



M7849

Art. 55-109

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



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 M7849 field meter very manageable in every situation. The new 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 and MPEG-4 with Dolby® Digital Plus audio TV programs. *only free to air

ALL TV AND SAT DIGITAL MEASUREMENTS. The M7849 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), Link Margin.

REMOTE SUPPLY FROM 5V TO 24V IS INCLUDED. When the remote supply is needed for external amplifiers and LNB, the M7849 will offer the following voltages: 5V, 13V, 18V and 24V. The TV meter also provides DiSEqC 1.2, SatCR and DCSS compatibility.

LCD COLOUR DISPLAY. The M7849 offers a bright and panoramic backlight high quality LCD display (16:9) for measurements results and free-to-air MPEG-2 / MPEG-4 programs.

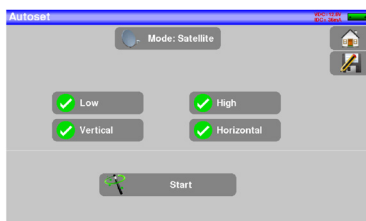
ALL NECESSARY FUNCTIONS AVAILABLE. The TV meter includes a spectrum analyser, displays the constellation diagram (DVB-S, DVB-S2 and DVB-T/T2) and the echoes (guard interval for DVB-T/T2).

FAST SEARCH. The M7849 includes a checksat mode for satellite and a special tool to align terrestrial antennas. User will have a graphical information combined with a beeper.

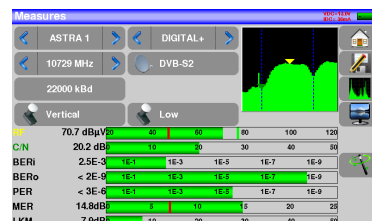
FREE SOFTWARE UPDATES. The 7849 includes a USB interface for updating and getting the benefit of free firmware updates.

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 campaigns are done.

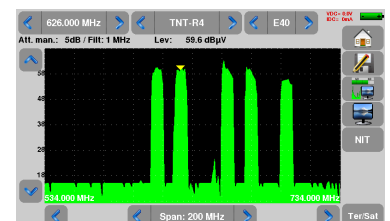
Main characteristic screen shots



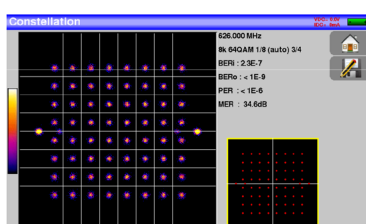
A very powerful autoset: automatic downloads of TV and SAT frequencies maps.



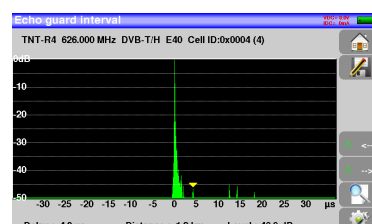
All measurements displayed on a single screen.



Fast spectrum analysis.



Constellation diagram.



Echoes display with guard interval.

freq.	std	RF	C/N	BERi	BERo	PER	MER
E38	DVB-T/H	59.6	38.3	4.7E-8	<1E-8	<1E-5	34.0
E44	DVB-T/H	60.1	37.4	<5E-8	<1E-8	<1E-5	34.6
E59	DVB-T/H	64.2	43.7	<5E-8	<1E-8	<1E-5	35.1
E40	DVB-T/H	60.3	39.8	1.2E-6	<1E-8	<1E-5	34.2
E49	DVB-T/H	59.2	37.4	3.8E-5	<1E-8	<1E-5	33.9
E46	DVB-T/H	60.1	38.8	2.3E-7	<1E-8	<1E-5	33.8
88.000	FM	27.6	22.6				

Measurement map.



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 dB μ V				20+120 dB μ V			
Units	dB μ V, dBmV, dBm				dB μ V, dBmV, dBm			
Accuracy	± 2 dB $\pm 0,05$ dB/ $^{\circ}$ C				± 2 dB $\pm 0,05$ dB/ $^{\circ}$ 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 (before BCH) 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)	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 dB μ V	35 dB μ V	< 55 dB μ V	< 55 dB μ V	47 dB μ V	47 dB μ V	47 dB μ V	
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, 16 / 32 APSK-L	
Rate	-	-	-	-	1 \div 50 Ms/s	1 \div 50 Ms/s	1 \div 50 Ms/s	
Roll-off	-	-	-	-	0,20, 0,25, 0,35	0,20, 0,25, 0,35	0,05 \div 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				-			
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)							
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 k Ω							
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/m 2), 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 $^{\circ}$ C to 40 $^{\circ}$ C; Storage temp.: -10 $^{\circ}$ C to 60 $^{\circ}$ 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							

