411B Special Option HDx (HD2, HD3, HD4, HD5, HDJ)

Familiar, easy to use, one button measurements of:

- Video carrier level
- Carrier-to-noise
- Composite second order and composite triple beat
- Hum

Users familiar with the industry standard 8591C will recognize the measurement screens and menus. They will especially be pleased with the 10 dB increase in dynamic range. In many cases this allows C/N and CSO/CTB measurements to be made without the complexity of a bandpass filter. The analyzer is ready to make calibrated measurements five minutes after turn on. Since the analyzer has a continuous background calibration, there's no need to recalibrate due to temperature swings.



Agilent Technologies



E4411B



8591C

Comparison of features of the E4411B HDx and 8591C

Features	E4411B HDX	8591C	E4411B HDx benefit (+)
Purpose	Field tool	Headend proof tool	Lower cost
Gated and color measurements	Not available	Yes	Optimized for field use
Ingress monitoring	5 ms swp time, 23 meas/sec	20 ms swp time, 9 meas/sec	Higher probability of intercept
Warmup time	5 minutes	30 min at temperature	Fast warm-up
User calibration	Continuous background autoalign	Every 5°C change in temperature	Always calibrated
Internal preamp	Calibrated	Not calibrated in normal mode	Included in HD3, 5 and J, but not in HD2 and 4
Attenuator step size	5 dB	10 dB	Easier to optimize
C/N atten sw point	47 dBmV	37 dBmV	More dynamic range, w/o bandpass filter
CSO/CTB atten sw point	37 dBmV for 80 dB dynamic range	27 dBmV for 70 dB dynamic range	More dynamic range, w/o bandpass filter
Channel plans	Can customize	Fixed per version	User configurable
Help text	Extensive help text	Only 'see more info'	Manual not required
RAM storage	PC compatible floppy disk	RAM card	Easier to get displays into the PC
Video format	NTSC (PAL coming soon)	NTSC, PAL and Secam	Field upgradeable
Channel tuning plans	Standard + user prog channel plans	Fixed per version	Makes any channel plan possible
Display	Monochrome LCD, VGA output	Monochrome CRT, composite output	PC compatible

Comparison of measurements of the 8591C versus the E4411B HDx and E44xxB E series¹

Measurements	8591C	E4411B HD 2,3,4,5 and J	E44xxB ESA E 2 series
Carrier level and freq	Standard	Standard (frequencies not FCC accurate)	Opt 1D5 precision frequency reference for FCC accuracy
Digital channel power	Standard	Standard	Standard
Carrier to noise	Internal preamp std, add opt 107 for gated C/N	Internal preamp std on HD3,5,J	Opt 1DS Internal Preamp
CSO/CTB	Standard, add Opt 107 for gated CSO	Standard	Standard
Hum	Standard	Standard	Standard
DOM	Full field and TV line	Full Field	Full field and TV line with Opts AYY and B7B
TV picture on screen	Opt 107 or 180	Not available	Opt B7B
FM demod	Standard	Not available	Opt BAA and AYY
Crossmod	Standard	Not available	Not available
In chnl freq response	Std, add Opt 107 for gated measurement	Not available	Not available
Diff gain/diff phase	Opt 107	Not available	Not available
Chroma-luma delay	Opt 107	Not available	Not available

1. The E44xxB E-Series includes E4401B, E4402B, E4404B, E4405B, and E4407B.

E4411B L-Series³ HDx option bundle contents

Special option bundles will be automatically selected and charged accordingly when any HDx option is ordered, unless they are unselected.

E4411B HD x special option bundles	HD2	HD3	HD4	HD5	HDJ
E1799 H01 CATV dlp	Yes	Yes	Yes	Yes	Yes (H0J)
Opt 1DP - 75 Ohm input	Yes	Yes	Yes	Yes	Yes
Opt 1DS - Internal preamp	No	Yes	No	Yes	Yes
Opt 1AX - RS-232 and parallel ports	Yes	Yes	No	No	No
Opt A4H - GPIB and parallel ports	No	No	Yes	Yes	Yes
Opt A4J - IF, sweep and video ports	No	No	Yes	Yes	Yes

Additional ESA options that are useful for cable TV installation and maintenance

Other useful options for CATV	E4411B L-series³	E44xxB E-series	Function
1DP – 75 Ohm input Z	Yes (in HDx bundle)	Yes	For 1.5 GHz 75 Ohm analyzer
1D7 – 75/50 external matching pad	Yes	Yes	Adapt 50 Ohm analyzers
E1779A - Ni-Cad snap on battery pack	Yes	Yes	True portability
E1779B, Ni-MH snap on battery pack for European Union	Yes	Yes	True portability
A5D - 12 Vdc power cord	Yes	Yes	Cigarette lighter plug-in
B70 - Benchlink software	Yes	Yes	Capture screens
AYU - Yellow soft carry case	Yes	Yes	Shoulder carry
AYT - Gray soft carry case	Yes	Yes	Shoulder carry
UK9 - Front panel cover	Yes	Yes	Hard cover protection
AXT- Hard transit case	Yes	Yes	Protection during shipping
1D5 - High stability freq ref	No	Yes	Measure frequencies FCC accurate
1DR - Narrow resolution bws	No	Yes	Measure 60 Hz sidebands
1DS - 1.5/3 GHz internal preamp	HD3, 5 and J only	Yes	Extends sensitivity and C/N measure range
BAA - FM demod	No	Yes	Measure FM deviation
AYX - Fast 0-span sweeps	No	Yes	Measure bursted TDMA carriers
B7B - TV trigger and picture	No	Yes	DOM on a TV line and on screen picture
B75 – Performance bundle	No	Yes	1D5, 1DR and 1DS convenience bundle
B72 – Increase memory to 10 Meg	No	Yes	More internal “C” drive storage of screens

Only Agilent offers a full range of spectrum analyzers to meet your measurement needs.

89441A	Accurate spectrum and digital modulation analysis			Price / performance
8563E	Accurate spectrum analysis			
8591C	CATV measurements	Complete proof tool		
ESA	Fast basic measurement	Ingress tester	Low cost	
	R&D and manufacturing	Headend	Field	

2. E44xxB ESA E series adds color LCD display plus ability to add additional options enabling measurements useful for bench converter setup of visual to aural delta, depth of modulation on a TV line and FM Deviation.

3. The E4411B L-Series includes E4403B and E4408B.

Agilent product literature

CaLan 8591C Cable TV Analyzer Product Overview,
literature number 5964-0244E

*8590 C/E/L/Q and EM Series Spectrum Analyzers and Accessories
Configuration Guide*, literature number 5963-6858E

*8590 E-Series Portable Spectrum Analyzers Brochure- Spectrum
Analysis by Agilent Tailored Solutions to Meet Your Needs*, literature
number 5963-6908E

ESA-E Series Spectrum Analyzer Brochure, literature number 5968-3278E

ESA-E Series Spectrum Analyzers Technical Specifications,
literature number 5968-3386E

Select the Right Agilent Portable Spectrum Analyzer for Your Needs,
literature number 5968-3413E

ESA/EMC Spectrum Analyzer Configuration Guide,
literature number 5968-3412E

ESA-L Series Spectrum Analyzer Product Overview,
literature number 5965-6309E

E1779A/B Rechargeable Battery Pack Product Overview,
literature number 5966-1851E

E4444A BenchLink Spectrum Analyzer Product Overview,
literature number 5966-0676E

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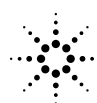
Other European Countries:

www.agilent.com/find/contactus

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