

SEFRAM 7859B

The ideal companion for Digital Terrestrial TV (DVB-T, DVB-T2/T2 Lite) Digital Cable (DVB-C/C2) and Digital Satellite (DVB-S/S2 and DVB-S2X (option)) with optical input Display HD TV programs

■ Touch screen, compact, robust and easy to use

With a panoramic 7 inches touch screen, you have full benefit of the touch screen technology: intuitive access to functions, menus and measurements. The new rugged housing with protective bumpers is designed for extensive field use and protection of sensitive parts of the instrument

■ All digital measurements in DVB-T, DVB-T2/T2 Lite, DVB-C/C2, DVB-S, DVB-S2, and DVB-S2X (option)

The 7859B provides all measurements in DVB-T, DVB-T2/T2 Lite, DVB-C/C2, DVB-S, DVB-S2, and DVB-S2X (option). For each digital standard, we provide all measurements, including error rate, the constellation diagram and echoes analysis.

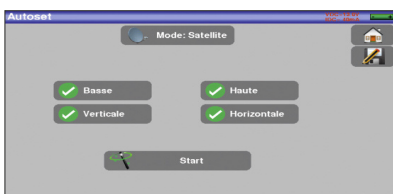
■ All necessary functions and tools to save time

The 7859B has a very simple and intuitive man-machine interface. Special functions have been added to save time and money.

■ Checking the alignment of antennas

The 7859B includes a checksat mode for satellite and a special tool to align terrestrial antennas. User will have a graphical information combined with a beeper.

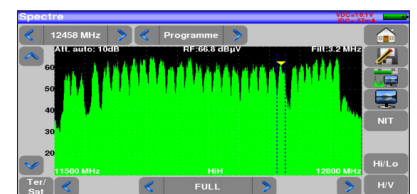
* only for free-to-air.



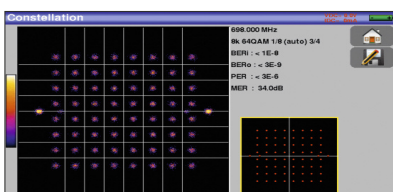
A performing autotest



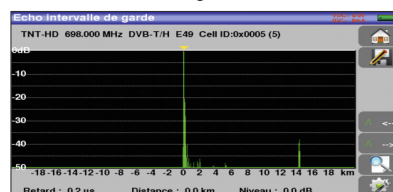
All measurements displayed on a single screen



Fast spectrum analysis



Constellation diagram



Echoes display with guard interval

freq.	std	RF	C/N	BER	BERo	PER	MER
E44	DVB-T/H	55.1	35.2	<5E-8	<1E-8	<1E-5	34.4
E58	DVB-T/H	59.0	38.7	<5E-8	<1E-8	<1E-5	33.9
E40	DVB-T/H	56.0	36.1	1.3E-6	<1E-8	<1E-5	33.8
E48	DVB-T/H	55.5	35.6	2.3E-7	<1E-8	<1E-5	33.8
E46	DVB-T/H	55.0	35.1	1.0E-6	<1E-8	<1E-5	33.4
10729 VL	DVB-S2	71.0	19.3	3.2E-3	<5E-8	<1E-5	14.4
10743 HL	DVB-S	70.6	30.4	5.1E-6	<1E-8	<2E-5	14.4

Measurement map



■ Optical input for terrestrial and satellite, including optical power measurement

The 7859B includes one USB interface for updating and getting the benefit of free firmware updates. The interface can be used to transfer measurements data, screens shots to a USB memory stick.

■ USB Interface

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Terrestrial and satellite TV meter

Specifications	Terrestrial band				Satellite band			
Frequency Range	5-1005 MHz				200 - 2400 MHz			
Resolution	measurement: 50kHz, display: 1kHz				measurement: 1 MHz, display: 1 MHz			
Type LNB	-				C, Ku, Ku WIDEBAND (OL adjustable)			
Level measurements								
Dynamic range	20 - 120 dB μ V				20 - 120 dB μ V			
Units	dB μ V, dBmV, dBm				dB μ V, dBmV, dBm			
Accuracy	± 2 dB ± 0.05 dB/ $^{\circ}$ C				± 2 dB ± 0.05 dB/ $^{\circ}$ C			
Resolution	0,1 dB				0,1 dB			
Measurement filters	32 KHz				160 KHz			
Standards	DVB-T / T2 / T2Lite, DVB-C / C2 BG, DK, I, L, MN, DAB, FM, carrier				DVB-S / S2 / S2X, DSS PAL, SECAM, NTSC, carrier			
Digital measurement								
	DVB-T	DVB-T2 / T2Lite	DVB-C (J83.A)	DVB-C2	DVB-S / DSS	DVB-S2	DVB-S2X	
Error rate	BERi (before Viterbi), BERo (before Reed-Solomon) PER (lost packets) MER LKM (Link Margin)	BERi (before LDPC) BERo (before BCH) PER (lost packets) MER LKM (Link Margin)	BER (before Reed Solomon BERo) UNC (lost packets PER) Noise margin	LDPC (BERi) BCH (BERo) FER (frame error PER) Noise margin	BERi (avant Viterbi), BERo (before Reed-Solomon) PER (lost packets) MER LKM (Link Margin)	BERi (before LDPC) BERo (before BCH) PER (lost packets) MER LKM (Link Margin)	BERi (before LDPC) BERo (before BCH) PER (lost packets) MER LKM (Link Margin)	
Modulation Error Rate (MER)	15 - 35 dB	15 - 35 dB	20 - 40 dB	25 - 35 dB	0 - 20 dB	0 - 20 dB	0 - 20 dB	
Sensitivity	35 dB μ V	35 dB μ V	< 55 dB μ V	< 55dB μ V	47 dB μ V	47 dB μ V	47 dB μ V	
Bandwidth	6, 7 or 8 MHz	1,7, 5, 6, 7 or 8 MHz	-	6MHz, 8 MHz	-	-	-	
Mode	-	-	-	PLP and data slice, simple or multiple	-	-	-	
Carrier	2k / 8k	1k, 2k, 4k, 8k, 16k, 32k + band extension	16 / 32 / 64 / 128 / 256 QAM	-	-	-	-	
Constellations	QPSK, 16 - 64 QAM	QPSK, 16 - 256 QAM	-	16 / 64 / 256 / 1024 / 4096 QAM	QPSK	QPSK, 8PSK, 16/32APSK	QPSK, 8PSK, 8/16/32APSK-L	
Rate	-	-	-	-	1 - 50 Ms/s	1 - 50 Ms/s	1 - 50 Ms/s	
Roll-off	-	-	-	-	0,20, 0,25, 0,35	0,20, 0,25, 0,35	0,05 - 0,35	
Guard interval	1/4, 1/8, 1/16, 1/32	1/4, 1/8, 1/16, 1/32, 19/128, 19/256	-	auto	-	-	-	
Viterbi	auto	auto	-	-	auto	auto	auto	
Spectrum inversion	auto	auto	auto	auto	auto	auto	auto	
HP/LP - PLP- Data Slice	HP/LP	PLP	-	PLP + Data Slice	-	-	-	
Multistream	-	-	-	-	-	stream selction 0 - 255 (ISI) PLS descrambling (Gold code)	stream selction 0 - 255 (ISI) PLS descrambling (Gold code)	
standards	EN 300-744	ETS 302-755	ETS 300-429	ETS 302-769	ETS 300-421	ETS 302 307 part 1	ETS 302 307 part 2	
Spectrum analysis								
Span	1MHz to full span in 1, 2, 5 sequences							
Sweep rate	100 ms mini, 1000 ms max							
Filters	1.6kHz, 3.2kHz, 8kHz, 16kHz, 32kHz, 80kHz, 160kHz, 320kHz, 800kHz, 1.6MHz, 3.2MHz							
Attenuator	automatic (0 to 55 dB, with 5 dB steps)							
Display	60 dB (10 dB/div)							
Antenna Check mode								
Settings	fast antenna pointing 10 places check 4 channels per place, can be modified by user	-	-	-	fast antenna pointing, single or double LNB 30 satellites, with European database loaded check 4 channels per place, can be modified by user	-	-	
Remote supply and control								
Voltage	5 / 13 / 18 / 24V, 500 mA max				13 / 18V, 500 mA max			
DiSEqC	-	-	-	-	DiSEqC 2.1, dish rotor control, committed & uncommitted switches			
DCSS	-	-	-	-	protocol extension DiSEqC SATCR, EN 50494, 8 slots max SCD2, EN 50607, 32 slots max			
TV picture and sounds								
Sounds	MPEG-1, MPEG-2, AAC, HE AAC, Dolby® Digital, Dolby® Digital Plus							
Table of services	SDT, LCN							
Video	MPEG-2 SD and MPEG4 HD (HD H264)							
Optic input								
Functions	Optic power measurement, reference measurement, every measurement after RF conversion							
Accuracy	$\pm 0,5$ dB							
Wavelength	1310, 1490, 1550 nm							
Connector	FC-APC							
Dynamic	-49,9 dBm to +10 dBm							
RF input								
Input	75 Ohms, (F-F and BNC/F adaptator supplied)							
Max permissive voltage	50V DC, 33Veff / 50Hz max							
Analog video input								
Connector	jack 3,5 mm, 4 contacts							
Voltage	video 1Vpp max / audio 10 kOhms							
Standards	PAL, SECAM, NTSC							
Aux input/output								
Interface	USB A, Ethernet 10/100 baseT							
Remote supply	15V / 1A with Jack 5.5mm							
General specifications								
Display	LCD TFT color, 7 inches, 16/9, backlight (500 cd/m2), resolution 800 x 480, capacitive touch screen							
Power supply	main adapter 110/230 VAC, 15V DC / 1A, Jack 5,5 mm diameter							
Battery (non removable)	Lithium-Ion 93Wh							
Autonomy	terrestrial : 6H / satellite : 4H30 (according to use)							
Charging time	9H for 80% / 10H for 100%							
Operating temperature	-5 $^{\circ}$ C to 40 $^{\circ}$ C							
Storage temperature	-10 $^{\circ}$ C to 60 $^{\circ}$ C							
EMC and safety	NF-EN 61326-1 / NF-EN 61326-2 / NF-EN 61010-1							
Dimensions	250 x 165 x 65 mm							
Weight	1,35kg							
warranty	1 year							

Supplied with : main charging adapter (90-245V with European plug), F-F adapter, transportation pouch. The instruction manual is available directly on our website www.sefram.com



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Terrestrial and satellite TV meter

■ Accessories



Sun protector+rain protector+belt clip - P/N: 978489000



Rain protector - P/N: 978489500



Carrying bag (supplied in standard) - P/N: 978481000



Carrying case - P/N: 978483000



Charging adapter (supplied in standard) - P/N: 978061000



Car cigar lighter adapter - P/N: 978361000



Optic fiber patchcord FC-PC / PC-APC (supplied in standard)
P/N: 978754700



Optic fiber patchcord FC-APC / SC-APC (supplied in standard)
P/N: 978754710

For assistance and ordering



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FT7859B A 00 - Specifications can be updated without notice



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