

RF instrumentation

ADAM 3000

Analogue/digital antenna measuring system



- **Handy portable desktop signal meter**
- **High resolution TFT colour display 8.4" for graphic display of analogue and digital TV signals as well as for the display of graphics**
- **Backlighting – makes it easy to read even in a bright environment (typ. 600 cd/m²)**
- **Convenient operation using 12 hard keys and using the infrared touch-screen for context dependent operation**
- **Alphanumeric keypad on screen for entry of numbers and text**

With the ADAM 2000, Schomandl is providing an instrument of the latest generation in a compact form which leaves nothing to be desired when it comes to testing antenna and cable systems, even including professional head-ends.

Schomandl Distributor:



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Functions:

- MER measurement for all digital modulation types
- BER measurement pre and post Viterbi
- Spectrum analyser
- Simultaneous spectrum and picture analysis
- Freely selectable start and stop frequency for the spectrum analysis
- Storage oscilloscope
- Constellation analyser
- MPEG and analogue TV monitor
- Demodulation of analogue signals – AM (CATV, terr.), FM (sat, radio)
- Demodulation of digital signals – DVB-C, DVB-T, DVB-S (DVB-S2 in preparation)
- Demodulation of digital USA standards (J83B, DOCSIS, ATSC)
- Video measurement options: video amplitude with line selection, S/N measurement, hum measurement
- Oscilloscope with zoom (zooming in on the required section of the signal) with indication of the numerical value
- Transmitter selection for DVB-C, DVB-S, DVB-T and analogue via frequency input, channel input and user lists
- Remote control over Ethernet, RS 232 and PCMCIA module (analogue modem, GSM modem, Bluetooth, WLAN)
- Display of SID, PMT-PID, PCR-PID, CA info, elementary current PID and type
- Measured data logging
- Automatic measurement process
- Automatic measurements for CTB, CSO
- Return path measurements
- Measurement units: dB μ V, dBmV, dBm, μ V, mV
- DiSEqC™ monitor
- Multimeter for LNB supply
- Expansion slots (e.g. for DVB-S2)

Technical data ADAM 3000

Spectrum analyser

Frequency range	5 MHz – 3100 MHz
Resolution bandwidths (-3dB)	0.001 MHz – 10 MHz
Resolution bandwidths (-6dB)	9 KHz, 25 kHz, 50 kHz, 120 kHz, 200 kHz
Video bandwidths	0.00001 MHz – 3 MHz
Phase noise at 10 kHz carrier spacing	< -90 dBc (1Hz)/ typ. -95 dBc (1Hz)
Phase noise at 100 kHz carrier spacing	< -100 dBc (1Hz)/ typ. -110 dBc (1Hz)
Dynamic range (RBW 100 kHz)	Typ. 70 dB
Level measuring range	20 - 130 dBuV
Measuring accuracy	< 1.5 dB
Measurement detector	Max peak, min peak, auto peak, sample, RMS
Return loss (5dB pre-attenuation)	< 16 dB (VSWR 1.35)
Refresh rate	Max. 10 pictures/sec.
Reference level	30 dBuV to 130 dBuV
Display range	100 dB, 50 dB, 20 dB, 10 dB
Screen resolution	Max. 800 x 600/
Nominal	501 x 401 pixels

Analogue TV receiver

Standards	B/G, I, D/K, L/L', M/N
Colour standards	PAL, SECAM, NTSC
Audio standards	IRT-A2, NICAM, BTSC, EIA-J
Frequency increment	50 kHz
Video IF bandwidth	According to standard
Audio IF bandwidth	According to standard
Video output voltage	1 Vpp/75 W ± 1 dB
Hum measurement	> 50 dB
S/N measurement	> 55 dB/typ. 57 dB

Analogue SAT receiver

Standard	FM according to CCIR Rec. 405
Colour standards	PAL, SECAM, NTSC
Audio standards	Deem. 50us/ Panda-Wegener 75 us
Frequency increment	200 kHz
IF bandwidths	27 MHz, 36 MHz
Audio IF bandwidth	130 kHz, 380 kHz
Video output voltage	1 Vpp/75 W ± 3 dB
Hum measurement	> 50 dB
S/N measurement	> 55 dB/ typ. 60 dB

Analogue input

S/N measurement
(evaluated according to CCIR Rec. 567) Typ. up to 60 dB

Digital TV receiver

Modulation process	QPSK, 16 QAM, 32 QAM, 64 QAM, 128 QAM, 256 QAM
Symbol frequency (depending on demodulator)	QAM/ ATSC 2.0– 6.999 MHz
Frequency increment	50 kHz
Video output voltage	1 Vpp/75 W ± 1 dB
IF bandwidths	1.5 MHz, 6 MHz, 7 MHz, 8 MHz, 12 MHz
MER measurement (equalizer on)	> 35 dB

Digital SAT receiver

Modulation process	QPSK
Symbol frequency QPSK	2 MHz – 45 MHz
Frequency increment	200 kHz
IF bandwidths	8 MHz, 18 MHz, 27 MHz, 36 MHz, 54 MHz
Video output voltage	1 Vpp / 75 W ± 1 dB
MER measurement	> 14 dB

Constellation analysis

DVB-C	QPSK, 16 QAM, 32 QAM, 64 QAM, 128 QAM, 256 QAM
DVB-T	QPSK / 16 / 64-QAM
DVB-S	QPSK
ATSC	8-VSB

Storage oscilloscope

Resolution	12 bit
Scanning rate	54 MHz
Memory depth	1 picture

Remote feeding

Switching voltage/max. current	5V – 20V/500 mA
Control signals 2	2 kHz/tone burst/ DiSeqC™ 2.0 SCR single-cable system and UFO® micro control signals

Power supply

Mains (power supply unit)	100 V – 250 V/ 50 Hz – 400 Hz/62 W
Li-ion rechargeable battery	11.1 V/6 Ah

Technical data ADAM 3000

External DC	10.8 V – 14.0 V
Connections	
RF standard input/impedance	1.6/5.6 (75 W)
FBAS input/output /RGB output	Scart socket
Video input/output	2 x BNC socket
Transport stream input/output	2 x 25-pin SUB-D socket
ASI input and output	2 x BNC
Common Interface/card reader	1/1
PCMCIA insert	1
Network connector 1	x Ethernet
USB port	2
External keyboard	PS-2
External mouse	USB
Headphone connector	3.5 mm jack
Modem interface	RS 232 / Sub-D 25-pin (socket)
DC supply 12 V	XLR socket
General	
Monitor	8.4" TFT; 800 x 600 pixels
with backlighting	
Touch-screen	Infra-red
Temperature range	+ 5 °C to + 45 °C
Dimensions (W x H x D)	Approx. 374 mm x 276 mm x 108 mm
Weight	Approx. 7.6 kg
Safety standards	CE
Order number	Order no. 86902.000
Subject to change	