Data sheet

OFFEL
Sistemi di ricezione TV e SAT

Made in Italy

M7869

Art. 55-119

Professional measuring instrument HEVC Ready
ideal for DVB-T/T2/T2 LITE, DVB-C/C2, DVB-S/S2

DTT
SAT
CONN. F
DVB T2 HEVC H.265
Wide band
SCR dCSS
DiSEqC
CE

EASY TO USE AND INTUITIVE. Panoramic 7 inches touch screen allows a simple and intuitive access to menus and measurements, also thanks to special functions that have been added to save time and money.

COMPACT, LIGHTWEIGHT AND ROBUST. Its small size and weight make M7869 field meter very manageable in every situation. The rugged housing with protective bumpers is designed for extensive field use and protection of sensitive parts of the instrument. Interchangeable F connector.

LONG-LASTING OPERATING TIME. Battery autonomy is 6 hours (typ.) for TV signals measurements and 4 hours for SAT.

DISPLAY SD* AND HD* TV PROGRAMS. The TV meter allows to display free to air MPEG-2, H.264/MPEG-4 and H.265/HEVC with Dolby® Digital Plus audio TV programs. . *only free to air

ALL TV AND SAT DIGITAL MEASUREMENTS. The M7869 provides all measurements in DVB-T/T2/T2 LITE, DVB-S/S2 and DVB-C/C2: before and after Viterbi BER, MER, PER (lost packets), NM (Noise Margin), LKM (Link Margin). Optional: version with DVB-S2X (multistream) measurements.

REMOTE SUPPLY FROM 5V TO 24V IS INCLUDED. When the remote supply is needed for external amplifiers and LNB, the M7869 will offer the following voltages: 5V, 13V, 18V and 24V. It also provides DiSEqC 1.2, SatCR and DCSS compatibility.

LCD COLOUR DISPLAY. The M7869 offers a bright and panoramic backlight high quality LCD 7 inches (16:9) display for measurements results and free-to-air MPEG-2 / MPEG-4 / HEVC programs.

DISPLAY 3 IN 1. Measurements, TV images and mini spectrum displayed on a single screen.

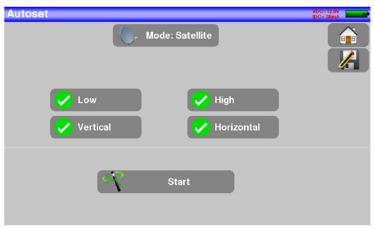
ALL NECESSARY FUNCTIONS AVAILABLE. The TV meter includes a spectrum analyser, displays the constellation diagram (DVB-S, DVB-S2 and DVB-T/T2) and the echoes (guard interval for DVB-T/T2).

FAST SEARCH. The M7869 includes a checksat mode for satellite and a special tool to align terrestrial antennas. User will have a graphical information combined with a beeper.

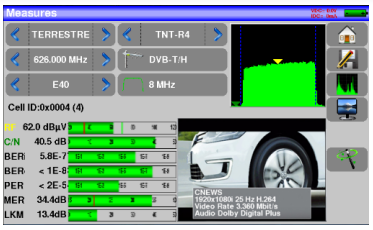
FREE SOFTWARE UPDATES. The 7869 includes an USB interface for updating and getting the benefit of free firmware updates.

TRANSFER MEASUREMENTS DATA VIA USB. The interface can be used to transfer measurements data (also in excel ®) and screen shots to a USB memory stick to create reports when your measurements campains are done.

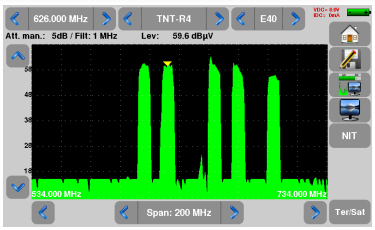
Main characteristic screen shots



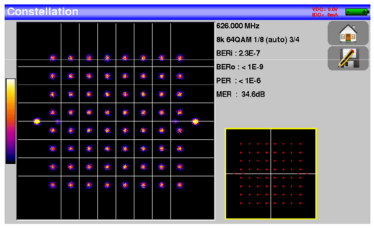
A very powerfull autoset: automatic downloads of TV and SAT frequencies maps.



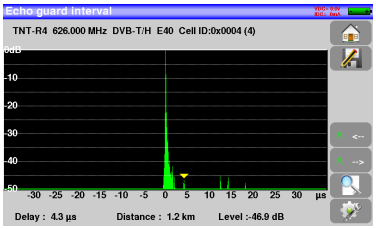
Display 3 in 1: all measurements displayed on a single screen.



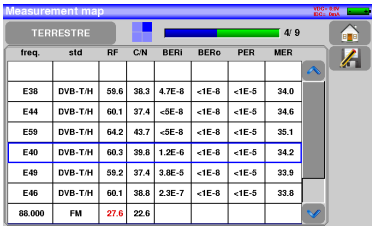
Fast spectrum analysis.



Constellation diagram.



Echoes display with guard interval.



Measurement map.

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Specifications	Terrestrial band				Terrestrial band		
Frequency							
Range	5÷1005 MHz				200÷2400 MHz		
Resolution	measurement: 50 KHz, display: 1 KHz				measurement and display: 1 MHz		
Type LNB	-				C, Ku, Ku wideband (LO adjustable)		
Level measurements							
Dynamic range	20÷120 dBµV				20÷120 dBµV		
Units	dBµV, dBmV, dBm				dBµV, dBmV, dBm		
Accuracy	±2dB ± 0,05 dB/°C				±2dB ± 0,05 dB/°C		
Resolution	0,1 dB				0,1 dB		
Measurement filters	32 KHz				160 KHz		
Standards	DVB-T/T2/T2 LITE, DVB-C/C2, B/G, D/K, I, L, M/N, DAB, FM, carrier				DVB-S/S2/S2X*, DSS, PAL, SECAM, NTSC, carrier		
Digital measurements	DVB-T	DVB-T2/T2 LITE	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 (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)	BERi (before LDPC) BERo (before BCH) PER (lost packets) MER LKM (Link Margin)
MER	15÷35 dB	15÷35 dB	20÷40 dB	25÷35 dB	0÷20 dB	0÷20 dB	0÷20 dB
Sensitivity	35 dBµV	35 dBµV	< 55 dBµV	< 55 dBµV	47 dBµV	47 dBµV	47 dBµV
Bandwidth	6, 7 o 8 MHz	1.7, 5, 6, 7 o 8 MHz	-	6 o 8 MHz	-	-	-
Mode	-	-	-	PLP e data slice, simple/multiple	-	-	-
Carriers	2K / 8K	1K, 2K, 4K, 8K, 16K, 32K + band estention	16 / 32 / 64 / 128 / 256 QAM	-	-	-	-
Constellations	QPSK, 16 QAM, 64 QAM	QPSK, 16QAM, 64QAM, 256QAM	-	16 / 64 / 256 / 1024 / 4096 QAM	QPSK	QPSK, 8PSK, 16APSK, 32APSK	QPSK, 8PSK, 8 / 16 / 32 APSK-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 selection 0-255 (ISI) PLS descrambling (Gold code)	
Standards	EN 300 744	EN 302 755	EN 300 429	EN 302 769	EN 300 421	EN 302 307 parte 1	EN 302 307 parte 2
Spectrum Analysis							
Sweep Rate	100 ms min, 1000 ms max						
Filters	1.6 kHz, 3.2 kHz, 8 kHz, 16 kHz, 32 kHz, 80 kHz, 160 kHz, 320 kHz, 800 kHz, 1.6 MHz, 3.2 MHz						
Attenuator	automatic (0 to 55 dB, with 5 dB steps)						
Dynamic (display)	60 dB (10 dB/div)						
Span	1 MHz to full span in 1-2-5 sequences						
Pointing Mode							
Settings	Fast antenna pointing - 10 places max check 4 channels per place, can be modified by user				Fast antenna pointing, single or double LNB - 30 satellites max check 4 transponders per satellite, can be modified by user		
Measurement Map							
Capacity	scrolling of 50 programs						
Display	text						
Constellation Diagram							
Display	graphical display						
Memory							
Data	Frequency maps, measures, spectrum, constellation diagrams, echoes						
Capacity	1000 files max						
Remote Supply and Control							
Voltage	5 / 13 / 18 / 24 V, 500 mA max		-		13 / 18 V, 500 mA max		
DiSEqC	-				DiSEqC 1.2: dish rotor control, committed/uncommitted switches		
SatCR e DCSS	-				protocol extension DiSEqC SATCR, EN 50494, max 8 slot SCD2, EN 50607, max 32 slot		
Audio and video decoding							
Audio	MPEG-1, MPEG-2, AAC, HE-AAC, Dolby® Digital, Dolby® Digital Plus						
Service table	SDT, LCN						
Video	MPEG-2 SD and MPEG-4 HD (H.264) and HEVC, 4K HDR (H.265)						
RF Input							
Connector	75 Ω (F-F adaptator supplied)						
Max permissive voltage	50 Vdc, 33 Veff / 50 Hz max						
Analog video input							
Connector	jack 3,5 mm, 4 contacts						
Voltage	video 1Vpp max / audio 10 kΩ						
Standards	PAL, SECAM, NTSC						
Aux input/output							
Interface	USB A, Ethernet 10/100 baseT						
Remote supply	15 Vdc / 5 A with jack 5,5 mm diameter						
General specifications							
Display	7 inches (16:9) colour LCD TFT, backlight (500 cd/m²), resolution: 800x480, capacitive touch screen						
Power supply	Main adapter 110÷230Vac, output: 15 Vdc / 5 A, jack 5,5 mm diameter						
Battery (non removable)	Lithium Ion (93 W)						
Autonomy	Terrestrial: 6 hours / Satellite: 4 hours (according to use)						
Charging time	9 hours for 80% , 10 hours for 100%						
Temperature	**Operating temp.:** -5°C to 40°C; **Storage temp.:** -10°C to 60°C						
EMC and safety	NF-EN 61326-1, NF-EN61326-2, NF-EN 61010-1						
Dimensions and Weight	250x165x65 mm; 1,5 Kg						
Warranty	1 year						
Supplied with	Main charging adapter (90-245 V with European plug); F-F adapter; transportation pouch. The instruction manual is available on our website www.offel.it						

* optional

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