

INTRODUCES: **"PSA - 5"**

## PROFESSIONAL DIGITAL SATELLITE "QPSK • V.SAT • DVB-S/DSS" PALM-TOP ANALYZERS

FREQUENCY: 930-2150 MHz • LEVEL/POWER: 15 to 110 dB $\mu$ V (-45 to +50 dBmV)

Specially designed for V.SAT & DBS, Satellite V. SAT installations, thanks to its high sensitivity and high resolution spectrum analyzer (opt.) it is possible to clearly distinguish the satellite beacon on the spectrum display. Using the AUTO SAT IDENTIFIER (opt.) during dish alignment, allows exact and automatic detection of the desired satellite.

The image displays the RO.VE.R. PSA-5 handheld analyzer in the center, surrounded by several overlapping screenshots of its interface. The screenshots show various views: spectrum analysis with peaks, signal strength meters, and detailed system parameters. A central screenshot shows a spectrum with a peak at 11919.0 MHz and a signal strength of 57.8%. Other screenshots show parameters like SNR, noise margin, and error rates. A 'SAT BEACON' label is overlaid on one of the spectrum views. The device itself has a screen displaying a similar spectrum view and a keypad with buttons for F1-F3, DIGITAL, ANALOG, MEAS, ESCAPE, SPECT, UP, DOWN, ENTER, V.SAT, V.SAT SPECT, BARS SCAN, PROGRAM STORE, V.SAT SPECT, RECALL, PRINT, SPECIAL, and a BATTERY MONITOR indicator.

**EASY  
ACCURATE  
COMPLETE**

- AUTO SAT IDENTIFIER
- DIG./AN. POWER or LEVEL
- DIG./AN. SAT SPECT.
- MCPC & SCPC
- SNR & NOISE MAR.
- b B.E.R. & a B.E.R.
- DiSEqC PROTOCOL
- ALL CHs BARS SCAN

- INTERCHANG. INPUT CONNECT.
- FAST BATTERY CHARGE
- 3 TO 6 hrs BATTERY
- RS - 232 SOCKET
- S.W. UP-GRADABLE VIA INTERNET

**LIGHT  
ROBUST  
COMPACT**

## ANALOG SAT

- **Frequency band:**  
930–2150 MHz
- **Frequency/Program reading:**  
on graphics display
- **Frequency resolution:** 0.1 MHz
- **Input impedance:** 75  $\Omega$ , interchangeable  
"F" connector (BNC - IEC - N opt.)
- **Measurement dynamic range at RF input:**  
from 25dB $\mu$ V typ. (15 min.) to 105 dB $\mu$ V typ. (110 max.)  
or –45 to +50 dBmV, or –93 to +2 dBm (selectable)
- **Measurement resolution:** 0.1 dB
- **Level measurement accuracy at 20°C:**  
1.5 dB typ. (3 dB max.)  
(with software correction after 5 minutes' warm up)
- **Measurement stability versus temperature from  
– 0 to 50°C:** 0.03 dB/°C
- **Program/frequency plan:**  
by frequency or storable memory and relative data  
logger, up to 300 memory positions

## DIGITAL SAT DVB–& DSS with SCPC, MCPC, QPSK demodulator

- **Power measurement dynamic range at RF input:**  
from 25 to 110 dB $\mu$ V, from –35 to +50 dBmV,  
from –83 to +2 dBm (selectable)
- **QPSK Symbol Rate setting:**  
2,69/45 MS/s (with 1 KHz steps) (with automatic  
generation of the pre-memorized selection table)
- **BER measurement before and after Viterbi:**  
bBER up to  $2 \times 10^{-4}$       aBER up to  $2 \times 10^{-9}$
- **FEC, automatic selection and display:**  
1/2, 2/3, 3/4, 4/5, 5/6, 6/7, 7/8, 8/9
- **Quality test:** FAIL, MARGINAL, PASS (automatic)
- **Noise margin measurement:** from –2 to 12 dB
- **Frequency error measurement:**  
caused by the LNB or a tuning mistake ( $\pm 3$  MHz).
- **Selectable LNB Oscillator Freq.:** 0 to 12.500 MHz  
(with 10 MHz steps) with automatic generation of the  
pre-selection table or direct "L" band freq. reading.
- **Digital satellite standard selection:** DVB/DSS

## AUTOMATIC OR MANUAL SPECTRUM ANALYSIS & BAR SCAN

### Analog & Digital SAT

- The spectrum measurement is completely automatic or manual and can be selected by program or frequency.
- Simply passing from Measurement (MEAS) to Spectrum (SPECT) you can immediately see the spectrum of the prog./freq. received perfectly and automatically aligned to the reference level.
- These parameters are automatically set with the following values (in auto mode):
  - *Reference level: at the top and with level/power value indication on the display*
  - *Span: 50 MHz (5 MHz in V.SAT SPECT)*
  - *dB/division: 5 dB*
  - *Frequency/level marker position is at the center carrier for all analog & digital SAT with level and frequency indication on the display, related to MRK position.*
  - *Analog or digital signal measurement indication is already correlated: "A/D" on display.*
  - *Indication of the selected program/freq.: on the display*
- Obviously all the spectrum parameters can be selected and varied manually by simply navigation with the cursor on the display and, if you are in auto, each time you change from measurement to spectrum the meter automatically resets all the default spectrum parameters.
  - **Frequency range:** SAT 930–2150 MHz
  - **Dynamic range:** 25 dB typ. (30 dB max.)
  - **Resolution bandwidth:** 3 MHz / (150 KHz V. SAT opt.)
  - **Reference level:** from 10 dB $\mu$ V to 110 dB $\mu$ V,  
or –50 to +50 dBmV, or –98 to +2 dBm (selectable)
  - **Span:** 5–10–20–50–100–200–500–FULL
  - **Marker frequency:** 930–2150 MHz in frequency
  - **Marker level:** from 15 dB $\mu$ V to 110 dB $\mu$ V or dBmV, dBm
  - **Marker analog level measurement:** automatic when selecting ANALOG and with indication on display (A)
  - **Marker digital power measurement:** automatic when selecting DIGITAL and with indication on display (D)
  - **Bar scan:** from 9 to 120 channels (selectable)
  - **Storable spect. & bar scan:** up to 40 pictures.

## OTHERS

- **LNB feed:**
  - Analog OFF +13V, +18V/22 KHz (0.25 A)
  - "8 DiSeqC-1" and "8 DiSeqC-2", pre programmed in sequence, very easy to use and to memorize. They can drive any type of analog or DiSeqC, single & double feed LNB & any type of 4 or 8-way, analog or DiSeqC multiswitch.
  - DiSeqC transmission via special menu, can control any type of DiSeqC devices.(opt.)
- **Buzzer with selection of related parameter**
- **Master Copy function** (optional via PC)
- **Power supply:**
  - Built-in NI-CD rechargeable batteries: 8 batt. 8Vx 2,1A
  - External power supply: 17 Vac or 20 Vdc (1A), (conn.  $\varnothing 5.5 \times 2.2$  on power pack)
  - AC/AC adapter: 230 Vac (117 V opt.), 17 Vac output
- **Battery duration at 25°C:**  
Up to 6 hours without LNB FEED  
From 2 to 4 hours with LNB (depending on LNB consumption and back light display)
- **Low battery indicator:** on the graphics display
- **Fast batt. recharge time:** 3 hrs approx. with electronic control and led monitor
- **Instrument size:** H 30 x W 11 X D 6 cm
- **Instr. weight:** 0,9 Kg with batteries
- **Casing structure:** plastic-(ABS)
- **RS232 standard serial interface port** available for:
  - downloading and/or printing stored data from PSA to PC
  - the possibility of up-grading the PSA software via internet, which will lengthen the life of your meter.
- **Back light graphic display:**  
128 x 128 pixel, 3" for measurement & spectrum
- **Auto off timer:** after 5 minutes without use (selectable)
- **Auto test menu:** to check the main digital circuit
- **Temperature meter indication:** in °C or °F
- **Clock calendary indicaton**
- **Belt bracket**

## INCLUSIVE ACCESSORIES

**N.1 mod. "TRAS-F-R142-230S"**  
**AC/AC Adapter**

- mains transformer
- input 230 or 117 Vca,
- output 17 V, 1 A



**N.1 mod. "BORSA-PDA"**

**Protective bag** for instrument with pocket for small tools, shoulder strap for transport purposes



**N.2 mod. "CNN-F-0150"**

Interchangeable F-F double female input connector



**N.1 mod. "CAVO-DD-FF-2000"**

RS 232 female/female (Null modem) cable to connect PSA to PC, for software upgrades via internet



## OPTIONAL ACCESSORIES

- mod. "V.SAT SPECT" (150 KHz RBW)  
High resolution spectrum filter to display the SCPC and Telemetric Beacon Carrier. (Factory upgrade only, the instrument must be returned to RO.VE.R. Labs in order to add this optional functionality).
- mod. "AUTOMATIC SAT IDENTIFIER"  
A sophisticated FW that during dish pointing, allows exact and automatic detection of the desired satellite. (Factory upgrade only, the instrument must be returned to RO.VE.R. Labs in order to add this optional functionality).
- mod. "VCA-1224"  
DC/DC cigarette lighter charger adapter  
VIN=12V VOUT=24V for batterie recharge
- mod. "TRA-FFEM-CEIFEM"  
Interchangeable "F" female / "IEC" female input connector
- mod. "TRA-BNFC-FFEM"  
Interchangeable "F" female / "BNC" female input connector
- mod. "TRA-FFEM-NFEM"  
Interchangeable "F" female / "N" female input connector
- mod. "ATT-F-6 or 10 or 20"  
RF attenuator, 6-10-20 dB interchangeable F-F double
- mod. "PRINT-TERM-40"  
Portable printer with built-in rechargeable batteries and RS232 connection cable (See user manual for printer accessories)  
P.S.U. 6 Vdc, 2 A

