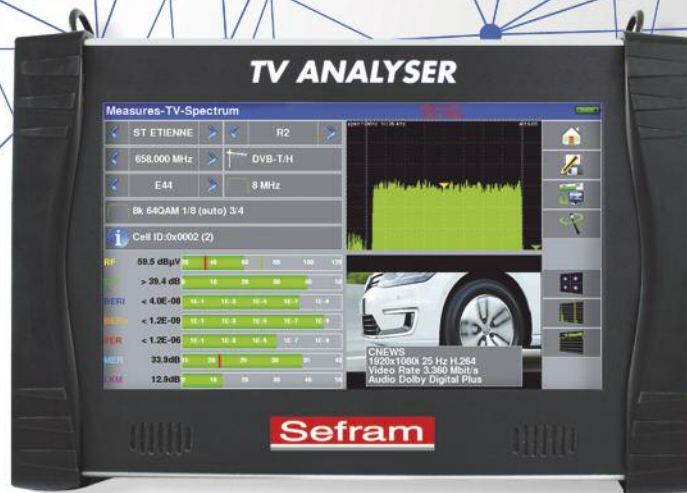


# TV METERS

## Catalogue

The most innovative TV Meters  
for digital television



Designed and manufactured in our plant of Saint-Etienne (France)

7880: A new family of TV Meters to meet the requirements of the XXI century !

**NEW**

**HEVC H.265 decoding  
Weights less than 3Kg**

**2** YEAR WARRANTY

*10 inch panoramic touch screen*



**Sefram**

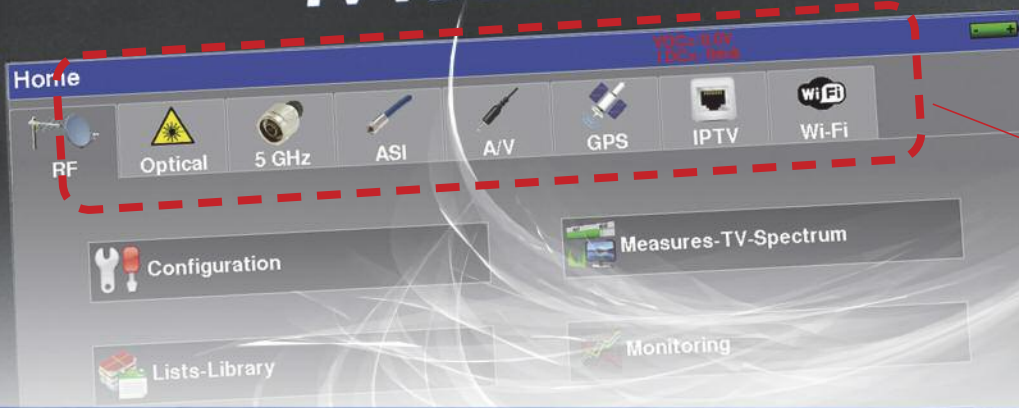
*Rugged housing with protective bumpers*

- HEVC H.265
- DVB-C/C2 J83B
- DVB-T/T2 Lite
- Analogue TV
- DVB-S/S2, multistream
- Optical fiber
- IPTV
- DAB DAB+
- GPS
- WiFi
- FM-RDS
- ASI
- Network Delay analysis
- Shoulder measurement
- T2MI via IP

IPTV  
HD TV  
Multistream  
Optical fiber  
Digital radio  
GPS  
Shoulder

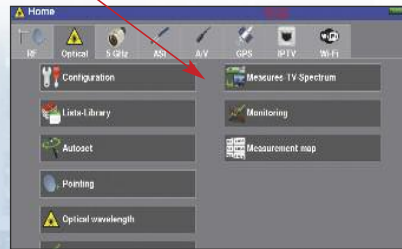
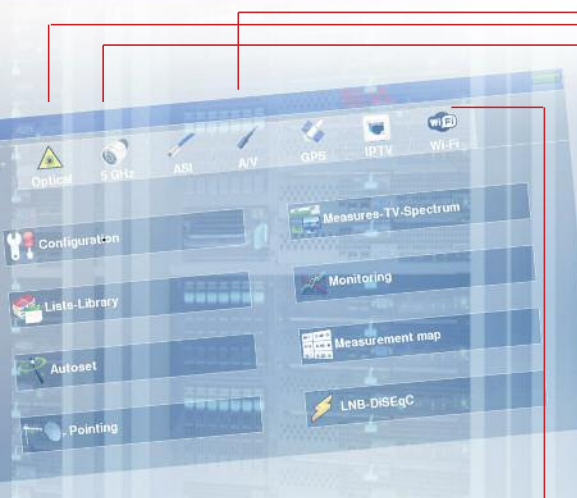
# Specific measurements: your TV Meter will meet all your needs

## TV ANALYSER

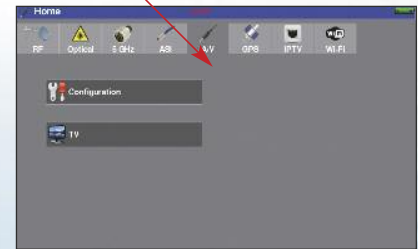


One menu bar to easily select the functions or the specific input.

## Specific menus to save time



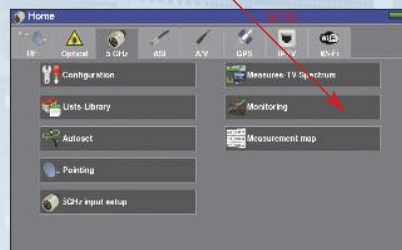
To qualify an optic fiber network for terrestrial, cable or satellite TV.



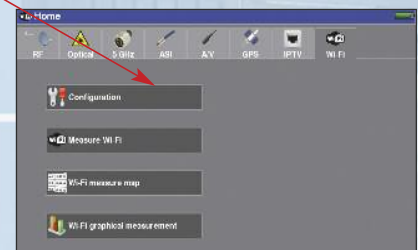
Some TV networks still use analogue programs: your TV analyser will provide the TV programs decoding and display. The analogue input / output are usefull to check signals from HD analogue cameras.



All necessary function to qualify your IPTV networks



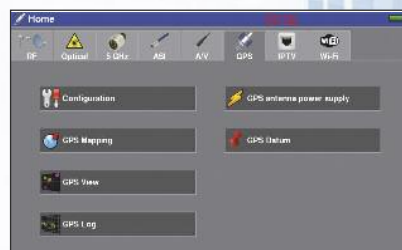
The 5GHz input is dedicated to specific 5GHz LNB for dishes.



WiFi networks can be analysed with specific functions and measurements.



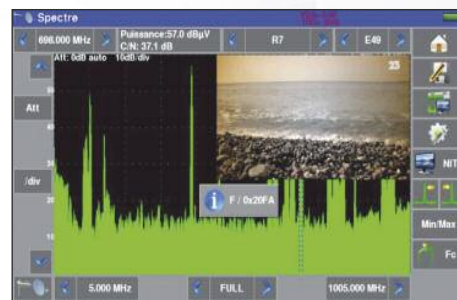
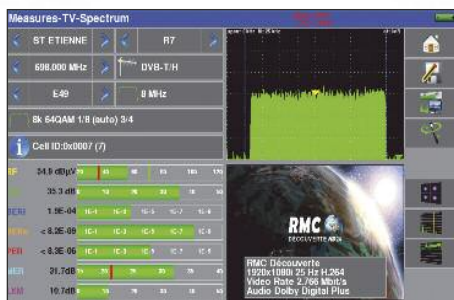
For head broadcasting stations, the ASI input / output will provide the transport stream analysis.



Using the internal GPS makes the mapping of a geographical area very easy and convenient.

Analyse and measure with the best accuracy

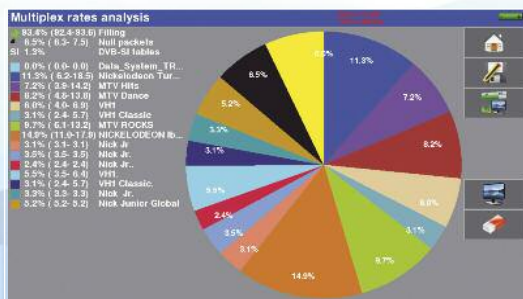
# TV ANALYSER



A zoom function is provided to check in detail TV signals and the quality of the TV installation.

A single screen with all necessary information.

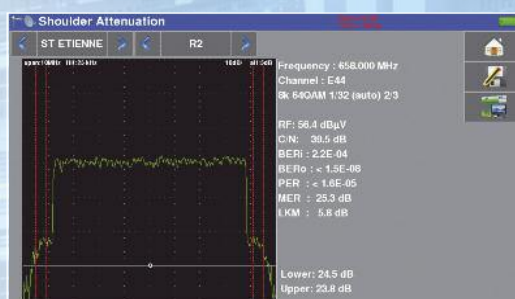
## MPEG-2 and MPEG-4 data flow analysis according to ETR 101-290



Priority 1	Priority 2	Priority 3
1.1 TS_sync_error	2.1 Transport_error	3.1 NIT_error
1.2 sync_byte_error	2.2 CRC_error	3.2 table_id
1.3 PAT_error	2.3 PCR_error	3.3 table_rate (-10%) actual
1.4 continuity_count_error	2.4 PCR_accuracy_error	3.4 table_rate (-10%) other
1.5 PMT_error	2.5 PTS_error	3.5 table_rate (-2%) actual
1.6 CAT_error	2.6 CAT_error	3.6 table_rate (-2%) other
1.7 scrambling_error	2.7 no_CAT	3.7 table_id
1.8 PID_error	2.8 table_id	3.8 table_rate (-2%) actual
		3.9 table_rate (-2%) other
		3.10 table_id
		3.11 table_rate (-30%) actual
		3.12 table_rate (-30%) other
		3.13 table_id
		3.14 table_rate (-30%) actual
		3.15 table_rate (-30%) other
		3.16 table_id
		3.17 table_rate (-30%) actual
		3.18 table_rate (-30%) other
		3.19 table_id
		3.20 table_rate (-30%) actual
		3.21 table_rate (-30%) other
		3.22 table_id
		3.23 table_rate (-30%) actual
		3.24 table_rate (-30%) other
		3.25 table_id
		3.26 table_rate (-30%) actual
		3.27 table_rate (-30%) other
		3.28 table_id
		3.29 table_rate (-30%) actual
		3.30 table_rate (-30%) other

Checking the content of the multiplex data flow is now possible with log file capability.

## Shoulder measurement for DVB-T and DVB-T2 reception

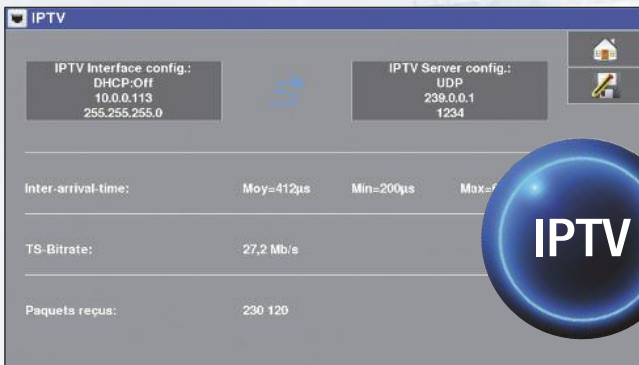


# Today's and tomorrow's measurements



**HEVC  
H.265**

Decoding and display of H.265 (2k) HD TV programs.



**IPTV**

The ideal tool to test your IPTV network: hotels, hospitals, industry,...



**T2MI  
via IP**

T2MI analysis including display TV programs.



**Optic  
Fiber**

All measurements for optic fiber are provided.

**DAB  
DAB+**

**FM-RDS**

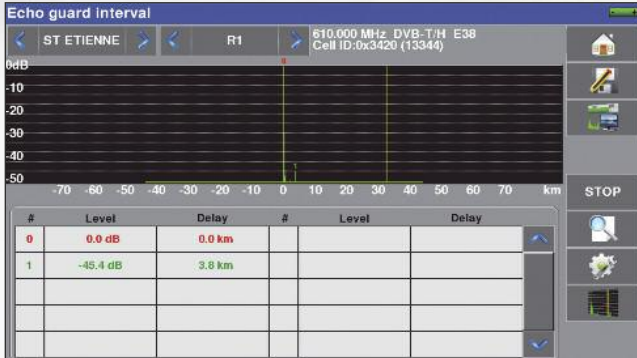
DAB, DAB+, FM with RDS analysis is provided. Stereo sound is available with headphone output.



# All necessary measurements

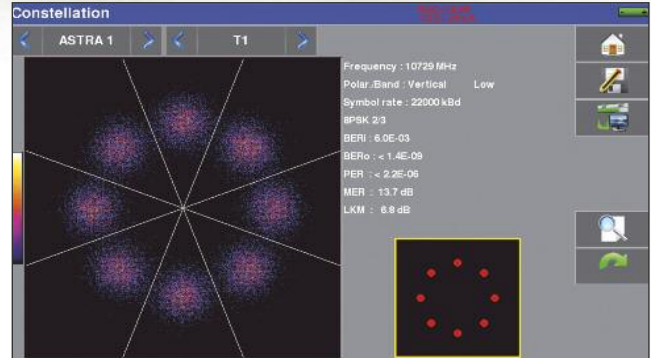
## TV ANALYSER

### Real time echoes and impulse response



Real time echoes and pre-echoes.

### Constellation diagram



Display of the constellation diagram for all digital standards.

### Antenna pointer



A dedicated function to save time: check sat mode and pointing function for terrestrial.

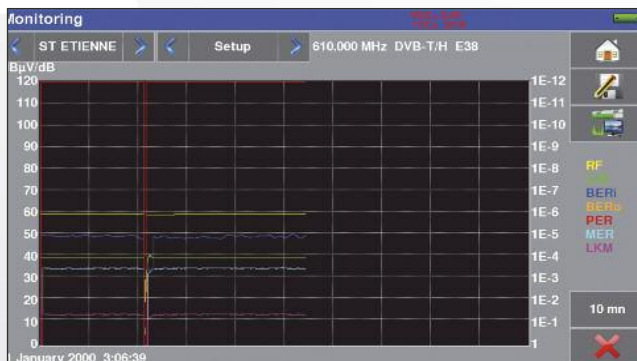
### Measurement map

freq.	std	RF	C-N	BERi	BERo	PER	MER	LKM
E38	DVB-T/H	59.6	>39.6	7.6E-06	<2.4E-08	<2.4E-05	35.2	14.2
E44	DVB-T/H	61.0	>41.0	5.3E-05	<2.4E-08	<2.4E-05	34.7	13.7
E59	DVB-T/H	58.6	>38.6	5.6E-05	<2.3E-08	<2.3E-05	34.0	13.0
E40	DVB-T/H	61.0	>41.0	1.1E-05	<2.4E-08	<2.4E-05	33.4	12.4
E46	DVB-T/H	58.2	>38.2	8.7E-05	<2.4E-08	<2.4E-05	32.4	11.4
E49	DVB-T/H	54.7	>34.7	2.1E-04	<2.4E-08	<2.4E-05	31.6	10.6
10714 HL	DVB-S2	67.3	6.7	Sync?	Sync?	Sync?	...	...
10729 VL	DVB-S2	71.0	8.1	4.2E-03	<1.4E-08	<2.3E-05	13.8	6.9
10743 HL	DVB-S	70.4	11.4	4.5E-06	<3.1E-08	<5.1E-05	14.4	7.5

Measurements recording (for all TV standards) in the TV Meter memory.

# To find all TV signals issues

### Monitoring



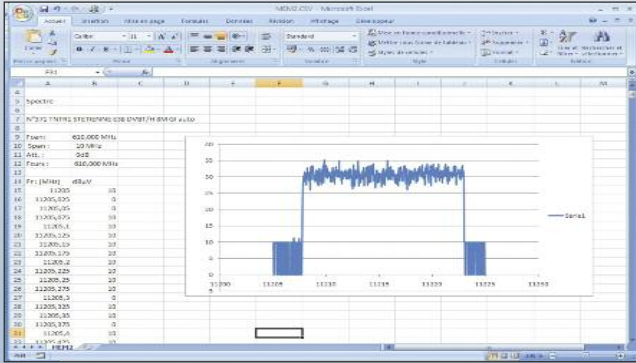
Graphical display of several parameters versus time is provided.

### Measurement map

freq.	std	RF	C-N	BERi	BERo	PER	MER	LKM
E38	DVB-T/H	59.6	>39.6	7.6E-06	<2.4E-08	<2.4E-05	35.2	14.2
E44	DVB-T/H	61.0	>41.0	5.3E-05	<2.4E-08	<2.4E-05	34.7	13.7
E59	DVB-T/H	58.6	>38.6	5.6E-05	<2.3E-08	<2.3E-05	34.0	13.0
E40	DVB-T/H	61.0	>41.0	1.1E-05	<2.4E-08	<2.4E-05	33.4	12.4
E46	DVB-T/H	58.2	>38.2	8.7E-05	<2.4E-08	<2.4E-05	32.4	11.4
E49	DVB-T/H	54.7	>34.7	2.1E-04	<2.4E-08	<2.4E-05	31.6	10.6
10714 HL	DVB-S2	67.3	6.7	Sync?	Sync?	Sync?	...	...
10729 VL	DVB-S2	71.0	8.1	4.2E-03	<1.4E-08	<2.3E-05	13.8	6.9
10743 HL	DVB-S	70.4	11.4	4.5E-06	<3.1E-08	<5.1E-05	14.4	7.5

Select the frequencies you want to monitor: all measurements will be recorded with timestamped information. Your records can be transferred on USB memory stick. Files (.csv) can be read and worked with Excel™.

# TR7837: a unique software for all SEFRAM TV Meters Set up, measure and analyse!



The screenshot shows a detailed data table with columns for Name, Position, Orientation, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F26, F27, F28, F29, F30, F31, F32, F33, F34, F35, F36, F37, F38, F39, F40, F41, F42, F43, F44, F45, F46, F47, F48, F49, F50, F51, F52, F53, F54, F55, F56, F57, F58, F59, F60, F61, F62, F63, F64, F65, F66, F67, F68, F69, F70, F71, F72, F73, F74, F75, F76, F77, F78, F79, F80, F81, F82, F83, F84, F85, F86, F87, F88, F89, F90, F91, F92, F93, F94, F95, F96, F97, F98, F99, F100. The table is color-coded by column.

The screenshot shows a detailed data table with columns for Serial number, Setup name, Place name, Standard, Requirement, Channel, Requirement, Polarisation, UHF band, Audio mode, Condition, Bandwidth, Symbol rate, Guard interval, and Duration. The table is color-coded by column.



## Select the most appropriate solution to protect and carry your TV analyser



This carrying bag is supplied as standard accessory.  
P/N 978851000



The rugged transport case is optional.  
P/N: 978852000



Car cigar lighter converter.  
P/N: 978361000



Audio-video cable.  
P/N: 978853000

The sun protector is standard for all models. You can work in the best conditions using this protector.



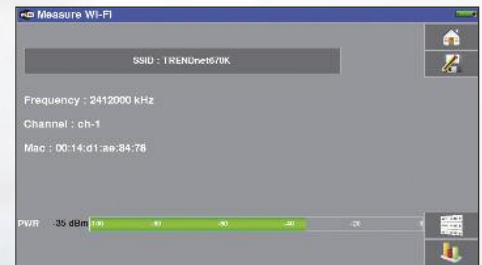
Remotely control your TV analyser: it will make everything you desire!



The GPS provides a very powerful mapping function for the signals received



Check all WiFi networks working with 2,4GHz or 5,8GHz



Network Delay analysis for DVB-T Reception





# Selection guide

## Selection guide

	Sefram 7880	Sefram 7881	Sefram 7882	Sefram 7885
Bandwidth	5-MHz à 1005 MHz , 900 MHz à 2200MHz			
HEVC H.265 decoding	✓	✓	✓	✓
MEPG-2, MPEG-4 HEVC H,264 decoding	✓	✓	✓	✓
DVB-T/T2/T2Lite,DVB-C/C2,DVB-S/S2(MS)	✓	✓	✓	✓
DVB-C/C2 : J83A, J83B	✓	✓	✓	✓
Fast spectrum analysis	✓	✓	✓	✓
Impulse response: echoes and pre-echoes in DVB-T and DVB-T2	✓	✓	✓	✓
Constellation diagram for all standards	✓	✓	✓	✓
DCSS and SatCR (EN50607)	✓	✓	✓	✓
External software compatibility (TR7837)	✓	✓	✓	✓
Expert spectrum analysis	✓	✓	✓	✓
Display free HD 2k programs for terrestrial, cable and satellite	✓	✓	✓	✓
Analogue program decoding and display	✓	✓	✓	✓
Video I/O	✓	✓	✓	✓
HDMI output	✓	✓	✓	✓
WiFi (2,4GHz & 5,6GHz)	✓	✓	✓	✓
MER per carrier	-	✓	✓	✓
Ethernet interface with webserver	-	✓	✓	✓
CAM common interface	-	✓	✓	✓
ASI I/O	-	-	✓	✓
IPTV decoding and analysis	-	-	✓	✓
Shoulder measurement	-	-	-	✓
T2MI via IP	-	-	-	✓
Network Delay analysis	-	-	-	✓
MPEG TS analysis (ETR 101-290, bit rate)	-	-	-	✓
Optical input	-	-	-	✓
DAB, DAB+, FM RDS	-	-	-	✓
GPS	-	-	-	✓



# SEFRAM 7848: TV Meter for digital terrestrial and digital satellite TV

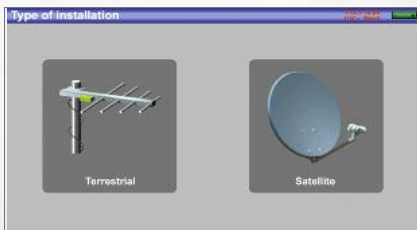
## The ideal companion for the electrician

The SEFRAM 7848 has been designed to ease the installation of terrestrial and satellite antennas : we have optimized the man-machine interface, taking the best benefit of the touch screen, to ease the process and save time.

7 inch touch screen



Rugged metal housing with protective bumpers



Choice between terrestrial and satellite.



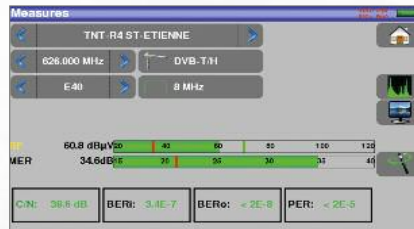
A detailed menu is provided for each type of installation.



New terrestrial pointing function, with the name of multiplex found.



In satellite mode, the checksat provides the NIT. No error possible!



All measurements are displayed with a clear color set: green if measurement is OK, red if measurement is out-off limits.

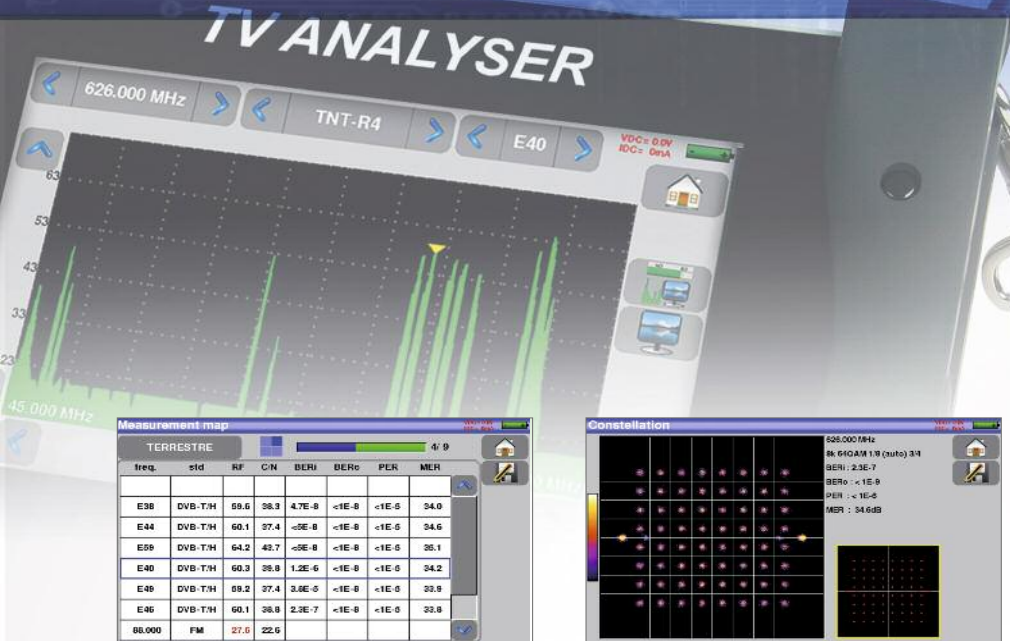


Display of free-to-air SD and HD programs.



Simplified spectrum analysis.

# Sefram 7849: TV Meter for digital terrestrial, cable and satellite TV



A single screen for all measurements and spectrum.

Measurement map for terrestrial, cable and satellite.

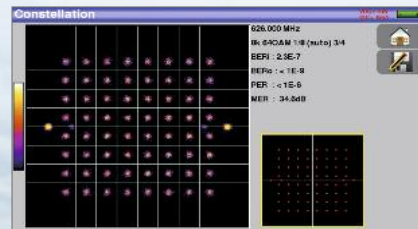
Constellation diagram in terrestrial, cable and satellite.

Fast spectrum analysis.

# Sefram 7859: dedicated to optic fiber networks



Measurement map for terrestrial, cable and satellite.



Constellation diagram in terrestrial, cable and satellite.



Fast spectrum analysis.



Optical power measurement



Fast spectrum analysis

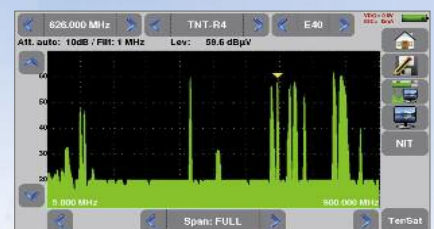
# Sefram 7817: dedicated to digital cable and terrestrial TV.



Powerful Autoset for terrestrial, cable.



A single screen for all measurements and spectrum.



Fast spectrum analysis.

# Selection guide and optional accessories

## Selection guide

	Sefram 7817	Sefram 7848	Sefram 7849	Sefram 7859
Bandwidth	5-865MHz	45-2200Mz	5-2200MHZ	5-2200MHZ
DVB-T, DVB-T2, DVB-T2 Lite, full measurements	✓	✓	✓	✓
DVB-S, DVB-S2, full measurements	-	✓	✓	✓
DVB-C, DVB-C2 (J-83A), full measurements	✓	✓	✓	✓
NIT (Network Identification Table) for satellite	-	✓	✓	✓
Cell Id (for terrestrial band)	✓	-	✓	✓
Pointing mode for satellite (checksat)	-	✓	✓	✓
Pointing mode for terrestrial	✓	✓	✓	✓
Display free-to-air HD terrestrial programs	✓	✓	✓	✓
Display free-to-air HD satellite programs	-	✓	✓	✓
Echoes display in DVB-T and DVB-T2	✓	✓	✓	✓
DiSEqC 1.2	-	✓	✓	✓
SatCR and DCSS (EN50607)	-	✓	✓	✓
Remote supply 5V/13V/18V:24V	✓	✓	✓	✓
USB interface	✓	✓	✓	✓
Free software update from Sefram website	✓	✓	✓	✓
Optical measurements for terrestrial, cable and satellite	-	-	-	✓
Optical power measurement	-	-	-	✓
Rain and sun protector, with belt clip	option	option	option	option



Rugged transportation case  
P/N: 978852000



Rain and sun protector kit for 7817, 7848, 7849, 7859. This kit includes the belt. clip. P//: contact us



Sun protector for 7817, 7848, 7849, 7859. P/N: contact us



Replacement carrying bag (supplied with each TV meter). P/N: 978481000

## Sefram 7940

### Optical power meter

- Optical power measurement in dBm or mW
- 5 wavelengths available: 850nm, 980nm, 1300nm and 1550
- Insertion loss measurement
- Panoramic LCD with backlight
- Auto power-off



### Specifications

Display	graphical LCD with backlight
Wavelength	850, 980, 1300, 1310, 1550nm
Dynamic	-50 à +26 dBm
Accuracy	linear: 0.1% - non linear: 0.01dBm

**Supplied with:** batteries, manual, protective holster, carrying pouch, connectors.



## Sefram 7951

### Optical light source

- Provides 2 wavelenhgts for single mode fiber
- Output modulated
- Compact housing with protective holster
- Easy-to-use

### Specifications

Display	graphical LCD with backlight
Wavelength	1310, 1550
Modulation	270Hz, 1KHz, 2KHz
Output powe:	-7 dBm

**Supplied with:** batteries, manual, protective holster, carrying pouch, connectors.

**Sefram 7951M:** Provides 2 wavelenghts (850 and 1300 nm) for multi-mode fiber

## Sefram 7950

### Visual fault finder

- Low cost solution for testing the continuity of fibers
- Laser source with 650nm (visible)
- CW or pulse mode
- Robust metal case

### Specifications

Output wavelength	650 +/- 10
Output power	3mW
Pulse mode	2-3 Hz

**Supplied with:** batteries, manual, carrying pouch



Optical fiber not supplied

## Sefram customer support



## Technical support

Our technical support team is ready to help you to get the most out of all of our Sefram products. We will answer all your technical questions:

- Help to start with your instrument
- Technical information on products
- Software install and setup
- Selection of products for specific applications

Contact us: +33.(0)4.77.59.36.97

### Free software updates for all Sefram products

Our website provides the latest embedded software for all products. Please browse our website to check the latest updates for your products.

[www.sefram.com](http://www.sefram.com)

## Sefram's Services:

To contact our after-sales department by e-mail: [services@sefram.fr](mailto:services@sefram.fr).

To ship back material for calibration or repair:

SEFRAM - SAV - 32, rue Edouard Martel BP 55 - F42009 SAINT-ETIENNE Cedex 2 - France.

To ease the receipt, we ask you to download from our website and fill the RMA as indicated on the PDF.

The RMA filled should be inserted in the parcel with the product returned (one RMA per product).

## Using SEFRAM's services, you will:

- Get the best price for repair and maintenance
- Get a quote in a very short period of time
- Get a warranty for your repair or upgrade

Sefram is also:



Do not hesitate to ask for our Data acquisition solution catalogue

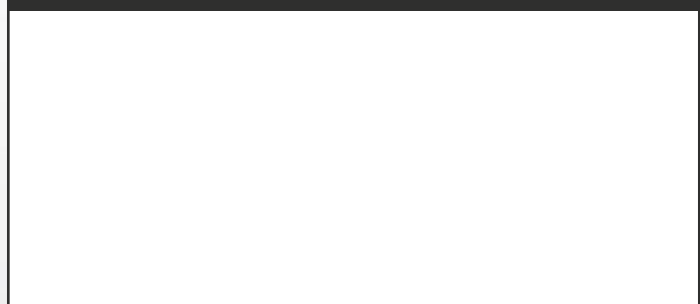


Non contractual photos - sefram 2018



FTMESCH2018UK - Specifications can be updated without notice

**For assistance and ordering**



**Sefram**



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Fax. +33 (0) 4.77.57.23.23  
Web : [www.sefram.fr](http://www.sefram.fr) - e-mail : [sales@sefram.fr](mailto:sales@sefram.fr)