

Since 1935
at your service....

AP 01 SERIES



AP 01

DVB-S/S2 + DVB-T*/H or DVB-S/S2 + DVB-C MPEG2+ N.I.T.**
QPSK/8PSK+COFDM* or QPSK/8PSK + QAM

AP 01 HD

DVB-S/S2 + DVB-T*/H or DVB-S/S2 + DVB-C MPEG4 + MPEG2 + N.I.T.
QPSK/8PSK + COFDM* or QPSK/8PSK + QAM

AP 01 FULL HD

DVB-S/S2 + DVB-T2/T/H + DVB-C MPEG4 + MPEG2 + N.I.T.
QPSK/8PSK + COFDM-T/T2 + QAM

*UPGRADABLE to DVB-T2, COFDM-T2
**UPGRADABLE to MPEG4



EXAMPLE
SCREENSHOTS

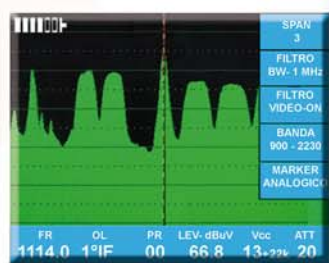
MADE IN ITALY



Green: Analogue Terrestrial
Signal Analysis



Red: Digital Terrestrial
Signal Analysis



Cyan: Analogue Satellite
Signal Analysis



Blue: Digital Satellite
Signal Analysis

5.7" COLOUR MONITOR, HIGH RESOLUTION and HIGH BRIGHTNESS

DISPLAY IMAGES MPEG4 and MPEG2 and ANALOG CHANNELS TER./SAT.

"AER" FUNCTION: ANALYSIS OF ECHOES on DVB-T SIGNALS through 67,6 km RANGE,
ANALYSIS OF ECHOES on DVB-T2 SIGNALS through 89,4 km RANGE

"CLC" FUNCTION: CABLE LENGTH CALCULATION (with NG 96F OPTION)

CONSTITUTION DIAGRAM

"ACS" FUNCTION: AUTOMATIC CHANNEL SEARCH DIGITAL TERRESTRIAL or ANALOGUE

"TP-SAT" FUNCTION: PRE-STORED SATELLITES TABLE TO DIRECTLY RECALL TRANSPONDERS

BATTERY: Li-ION , MORE THAN 4h BATTERY OPERATIVE TIME, 4h CHARGING TIME

DATA-LOGGER with 50 PROGRAMS FOR EACH of 5 PLANS

PC INTERFACE: RS232 and USB for CONNECTION by PC and with SOFTWARE
for REMOTE CONTROL

Real Time Spectrum Analyzer

UNA OHM®

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AP 01 SERIES



GENERAL SPECIFICATIONS

Level

VHF/UHF/SAT Bands: 20dB μ V - 130dB μ V
5-65 MHz Band: 30dB μ V - 130dB μ V

Measurement Unit

dB μ V, dBmV, dBm and V

Attenuator

10dB steps, manual or automatic modes

Attenuator Accuracy

± 1.0 dB VHF/UHF.
 ± 1.5 dB SAT.

Frequency Response (Measurement + Spectrum)

± 2.0 dB from 45 to 2050MHz
 ± 2.5 dB from 2050 to 2250Mhz

Reading

Digital on OSD (On Screen Display)
Level Resolution 0.1dB
Relative level bar, on display 30dB reading scale
Note: Acoustic; tonality proportional to measurement level

Measurement Bandwidth (-3dB Measurement + Spectrum)

VHF/UHF/CATV/SAT: 100kHz; 1.0MHz

Input impedance

75 Ω unbalanced (1)

Maximum Voltage Applicable to Input

100VDC and/or 5 True RMS RF.

Input connector

BNC; BNC/IEC and BNC/F adapters as standard accessories

LNB Power Supply

13 – 15 – 18 – 24V / 500mA max from input connector
Overload and short-circuit protection with reading on OSD

DISEqC

1.1; 2.0 S.C.R.
1.2 for motorized dishes

Tuning

PLL continuous tuning
Direct frequency recall
Recalling channels referred to the TV standard
used VHF/UHF/CATV
Recalling stored programs

Storage Capacity

100 programs / 250 programs for Data Logger

SPECTRUM ANALYZER

Presentation

Level on Y (vertical) axis
Frequency on X (horizontal) axis
Real time response
30dB level dynamic range
Video filter, selectable On/Off

Frequency Range

5MHz to 2150MHz in 5 bands:
C Band 5 to 65MHz (as an option)
L Band 45 to 156MHz
M Band 156 to 470MHz
H Band 470 to 900MHz
SAT Band 900 to 2250MHz

Frequency Range Exploration

1% to 100% of the selected band
in 8 selectable expansion steps

Frequency Markers

Two markers to read frequency and level,
 Δ frequency and Δ level measurement between markers

MONITOR

Screen

5.7" colour LCD
Resolution 320x240

TV Standard

BG – I – DK – M – N – L

Colour Standard

PAL - SECAM - NTSC

FUNCTIONS

Full-screen analogue or digital TV-picture
"Three-in-One" display (picture + sync pulse + level bar graph)
Full frequency spectrum with two markers
Partial frequency spectrum (SPAN)
Teletext
Video Monitor (via SCART socket) CVBS Signal
Graphic menus and submenus
Data Logger functions and measurements

AUDIO

Analogue system

Demodulators

TV/AM/FM/NICAM

Subcarriers Frequency

VHF/UHF/CATV: automatically selected
with respect to the TV Standards
SAT: 5 to 9.99MHz through PLL frequency synthesis adjustable
by 10kHz steps
Selectable de-emphasis

Digital system

Selection of audio options inside the channel

AUXILIARY INPUTS AND OUTPUTS

SCART Socket

INPUT:

Video (CVBS - 1Vpp-75 Ohm)
Audio (0.3V - 600 Ohm)

OUTPUT:

Video (RGB - 1Vpp - 75 Ohm)
Audio output (0.3V-600Ohm)

RS232 Serial Port

9 pole female "D" connector to exchange data with external PC,
printer and modem

USB

1.0standard; female B connector

POWER SUPPLY

External power Adaptor

90 to 260V 50-60Hz

Internal VDC

Li-Ion battery, 14.8V / 4.5Ah

Running time: over 4 hours

External Battery Charger

Recharge time: 4h
Charge status and battery running monitor

Battery Indicators

Battery level on screen
Battery charge status: Green LED Charged - Red LED Charging

MECHANICAL

Dimensions

(WxHxD) 250 x 110 x 250 mm

Weight

3,5 kg

AMBIENT

Operating Temperature

5° to 40°C

Operating Altitude

0 to 2000m

QPSK / 8PSK CARD for DVB-S/S2

Frequency range: 950 to 2150MHz

Symbol rate: 1-45MS/s DVB-S (QPSK)
1-36MS/s DVB-S2 (QPSK)
1-30MS/s DVB-S2 (8PSK)

Code Rate

AUTO
(pre-Viterbi). 6E-2 to 1E-6
(post-Viterbi BER). 1E-2 to 1E-8

Indicator of errors not corrected
on output of
Reed Solomon stage
5 to 20dB

MER

CFO

NM:

Noise Margin
Real measure, showed in dB, of the security
margin before the signal declines reaching the
deadline (UNLOCKED Status)

QAM CARD DVB-C

(optional and as an alternative to COFDM CARD)

Frequency Range

Symbol Rate

Modulation

CH BER

RU

MER

CFO

NM:

47 to 860MHz

2.5 to 7MS/s

16; 64; 128; 256 QAM. Automatic selection

(before Reed Solomon) 1 E-2 a 1 E-8

Indicator of errors not corrected on output of
Reed Solomon stage

Relative reading from 14 to 40dB

AFC: +/-0.5MHz

Noise Margin

Real measure, showed in dB, of the security margin before
the signal declines reaching the deadline (UNLOCKED Status)

COFDM CARD for DVB-T / DVB-H

COFDM CARD-T2 for DVB-T2 / DVB-T / DVB-H

Frequency Range

Frequency Range

Modulation

Modulation

Code Rate

Code Rate

Guard Interval

Guard Interval

Bandwidth

Hierarchy

Operating Mode

Operating Mode

CH BER

PV BER

RU

MER

MER

NM:

50 to 860MHz (for DVB-T)

42 to 870MHz (for DVB-T2)

16 QAM; 64 QAM. Automatic (for DVB-T)

1/2, 2/3, 3/4, 5/6, 7/8. Automatic (for DVB-T2)

16 QAM; 64 QAM; 256 QAM; QPSK. Automatic (for DVB-T2)

1/2, 3/5, 2/3, 3/4, 4/5, 5/6 (for DVB-T2)

1/4, 1/8, 1/16, 1/32. Automatic (for DVB-T)

1/4, 1/8, 1/16, 1/32, 1/128, 19/128, 19/256.

Automatic (for DVB-T2)

7MHz; 8MHz

Non-hierarchic

2000; 8000 carriers (for DVB-T)

1000-2000-4000-8000-16000-32000 carriers (for DVB-T2)

(pre-Viterbi BER). 1E-2 to 1E-6

(post-Viterbi BER). 1E-2 to 1E-8

Errors not corrected on output of

Reed Solomon stage

6 to 25dB (QPSK, 16 QAM)

6 to 36dB (64 QAM) (for DVB-T)

2 to 36dB (QPSK, 16 QAM, 64 QAM, 256 QAM) (for DVB-T2)

Noise Margin

Real measure, showed in dB, of the security margin before
the signal declines reaching the deadline (UNLOCKED Status)

Cell ID:

Cell Identification

Identification of distribution's operator that is broadcasting
the signal

CSI:

Channel Status Information

Readout of the MER in percentage, lower value is better MER

MPEG4 + MPEG2 CARD

Standard

DVB Standard - compatible
MPEG4 - H264 + MPEG2
MPEG2 (AP 01)

SPECIAL DESIGNS

(1) Input impedance 50 Ohm

ACCESSORIES

- BNC/DIN Adapters - "P80 – P82"
- Li-Ion battery, 14.8V / 4.5Ah
- Operator's manual
- Reinforced-nylon bag (rucksack model for easy transport
with accessories compartment)

OPTIONS

- FCH 12 quick battery charger
- Noise generator (internal)
- QAM card as an alternative to COFDM (only AP 01 and AP 01 HD)
(the module can be only assembled at the factory when purchased)
- 5-65 Converter (the module can be only assembled at the factory
when purchased)
- MPEG4 (only AP 01)
- DVB-T2 (only AP 01 and AP 01 HD)

