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# SEFRAM 7859

**The ideal companion for Digital Terrestrial TV (DVB-T, DVB-T2/T2 Lite) Digital Cable (DVB-C/C2) and Digital Satellite (DVB-S/S2)**  
**Optical input: optical power measurement and optical --> RF converter**

**Touch screen, compact, robust and easy to use**

With its 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 and DVB-S2**

The 7859 provides all measurements in DVB-T, DVB-T2/T2 Lite, DVB-C (J83.A)/C2, DVB-S and DVB-S2. For each digital standard, we provide all measurements, including the constellation diagram and echoes analysis.

**Panoramic LCD with display of MPEG-2 and MPEG-4\* TV programs**

The 7859 offers a bright and panoramic high quality LCD display for measurements results and free-to-air MPEG-2 / MPEG-4 programs display.

**All necessary functions and tools to save time**

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

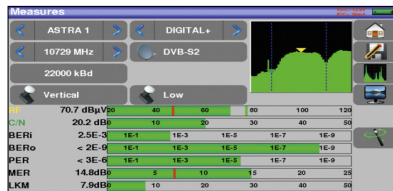
**Checking the alignment of antennas**

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

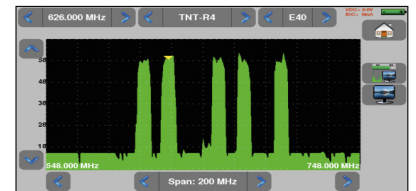
\* only for free-to-air



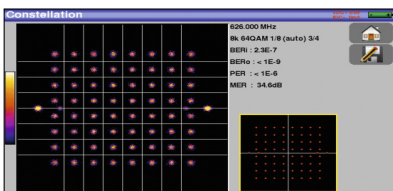
A very powerfull Autoseat



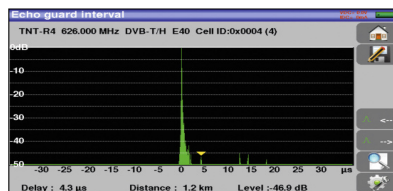
All measurements displayed on a single screen



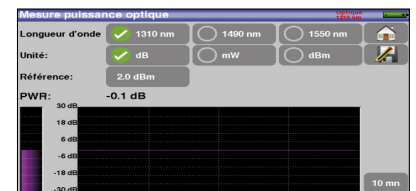
Spectrum analysis



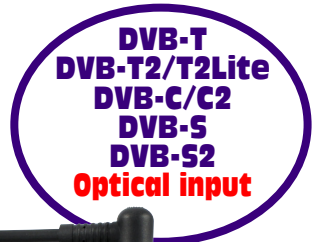
Constellation diagram



Echoes display with guard interval



Optical power measurement



**NEW**



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

The 7859 includes an optical input which can be used for measuring signal from fiber (satellite or terrestrial). The optical to RF converter allows all measurements and functions on the optical signal, just like the terrestrial or satellite regular signals.



Specifications	Terrestrial band	Satellite band
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Frequency	5-900 MHz		900-2200 MHz		
Range	Measure: 50kHz, display: 1kHz		Measure and display: 1 MHz		
Resolution					
<b>Level measurements</b>					
Dynamic range	20-120 dBμV (30-120dBμV for 5 - 45MHz)		30-110 dBμV		
Measurements	level, RF power, C/N		level, RF power, C/N		
Noise level	10dBμV (typical)		20dBμV (typical)		
Units	dBμV, dBmV, dBm, V		dBμV, dBmV, dBm, V		
Accuracy	±2dB ± 0.05dB/°C		±2dB ± 0.05dB/°C		
Resolution	0,1dB		0,1dB		
Measurement filters	100kHz, 300kHz, 1MHz		MHz, 3MHz, 10MHz		
Standards	B, G, D, K, I, L, M, N, FM, DVB-T/H/T2/T2 Lite, DVB-C/C2		PAL, SECAM, NTSC, DVB-S, DVB-S2, DSS		
<b>Digital measurements</b>	<b>DVB-T/H</b>	<b>DVB-T2/T2 Lite</b>	<b>DVB-C (J83.A) / C2*</b>	<b>DVB-S / DSS</b>	<b>DVB-S / DSS</b>
Error rate	BERi (before Viterbi), BERO (after Viterbi), UNC/PER (lost packets), NM (Noise Margin)	Before LDPC BCH (after LDPC) FER (lost packets, after BCH)	BER, UNC, NM, LDPC*, BCH*, FER*	CBER, BERi, BERO, UNC, PER, Link margin	LDPC (BERi), BCH (BERo), PER, Link Margin
Modulation Error Rate (MER)	5-35dB	5-35dB	DVB-C: 20-40dB, DVB-C2: 5-35dB	0-20dB	0-20dB
Bandwidth	6, 7 or 8 MHz	1.7, 5, 6, 7 or 8 MHz	6MHz, 8MHz	-	-
Symbol rate	-	-	DVB-C: 1 at 7,224Ms/s	1-45Ms/s	1-45Ms/s
Viterbi	1/2, 2/3, 3/4, 5/6, 7/8 (auto)	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 1/3, 2/5, auto	2/3, 3/4, 4/5, 5/6, 8/9, 9/10	1/2, 2/3, 3/4, 5/6, 6/7, 7/8, auto	2/5, 1/2, 3/5, 2/3, 3/4, 5/6, 8/9, 9/10, auto
Guard interval	auto, manual	auto	auto	auto	auto
Inverted spectrum	auto	auto	auto	auto	auto
Carriers / FFT	2k / 8k (auto)	1k, 2k, 4k, 8k, 16k, 32k + band extension	-	-	-
HP/LP - PLP - Data Slice	HP/LP	PLP	PLP + Slice data*	-	-
Constellation	QPSK, 16QAM, 64QAM, auto	QPSK, 16QAM, 64QAM, 256QAM, auto	16QAM, 32QAM, 64QAM, 256QAM, 1024QAM*, 4096QAM*, auto	QPSK	QPSK, 8PSK, 16APSK, 32APSK
Echoes et pre-echoes	Dynamic: 50dB/ -75kms +75kms (8k)	Dynamic: 50dB/ -75kms +75kms (8k)	Dynamic: 50dB/ -35kms +35kms (4k)	-	-
Standards	EN 300-744	ETS 302-755	-	ETS 300-421	ETS 302 307

<b>Spectrum analysis</b>		
Sweep rate	350 ms typical, 400 points	
Filters	100kHz, 300kHz, 1MHz	
Attenuator	automatic (0 to 55 dB, 5 dB steps)	
Dynamic (display)	60 dB (10 dB/div)	60 dB (10 dB/div)
Span	5MHz at full span with 1-2-5 sequence	

<b>Pointing mode</b>		
	fast search of transmitter 10 transmitters max, 4 multiplex per transmitter	fast search of satellite 30 satellites max, 4 transponders per satellite, with NIT

<b>Measurement map</b>		
Capacity	scrolling of 50 programs	
Display	text	

<b>Constellation diagram</b>		
Display	display of constellation diagram	

<b>Memory</b>		
Data	measures, spectrum, constellation diagrams, echoes	
Capacity	1000 files max.	

<b>Input / output</b>		
Interface	USB A, Ethernet 10/100 baseT	
Power supply input	15V / 1A with 5.5mm input jack (male)	

<b>Remote supply</b>		
Voltage	5/13/18/24V, 500 mA max (300mA max. for 24V)	13V/18V, 500 mA max

DiSEqC	-	DiSEqC 1.2: dishes, committed and uncommitted switches
22 kHz (mini DiSEqC)	-	22 kHz / 0.6V cc
SatCR and DCSS	-	DiSEqC protocol extension, 8 slots maximum

<b>RF input</b>		
Connector	75 Ohms (F to BNC adaptor supplied)	
Maximum input voltage (DC or AC peak)	70 V DC, 50 Vrms./50Hz max	

<b>Audio and video decoding</b>		
Audio	MPEG-1, MPEG-2, AAC, HE AAC, Dolby® Digital, Dolby® Digital Plus	
Service table	SDT, LCN	
Video	MPEG-2 SD and MPEG4 HD (high definition H264)	

General specifications		
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Display	7 inches (16:9), LCD TFT, backlight (500 cd/m2), resolution: 800 x 480
Power supply	main adaptor 100-240V, output: 15V DC / 1A
Battery (factory installed)	Lithium Ion (25Wh)
Autonomy	2 hours (typical)
Charging time	80% charging in 1H15
Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 60°C
EMC and safety	NF-EN 61362-1 / NF-EN 61326-3 / NF-EN 61010-1
Dimensions	250 x 165 x 65 mm
Weight	1,35kg
Warranty	1 year

<b>Optical input</b>	
<b>Optical power measurement</b>	
Wavelength	1310nm, 1490nm, 1550nm
Dynamic	-49,9dBm à +10dBm
Accuracy	±0,5dB
Connector	FC/APC
<b>Optical to RF converter</b>	
Converter dynamic	-12dBm to -3dBm
RF band (cable)	50 to 900MHz
RF band (optical LNB)	950MHz to 5450MHz
RF band (output)	50MHz to 2150MHz
RF connector	F

**Supplied with:** main wall plug adaptor, user's manual (CD-ROM), F/BNC adaptor, carrying belt, carrying pouch. F/F right angle cable, FC/FC optical cable, FC/SC optical cable, SC/SC to APC and FC/FC connectors.

<b>Optional accessories:</b> Sun protector + rain protector + belt hanger kit: 978489000 Rain protector: 978489500	Car cigar lighter adaptor: 978361000 Backpack for TV meter and accessories: 978751000	
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FT7859 A00 - Specifications can be updated without notice



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## For assistance and ordering