

TUBE-TECH EM 1A **Program equalizer Module**

DESCRIPTION

The **TUBE-TECH program equalizer EM 1A** contains a passive filter and a tube (valve) based amplifier to restore the loss from the filter.

The filter has a low frequency boost/attenuate section with 4 selective frequencies, a high frequency boost section with a variable bandwidth and 10 selective frequencies and a high frequency attenuation section with 3 selective frequencies.

The filter is placed directly after the input transformer therefore eliminating noise from the amplifier when boosting either low- or high frequencies.

The amplifier consists of two tubes (valves) in push-pull configuration (one ECC 83 as the pre-amp and phase splitter, and one ECC 82 as the output stage), and an output transformer.

Both input and output are balanced and fully floating.

The in/out key switches the filter in and out without clicks and changes in level, while the amplifier remain in the signal path.

The power supply for the pre-amp and phase splitter are stabilized and the heaters of both tubes (valves) are fed with a stabilized DC voltage.

The whole amplifier (including input and output transformer) and the power supplies are placed on one PC-board.

CONTROLS:

LOW FREQUENCY SECTION:

The low frequency section consists of a **BOOST** and **ATTENUATE** control and a **LOW FREQUENCY** switch located just below.

BOOST: The **BOOST** control is continuously variable from 0 dB to +14 dB. It is of the shelving type.

ATTEN: The **ATTENUATE** control is continuously variable from 0 dB to -18 dB. It is of the shelving type.

LOW FREQUENCY: The **LOW FREQUENCY** switch determines at which frequency the maximum boosting and attenuation is obtained. There is a choice of 4 frequencies: 20, 30, 60 and 100 Hz.

HIGH FREQUENCY SECTION:

The high frequency section consists of two separate circuits:

1. A high frequency boost section, which contains a **BOOST** control, a **BANDWIDTH** control and a **HIGH FREQUENCY** switch.
2. A high frequency attenuate section, which consists of a **ATTENUATE** control and a **ATTEN SELECT** switch.

BOOST SECTION:

BANDWIDTH: The **BANDWIDTH** control is continuously variable from **SHARP** to **BROAD**. It controls the width of the high frequency boost curve.

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BOOST: The **BOOST** control is continuously variable and is of the bell type. The gain is depending of the setting of the bandwidth control. When the bandwidth is in the sharp position the gain is from 0 dB to +18dB. When the bandwidth is in the broad position the gain is from 0 dB to +10dB.

HIGH FREQUENCY: The **HIGH FREQUENCY** switch determines at which frequency the maximum boosting is obtained. There is a choice of 10 frequencies: 1, 1.5, 2, 3, 4, 5, 8, 10, 12 and 16kHz.

ATTENUATE SECTION:

ATTEN: The **ATTEN**uate control is continuously variable from 0 dB to -18 dB. It is of the shelving type.

ATTEN SEL: The **ATTEN SE**lect switch determines at which frequency the maximum attenuation is obtained. There is a choice of 3 frequencies: 5, 10 and 20 kHz.

IN/OUT: This lever switch switches the filter in and out of the signal path. The amplifier remains in the circuit.

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TECHNICAL SPECIFICATIONS EM 1A:

<u>Input impedance:</u>	600 Ohms
<u>Output impedance:</u>	< 60 Ohms
<u>Frequency-response @ -3dB:</u>	5 Hz to 40 kHz
<u>Distortion THD @40 Hz:</u>	
<u>0 dBU:</u>	< 0,15 %
<u>10 dBU:</u>	< 0,15 %
<u>maximum output (1 % THD):</u>	+26,0 dBU
<u>maximum input (1 % THD):</u>	+21,0 dBU
<u>Noise Rg=200 Ohm:</u>	
<u>Unweighted</u>	-85,0 dBU
<u>CCIR 468-3</u>	-75,0 dBU
<u>CMRR @ 10KHz</u>	< -60dB
<u>Gain:</u>	0 dB
<u>Tubes</u>	
ECC 82	1 pcs
ECC 83	1 pcs
<u>Dimensions</u>	
Height:	176 mm / 5,2"
Width:	50 mm / 1,9"
Depth:	220 mm / 6,7"
<u>Weight</u>	
Net:	1,2 Kg / 2,6 lbs
Shipping:	1,8 Kg / 4,0 lbs
<u>Power requirements</u>	12W

All specifications at RL=600Ω

Lydkraft reserves the right to alter specifications without prior notice

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