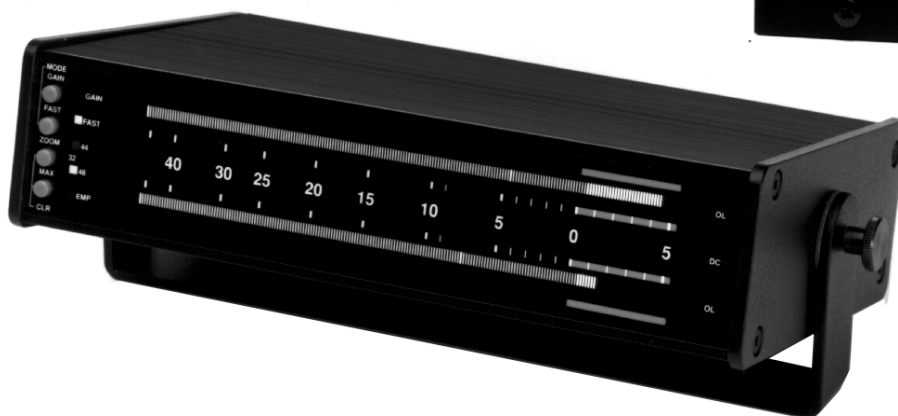
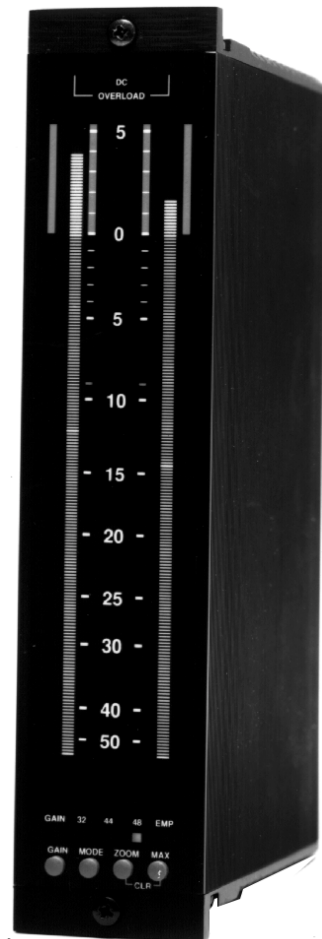


Stereo Digital Peak Program Meter The 478-200



Features:

- Peak Programme Meter for Digital Audio - "analogue style"
- Advanced Dual-Mode Display, combining:
 - BAR: Reading similar to traditional Analog PPMs
Referring to a "normal operating level"
10 msec integration time
 - SPOT: True digital peak-reading
"Zero" integration time
- Built-in three color LED compatibility meter. (option)
- Reference level selectable from 0 to 31 dB below max. digital code
- Selectable "freezing" of Spot for peak-hold indication
- Built-in 0.3 Hz Highpass filter for DC-blocking and LED DC warning indication for LF-component levels of more than -30 dB FS
- Individual overload indicators with selectable trigger threshold
- Additional gain function for monitoring of low level signals
- Resettable memory for storing of maximum reading.
- 32/44.1/48 kHz sampling-rate and pre-emphasis indicators.



General Description.

The 478-series of audio level measuring instruments is a member of a family of instruments designed to take heritage of the previous series of 477-series PPM's. Based upon one of today's most powerful DSP's it offers all of its predecessors appreciated qualities like a bright, high definition bargraph display with a multitude of display modes.

The prime function of the meter is to measure the peak level of a digital audio signal and to display it on a meter scale, identical to the familiar "analogue scale". It facilitates both measurements with 10/5 ms integration time in accordance with IEC 268-10 and measurements with "zero" integration time. Additionally a spot

indication may be superimposed on the normal reading, indicating the absolute level with reference to digital FS. This enables the sound engineer, working in a mixed analogue and digital environment, to make a direct comparison between signals. Numerous other displays functions are available including peak hold, memory, zoom and an optional compatibility/phase meter. The instrument is housed in a ruggedized aluminium cabinet, with a high contrast, non glare scale.

Stereo Digital Peak Programme Meter

Technical Specifications:

Supply voltage 20-32 V DC

Current consumption, @ 24V supply 140 mA typ. (max. 200 mA)

Signal input:

Input type Serial digital audio interface (IEC 958)

Input impedance High impedance, floating, ($Z_i > 1 \text{ k}\Omega$) or 100 ohms

Minimum input signal $V_{min} = 200 \text{ mV}$, $T_{min} = 0.5 \times T_{nom}$ (IEC 958)

Sampling rates 48 kHz, 44.1 kHz and 96 kHz

Measuring characteristics:

Main reading (bargraph):

Integration time 5/10 ms (IEC 268-10, 1991-03)

Return time 1.7 s (0 to -20 dB) (IEC 268-10, 1991-03)

Reference level selectable 0 to 31 dB below max. digital code.

Overload indication The bar intensity is increased within overload range.

Low frequency cut-off DC-blocking; Cut-off frequency $< 0.3 \text{ Hz}$

Secondary reading (spot):

Integration time "zero"

Return time 1.7 s (0 to -20 dB) (IEC 268-10, 1991-03).

Scale max. Scale max. equals the lower limit of intensified bar range.

Reference level Scale max. corresponds to max. digital code level.

Phase indication:(option) 0 to 180°. - Resolution: 18°.

Additional functions:

Gain: Additional 20 dB gain selectable on front.

Mode The Bar-Graph display can be operated in various modes.

Memory: A peak memory is provided. Reset is controlled from a push-button on the front.

Zoom: To enable extremely accurate reading around "0 dB", the scale may be expanded by a factor of 10.

LED Indicators:

Flashing LEDs on top of each bar for instantaneous digital overload.

Excessive DC-content in either channel.

Gain, when selected.

Sampling rate and preemphasis, if present.

Remote control:

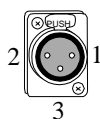
All functions, accessible through push buttons at the front, can be controlled remotely. Rather than running individual wires to each remote switch only a single pair is used for all remote switches. The actual function of each switch is then being determined by the value of a resistor in series with the switch.

If the required reference level differs from the factory setting, they can be controlled remotely in the same manner.

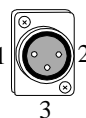
The 478 meter series of instruments is a highly modular design. Cabinets are available for panel mount or for table top use.

Terminal connections (XLR-connectors):

Connection is via one XLR A3F connector and one XLR A3M connector for loop-through.



Chassis/screen 1
Input (a) 2
Input (b) 3



Chassis/screen 1
Output (a) 2
Output (b) 3

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