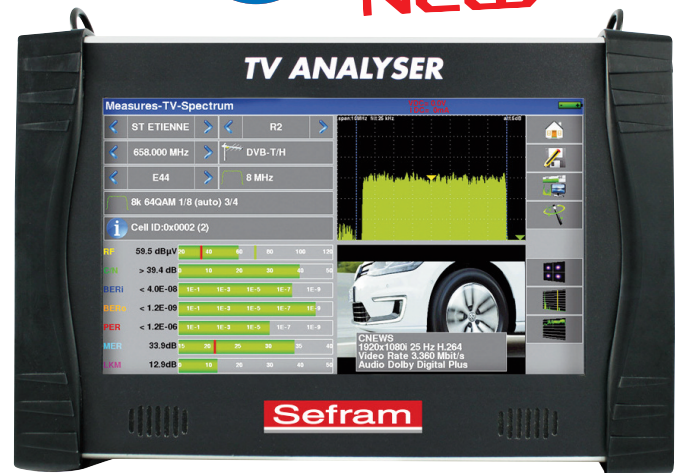


## SEFRAM 78814K

State-of-Art specifications  
for Ultra High Definition TV  
4K HDR decoding



**NEW**



### ■ Performances

- Panoramic LCD touch screen: 10.1 inches (16:9)
- Display free to air programs for digital terrestrial, cable and satellite
- Wideband : 5 MHz-2400 MHz
- Display High Definition TV programs MPEG4-H264 and HEVC (H.265 4K HDR)
- Display analog TV programs
- All measurements for DVB-T/T2, DVB-C (J83-A and B), DVB-S, DVB-S2, DVB-S2X (option), Wi-Fi
- MER per carrier
- Ultra fast spectrum analysis and expert spectrum analysis
- Checksat mode with NIT (satellite recognition)
- LTE function to help the diagnostic of filter
- Real time echoes and pre-echoes measurement with zoom
- Constellation diagram with zoom
- Three in one display : measurement, TV picture, mini spectrum
- Graphical display of measurements
- HDMI interface
- Analog input and output
- Multistream capability
- Memorize and export/import data with USB memory stick
- Battery with 1 hour charging time and 4 hours autonomy
- Supplied with **carrying bag and protection pouch**
- Weight: 2,8kg

### ■ The most complete TV Meter of the market

Time is money! With its fast and expert spectrum analysis, the checksat mode with electronic compass and NIT, the Cell ID function, real time echoes and pre-echoes, the MER per carrier, the constellation diagram, the fast Auto-set, Multistream capability, the LTE function to help the diagnostic of spurious filtering, no doubt that you can setup a TV receiving system in record time.

### ■ Easy to use

Direct access to function from the touch screen is like a game: dedicated icons, special "home" function to go back to main menu, virtual keyboard to enter your specific data, possibility to export / import file on USB memory stick,... Getting started with the new SEFRAM 78814K is fast and easy.

### ■ A new design optimized for your safety

To protect your TV meter, we have design a robust metal housing with a protective pouch. For your safety, we supplied an ingenious system of belts and clip and a light transportation bag

### ■ Panoramic touch screen

With the largest and brightest LCD of the market, using the new TV meter is possible in all conditions of light, including in sunny environment. With the 10.1" touch screen, you will use your new TV meter like a smartphone or a tablet: no need to worry where and which button to push, everything is displayed on the large screen in a clear and easy way. Incredibly user friendly!



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## Ultra High Definition TV 4K HDR decoding

| Technical specifications                      | Terrestrial band  |  |   |   |  | Satellite band   |  |   |
|---|---|--|---|---|--|--|--|---|
| <b>Fréquence</b>                              |   |  |   |   |  |  |  |   |
| Range   | 5-1005 MHz  |  |   |   |  | 900-2400 MHz   |  |   |
| Resolution                                    | measurement: 50 kHz, display: 1 kHz   |  |   |   |  | measurement: 1MHz, display: 1MHz   |  |   |
| <b>Level measurements</b>                     |   |  |   |   |  |  |  |   |
| Dynamic range                                 | 20-120 dB $\mu$ V   |  |   |   |  | 20-120 dB $\mu$ V  |  |   |
| Units   | dB $\mu$ V, dBmV, dBm   |  |   |   |  | dB $\mu$ V, dBmV, dBm  |  |   |
| Accuracy                                      | $\pm 2$ dB $\pm$ 0.05dB/ $^{\circ}$ C   |  |   |   |  | $\pm 2$ dB $\pm$ 0.05dB/ $^{\circ}$ C  |  |   |
| Resolution                                    | 0,1 dB  |  |   |   |  | 0,1 dB   |  |   |
| Measurement filters                           | 25kHz   |  |   |   |  | 125kHz   |  |   |
| Standards                                     | BG, DK, I, L, MN, Carrier, DVB-T/T2/T2lite, DVB-C/C2, J83B  |  |   |   |  | PAL, SECAM, NTSC, Carrier, DVB-S/S2/S2X, DSS   |  |   |
| Measurements                                  | RF, C/N, V/A  |  |   |   |  | RF, C/N  |  |   |
| <b>Digital measurement</b>                    | <b>DVB-T/H</b>  | <b>DVB-T2/T2lite</b>   | <b>DVB-C</b>  | <b>DVB-C2</b>   | <b>J83B</b>  | <b>DVB-S, DSS</b>  | <b>DVB-S2</b>                                  | <b>DVB-S2X</b>  |
| Bit Error Rate (BER)                          | CBER (before Viterbi BER)<br>VBER (after Viterbi BER)<br>UNC (lost packets PER)<br>Noise margin       | LDPC (BER)<br>BCH (BER)<br>FER (frame error PER)<br>Noise margin | BER (before Reed Solomon BER)<br>UNC (lost packets PER)<br>Noise margin | BER (before Reed Solomon BER)<br>UNC (lost packets PER)<br>Noise margin | BER (after Reed Solomon BER)<br>UNC (lost packets PER)<br>Noise margin | CBER (before Viterbi BER)<br>VBER (after Viterbi BER)<br>UNC (lost packets PER)<br>Link margin | LDPC (BER)<br>BCH (BER)<br>PER<br>Link margin  | BERi (before LDPC BERo (before BCH) PER (lost packets) MER<br>LKM (Link Margin) |
| Modulation Error Rate (MER)                   | 5 - 35dB  | 5 - 35dB   | 20 - 40dB   | 20 - 40dB   | 20 - 35dB  | 0 - 20dB   | 0 - 20dB                                       | 0 - 20 dB   |
| Sensitivity                                   |   |  |   |   |  | 47 dB $\mu$ V  |  |   |
| MER per carrier                               | yes   | yes  | -   | yes   | -  | -  | -  | -   |
| Symbol rate                                   | -   | -  | 1 to 7,224 Ms/s (J.83A)   | -   | 1 to 5,563 Ms/s  | 1 to 45Ms/s  | 1 to 45Ms/s                                    | 1 to 50 Ms/s  |
| Bandwidth                                     | 5, 6, 7, 8 MHz  | 1,7, 5, 6, 7, 8 MHz  | -   | 6, 8 MHz  | -  | -  | -  | -   |
| Mode  | -   | SISO, MISO, PLP simple or multiple                               | -   | PLP simple or multiple, data slice                                      | -  | -  | -  | -   |
| FFT size                                      | 2k et 8k, auto and manual   | 1k, 2k, 4k, 8k, 16k et 32k + bandwidth extension, auto           | -   | 4k  | -  | -  | -  | -   |
| Constellation                                 | QPSK, 16 and 64 QAM, auto   | QPSK, 16, 64 and 256 QAM auto                                    | 16, 32, 64, 128 and 256 QAM   | 16, 64, 256, 1024, 4096 QAM   | 64, 256QAM   | QPSK   | QPSK, 8PSK, 32APSK                             | QPSK, 8PSK, 8/16/32APSK-L   |
| Code rate                                     | 1/2, 2/3, 3/4, 5/6, 7/8 (auto)  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 (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 and manual   | auto   | -   | auto  | -  | -  | -  | -   |
| Roll-off                                      | -   | -  | -   | -   | -  | -  | -  | 0,05 - 0,35   |
| Inverted spectrum                             | auto  | auto   | auto  | auto  | auto   | auto   | auto   | auto  |
| Viterbi                                       | -   | -  | -   | -   | -  | -  | -  | auto  |
| HP/LP   | yes   | -  | -   | -   | -  | -  | -  | -   |
| PLP choice                                    | -   | yes  | -   | yes   | -  | -  | -  | -   |
| Multistream                                   | -   | -  | -   | -   | -  | -  | PL descrambling                                | stream selection<br>0 - 255 (ISI)<br>PLS descrambling<br>(Gold code)            |
| Standards                                     | ETS 301-701   | ETS 302-755  | ITU J83-AppendixA   | ETS 302-769   | ETS 302-769  | ETS 300-421  | ETS 302-307                                    | ETS 302 307 part 2  |
| <b>Pre-echoes / Echoes / Impulse response</b> |   |  |   |   |  |  |  |   |
| Dynamic range                                 | 30 dB, 75km (in 8k)   | 50 dB, -75km +75km (in 8k)                                       | -   | 50 dB, -5km +5km  | -  | -  | -  | -   |
| Units   | $\mu$ s, km, miles  | $\mu$ s, km, miles   | -   | $\mu$ s, km, miles  | -  | -  | -  | -   |
| <b>Constellation diagram</b>                  | yes   | yes  | yes   | yes   | yes  | yes  | yes  | -   |
| <b>Spectrum analysis</b>                      |   |  |   |   |  |  |  |   |
| Span  | 1MHz to full span in 1, 2, 5 sequences  |  |   |   |  |  |  |   |
| sweep time                                    | 100ms mini, 500 ms maxi   |  |   |   |  |  |  |   |
| Filters (automatic with selected span)        | 1,25 kHz, 2,5 kHz, 6,25 kHz, 12,5 kHz, 25 kHz, 62,5 kHz, 125 kHz, 250 kHz, 625 kHz, 1,25 MHz, 2,5 MHz |  |   |   |  |  |  |   |
| Attenuator                                    | automatic or manual (0 to 50 dB with 10 dB steps)   |  |   |   |  |  |  |   |
| Dynamic (display)                             | 60 dB (10 dB/div)   |  |   |   |  |  |  |   |
| With NIT(OSD) and TV picture                  | yes   |  |   |   |  |  |  |   |
| <b>Measurement map</b>                        |   |  |   |   |  |  |  |   |
| Capacity                                      | scrolling of 100 programs maximum   |  |   |   |  |  |  |   |
| Display                                       | graphical (bargraph), tilt measurement  |  |   |   |  |  |  |   |
| <b>Antenna Check mode</b>                     |   |  |   |   |  |  |  |   |
| Goal  | fast antenna pointing<br>avec LNB simple ou double  |  |   |   |  | fast antenna pointing,<br>single or double LNB   |  |   |
| Sites/Satellites                              | 10 places   |  |   |   |  | 30 satellites, with European<br>database loaded  |  |   |
| NIT   | yes<br>check 4 channels per place,<br>can be modified by user   |  |   |   |  | yes<br>check 4 transponders per satellite,<br>can be modified by user                          |  |   |
| <b>Signal Monitoring</b>                      |   |  |   |   |  |  |  |   |
| measurements                                  | all, level and digital measurements   |  |   |   |  |  |  |   |
| duration                                      | 10mn, 60mn, 8h, 24h, 7d   |  |   |   |  |  |  |   |
| <b>Memory</b>                                 |   |  |   |   |  |  |  |   |
| Saving  | internal non volatile memory, or USB memory stick (not supplied)                                      |  |   |   |  |  |  |   |
| Data  | places, measure (level, BER/MER, frequency map, spectrums,...)  |  |   |   |  |  |  |   |
| Capacity                                      | 512 Kb (1000 files or folders max.)   |  |   |   |  |  |  |   |
| <b>TV picture and sounds</b>                  |   |  |   |   |  |  |  |   |
| Analog programs                               | PAL, SECAM, NTSC  |  |   |   |  |  |  |   |
| Digital programs                              | MPEG2, MPEG4, HEVC, SD and HD definition  |  |   |   |  |  |  |   |
| Sounds  | MPEG-1, MPEG-2, AAC, HE AAC, Dolby® Digital, Dolby® Digital Plus                                      |  |   |   |  |  |  |   |
| Encrypted programs (*)                        | yes   |  |   |   |  |  |  |   |
| <b>RF input</b>                               |   |  |   |   |  |  |  |   |
| Input   | 75 Ohm, F and BNC with adapter supplied   |  |   |   |  |  |  |   |
| Max permissive voltage                        | 50 Veff. /50Hz  |  |   |   |  |  |  |   |

## Ultra High Definition TV 4K HDR decoding

| Technical specifications         | Terrestrial band  | Satellite band   |
|----------------------------------|---|--|
| <b>Remote supply and control</b> |   |  |
| Voltage                          | 5 V/13 V/18 V/24V, 500 mA max (300mA for 24 V)  | 13/18 V, 500 mA max  |
| DiSEqC                           | -   | DiSEqC 1.2, dish rotor control, committed & uncommitted switches |
| Mini DiSEqC (22kHz)              | -   | 22 kHz, ToneBurst  |
| SatCR                            | -   | DiSEqC protocol extension, control of 8 slots max.               |
| DCSS                             | -   | SatCR protocol extension, control of 32 slots max.               |
| <b>Aux Input/output</b>          |   |  |
| Interfaces                       | USB A, Ethernet 10/100baseT (RJ45)  |  |
| Power supply input               | jack 5.5 mm, 15 V max, 5 A max  |  |
| Audio/Video                      | HDMI output 720p, A/V jack for analog video input and earphones output                            |  |
| CAM DVB-CI module                | 1 slot for CAM DVB-CI module (contact us for compatibility)                                       |  |
| <b>ASI</b>                       |   |  |
| Functions                        | ASI input and output TS MPEG  |  |
| Frequency                        | 270 MHz, 188/204 bytes, useful bit rate 70Mbit/s max  |  |
| Connector                        | BNC 75Ohms  |  |
| <b>5GHz input</b>                |   |  |
| Functions                        | all level and digital measurements  |  |
| Connector                        | SMA 50 Ohms   |  |
| Remote supply                    | 6,2 V, 250mA  |  |
| <b>Wi-Fi</b>                     |   |  |
| Functions                        | Wi-Fi network level measurement, SSID   |  |
| Frequency                        | 2,4GHz  |  |
| WiFi antenna input               | SMA reverse 50Ohms, antenna   |  |
| <b>General Specifications</b>    |   |  |
| Display                          | 10.1 inches color LCD 16/9, backlight 500 cd/m <sup>2</sup> , 1024x600 dots, capacitive touch pad |  |
| Power supply                     | main adapter 110/230 VAC, jack with 5,5mm diameter, 15 V/5 A                                      |  |
| Battery (non removable)          | LiOn battery 100W   |  |
| Autonomy                         | 4 hours typical   |  |
| Built-in charger                 | 1 hour charging time for 80% capacity   |  |
| 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                       | 310 x 210 x 80 mm   |  |
| Weight                           | 2,8 kg (battery and pouch included)   |  |
| Warranty                         | 2 years   |  |

(\*): the display of digital encrypted programs is possible, if user has a valid subscription card and if the encryption type is supported by the TV Meter. Please check with our sales department when ordering.

**Supplied with:** main adapter (90-245V with European plug), F/F and F/BNC adapter, carrying protective pouch, belt clip, transportation pouch. The instruction manual is available directly on our website [www.sefram.com](http://www.sefram.com)

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Ultra High Definition TV 4K HDR decoding

## ■ Accessories



Carrying bag (provided in standard) - P/N: 978851000



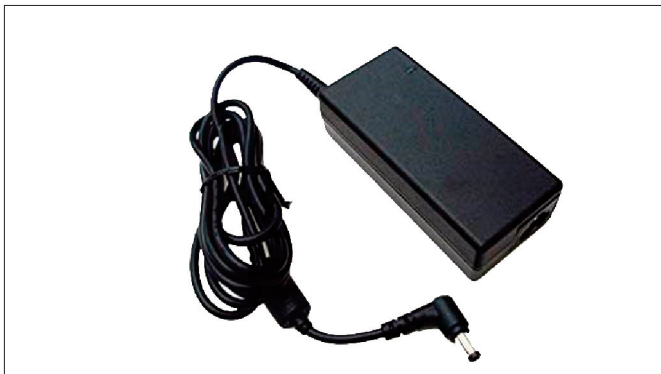
Carrying case - P/N: 978852000



A/V external video cable - P/N: 978853000



Car cigar lighter adapter: - P/N: 978361000



Main power supply adapter (provided in standard):  
P/N: 978553000

For assistance and ordering



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FT78814K A 00 - Specifications can be updated without notice



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