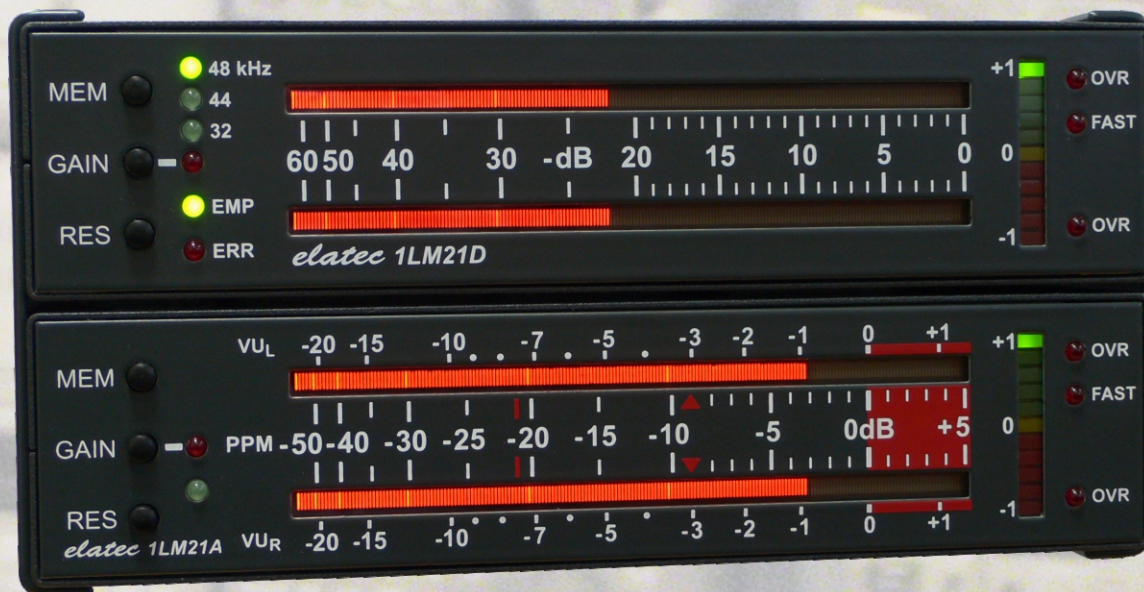


ANALOG PEAK PROGRAMME METER with correlator



Analog peak programme meter with correlator 1LM21Ax measures the level and phase of the stereo sound signal. Inputs are ballanced and separated by transformers. Signal level is indicated by two orange bars on double 201-segment plasma display unit. Correlation is displayed by 11-segment LED strip. The core of indicator is a digital signal processor. The analog signal is converted by means of Σ - Δ converters, at 48 kHz sampling rate. The signal is displayed with standardized ballistic characteristic. PPM and VU scales are generated electronically and have a common point at the level of 0 dB. They can also be used simultaneously. The instrument include additional features like the instant reading from the max. Peak memory can also be activated at any time, with the MEM push-button or cleared with the RESET push-button. The maximum signal value is indicated by a bar with half brightness. Integration time can be set between 1 sample and 10 ms. Using remote controller it is possible to switch it between FAST and SLOW values. Exceeding the Overload level is indicated by red LEDs and the level is adjustable. On the front panel there are also push-buttons for switching GAIN (+20dB), RESET and MEM. Using RESET button with the memory of maximums deactivated, we can select scales PPM, VU or both PPM+VU at the same time. Operating modes are set using internal switches and GPI remote control. If the signal level is not measurable for prolonged time, the level meter turns itself into the standby mode. The level meter is available in vertical (1LM21AV) or horizontal (1LM21AH) version. The power is supplied from the external AC adaptor.

Technical Specifications

Inputs

Analog inputs L,R	transformer ballanced
Input sensitivity (in 1dBu steps)	0...15 dBu
Maximal input level	+20 dBu
Input impedance	10 kohm
Sampling rate	48 kHz
Frequency range $\pm 0,5$ dB	20 Hz - 20 kHz
Dynamic measuring range	> 60 dB

Level meter

Total scale length	102 mm
Number of single elements in each PPM bar	201
Stand by automatically after selected state	selectable

Standard scale DIN

	-50 ... +5 dB
Integration time	switched SLOW or FAST
SLOW (analog system)	10ms or 1 ms
FAST (digital system)	100us or 1 sample
Fall back time	0 \rightarrow -20dB 1,50s
	0 \rightarrow -40dB 2,50s
Overload treshold range - selectable	-15 ... +5 dB

VU scale shortcut (indicated green LED)	-20 ... +1 dB
Integration time	300 ms
Fall back time	300 ms

Accessory : supply 10,5V/1200 mA and user documentation

Phase correlation meter (Compatibility meter)

Input level range	-30 ... +20 dBu
Number of LEDs	5x green, 1x yellow, 5x red
Indication:	
- no signal on both inputs	no LED indicate
- no signal on one input	flashing 0
- random phase signals on both inputs	0
- in phase signals on both inputs	+1
- out of phase signals on both inputs	-1

Remote control GPI

functions	GAIN, FAST, MANUAL
a) with internal supply +5V	control with contact
b) with external supply	control with contact

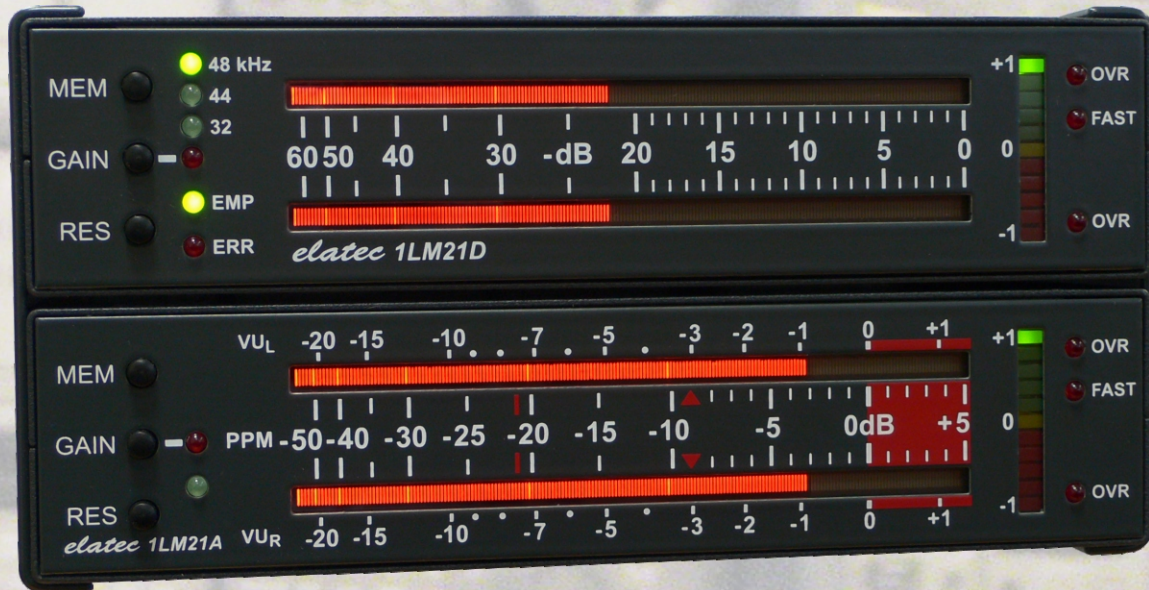
General specification

Supply voltage	+ 10,5 V
Current consumption (depending on reading)	max. 0,6 A
Dimensions 1LM21A max. (w x h x d)	168 x 43 x 153 mm
Weight	0,85 kg
Temperature range	+5 až 45 °C

Connectors:

2 x female XLR 3-pin	NEUTRIC NC 3 FAH
1 x female D-SUB for remote control	D-SUB 9
1 x male socket for DC - supply	RIA229/03

DIGITAL PEAK PROGRAMME METER with correlator



Digital peak programme meter with correlator 1LM21D measures the level and phase of digital sound signal in the AES/EBU format. It indicates sample frequency, information on preemphasis, and presence of AES/EBU signal in a correct format. Signal level is indicated by two orange bars on double 201-segment plasma display unit. Correlation is displayed by 11-segment LED strip. The core of the indicator is a digital signal processor, which evaluates the signal measured and displays it with a correct ballistic characteristic. The instrument has a switching-off memory for signal maximums with automatic or manual clearing. The maximum signal value is indicated by half brightness. Integration time can be set from 10ms up to 1 sample. Using remote controller it is possible to switch it between FAST and SLOW values. In order to facilitate the level reading, the instrument is provided with adjustable Headroom area with increased scale brightness. Exceeding the Overload level is indicated by red LEDs and the level is adjustable. On the front panel there are also push buttons for switching on/off the auxiliary Gain +20dB for indicative signal control with the level below -50dBFS, for switching on/off the memory of maximums and maximum resetting control. Operating modes are set using internal switches and GPI remote control. If the signal level is not measurable for longer time, the level meter turns itself into the standby mode. The Level meter is available in vertical (1LM21DV) or horizontal (1LM21DH) version. The power is supplied from the external adaptor.

Technical Specification

Input/output

AES / EBU input	transformer balanced
AES / EBU output	transformer balanced
Input impedance	110 ohm
Output impedance	110 ohm
Sampling rates	32 kHz, 44,1 kHz, 48 kHz
Synchronizing	automatically
Frequency range $\pm 0,5$ dB	20 Hz+20 kHz
Accepts input signals	AES / EBU, S/PDIF

Level meter

Total scale length	102 mm
Number of single elements in each PPM bar	201
Stand by automatically after selected state	selectable
Brightness control	from rearside panel, trim
Electronics marks for scale	selectable

Ballistic characteristic

Standard scale DIN	- 60 ... 0 dBFS
Integration time	SLOW or FAST
SLOW (analog system)	10 ms or 1 ms
FAST (digital system)	100 s or 1 sample
Fall back time	from 0 dB to - 20dB1,50 s
	0 --> - 40dB2,50 s
Overload treshold range	-20 dBFS... FS24
Selection of hold time OVERLOAD	0,5 s ... 4 s
Headroom (brighter segments)	5 dB to 20 dB (selectable)

Phase correlation meter (Compatibility meter)

Input level range	-45...0 dBFS
Number of LEDs	5x green, 1x yellow, 5x red
Indication:	
- no signal on both inputs	no LED indicate
- no signal on one inputs	flashing 0
- random phase signals on both inputs	0
- in phase signals on both inputs	+1
- out of phase signals on both inputs	-1

General specification

Supply voltage	+ 10,5 V
Current consumption (depending on reading)	max. 0,4 A
Dimension max. (w x h x d)	168 x 43 x 153 mm
Weight	0,85 kg
Temperature range	+5 až 45 °C

Remote control - GPI

functions	optoisolated
with internal supply +5V	GAIN, FAST, MANUAL control with contact

Connectors:

1 x female XLR 3 pin	NEUTRIC NC 3 FAH
1 x male XLR 3 pin	NEUTRIC NS 3 MAH
1 x female D-SUB for remote control	D-SUB 9
1 x male socket for DC - supply	RIA229/03

Accessory : supply 10,5V/1200 mA and user documentation