

LUXMAN

CL-88 • MQ-88 • EQ-88

VACUUM TUBE CONTROL AMPLIFIER

CL-88

VACUUM TUBE POWER AMPLIFIER

MQ-88

VACUUM TUBE PHONO AMPLIFIER

EQ-88



LUXMAN CORPORATION



■ Driving KT88 with Mulardo type circuit

The vacuum tube was adopted in power amplifier MQ-88 after overall careful consideration. In the primary stage of ECC83S, JI-made vacuum tube of Slovakia, and in the drive stage of 12BH7A and output tube of KT88, the Sobollikku-made vacuum tube of Russia are respectively adopted. The products with a good fame in quality, sound quality and in long term stable delivery are used. In circuit type, the cathode directly connecting type aiming at gaining flexibility and forcefulness, namely the Mulardo type was adopted. It features that the second distortion occurred at the drive section of differential construction in the primary stage could be eliminated and the balances of push-pull actions of output tube KT88 is stabilized. In addition, the product that has same size with OY36 which boasts wide range features and dynamic sound was specially designed into the output transistor. Lastly, the transistor using oriented core material was built in the sealed box for protecting it from noise.



■ The bias adjusting function equipped with monitoring meter

The meter using for adjusting the bias current aiming at guaranteeing the visibility by the combination of blue LEDs was equipped on the top panel. For keeping 4 KT88 (vacuum tubes) at usually best conditions, and for highlighting the stability and reliability in semi-fixed volume, the wirewound sealed construction type was adopted.

Re Entry

Reviving from 11 years' dormancy,

VACUUM TUBE POWER AMPLIFIER

MQ-88

We, Luxman could be said a maker who has been pursuing the possibility of adopting the vacuum tube in amplifier for a long term in Japan. Although it happens that the replacing into the semiconductor has become the main stream in audio amplification, the high reality and wide range owned by vacuum tube enables it be actively used in the design as well as in the constitution of amplification circuit. Here comes the CL-88/MQ-88, a separate type vacuum tube amplifier poured with the latest (development) results and everlasting enthusiasm and republished after 11 years' dormancy.



When the real vacuum tube was delivered, the cover will be installed on it for security.

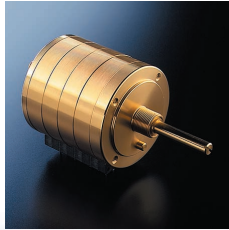


■ The high grade/high sound quality parts made with carefulness

This is the CL-88/MQ-88 aiming at increasing the high fidelity of the amplification of signal by decreasing the attached functions. So the parts used in this must be in good quality. First of all, the single wire of the gold plating 4N non-copper oxide coated with the ideal insulating material—fluorine resin insulating coating was adopted in the signal wire. So the sound with core and long term stable feature could be reached. In CR parts type, many best-known parts such as tubular type condenser immersed in vitamin Q oil, the Ligen Dengu-made carbon film resistor used in audio are adopted. In addition, many high-grade custom-made parts such as gold-plating tight socket, super-high insulation lug terminal plate, etc. are adequately used.

■ **High-precision ultimate volume + touch mute function**

One of the important parts that could decide the sound quality of preamplifier is volume. Luxman has not only dedicated to sound quality for a long time, but also to the precision, operation feeling. And the ultimate volume with a high precision was adopted in CL-88. For improving operation, the touch mute function is built in. By touching the center of the volume knob, one could mute the sound at once



■ **The special vacuum tube phono amplifier EQ-88 could be connected**

In CL-88 specially designed for the special use of line level, the optional compact, high quality special vacuum tube phono amplifier EQ-88 was prepared for analog lovers. The power could be supplied just by one touch on the Noitorikku -made connector installed on the rear of power source.

* The separate power unit only for driving EQ-88 will be launched recently. Please consult business department of our company for more detailed information.



Re Union

exploring mysterious frontier



VACUUM TUBE CONTROL AMPLIFIER

CL-88

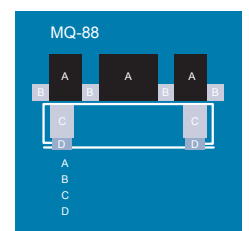
Simple two-step amplification NF circuit was adopted. In control amplifier CL-88 circuit, the two-step amplification NF type circuit was adopted in an orthodox way. The functional circuit such as tone control, balance volume, etc. was only directly reflected in the simple circuit via no any other medium, and the wiring method, the layout of components are directly reflected in the sound quality and audio specifications. The switching of signal at the golden contact relay sealed in nitrogen gas at the nearby of 4-system line input terminal reflects the consideration about maintaining a high S/N (rate) because of simple circuit. It is the same with power source part. The reason of the adoption of small scale OI type transistor with good sealing feature and little leakage flux lies in that Luxman knows quite well about how big the impact exerted by S/N (rate) on vacuum tube amplifier is. For quickly supplying pure energy, the regulator circuit is omitted.

■ **Illumination realized by blue-LED**

For displaying the character of products and for helping owner enjoy a happiest time of performance, below the volume, meter and chassis, the elegant and calm illumination realized by the blue-LED was equipped.

■ **Chassis construction completely pursuing rigidity**

The vibration and the resonance on the outside are the formidable enemy for vacuum tube inside it the electrons collide each other in the vacuum glass tube. For CL-88/MQ-88, on the basis of guaranteeing the rigid foundation by adopting the 15mm super-thick aluminum stainless plate for top panel, the constructions suitable for control amplifier and power amplifier are extensively analyzed. The CL-88 has replaced construction from the original box-type case body to the hanging mode with heavy thing installed in the internal side of top panel. Between the chassis and the top panel, the rubber cushion material was inserted, the framework construction for eliminating the tiny vibration by batten with high rigidity was adopted. On one side, the shock-proof construction integrated surface and collar of MQ-88 supports the heavy things such as transistors, etc. Because the collars are directly installed at the foot parts of case, the case body is kept upright. The existing box-type part plays a role of beam in this construction, contributing a lot for the strengthening of the horizontal intensity of the case body as a whole. The Piezon composite insulator used at the foot parts of the two models has taken the construction combining the advantages of hardware and software systems by using the stainless brass combined with damping material (piezoelectricity-type sound-proof and absorption material). It could give a solid support to the amplifier case body as well as could eliminate the vibration and resonance.



CL-88

Input sensibility/input impedance	100mV / 90kΩ	
Output/input impedance	1V / 1 kΩ	
Overall higher harmonic distortion rate	1kHz (rated)	0.013%
Frequency characteristic	5Hz-100kHz	+0, -3dB
S/N rate	1kHz (1HF A)	> 93dB
Input	Coaxial	4 systems
Output	Coaxial	1 system
Accessory device	Power switch, power indicator, input selector, volume, touch mute, mute indicator, line phase sensor, signal ground contact, AC inlet	
Vacuum tube used	ECC83S / ECC82	
Circuit format	2-step amplification NF type	
Sound quality parts	Gold plating 4N non-copper oxide single wire, tubular type condenser immersed in vitamin Q oil, film type block condenser, gold-plating tight socket, nitrogen padding relay with gold contact, high precision ultimate volume, shock-proof construction used in 15mm thick aluminum top panel	
Power consumption	12W	
Maximum dimension	255 (W) X 95 (H) X 387 (D) mm	
Weight	8.6Kg	



MQ-88

Rated output	40W+40W(8Ω), 50W+50W(6Ω), 40W+40W(4Ω)	
Input sensibility/input impedance	420mV / 100kΩ	
Overall higher harmonic distortion rate	1kHz (rated)	1.5%
Frequency characteristic	5Hz-90kHz	+0, -3dB
S/N rate	1kHz (1HF A)	> 101dB
Input	Coaxial	2 systems (one is direct input system)
Output	Speaker terminal	1 system
Accessory device	Power switch, power indicator, input level adjusting volume, bias current adjusting volume X 4, bias monitoring meter, line phase sensor, signal ground contact, AC inlet	
Vacuum tube used	Output tube: KT88 X 4, the first stage: ECC83S X 2, Drive stage: 12 BH7A X 2	
Circuit format	Murado type	
Sound quality parts	Gold plating 4N non-copper oxide copper single wire, tubular type condenser immersed in vitamin Q oil, gold-plating tight socket, shock-proof construction used in 15mm thick aluminum top panel	
Power consumption	190W (Based on the Safety Law on Electrical Appliances)	
Maximum dimension	400(W) X 186 (H) X 397 (D) mm	
Weight	25.1Kg	



EQ-88

- Vacuum tube mini-type phono equalizer amplifier corresponding to MM type cartridge which could be set up to meet the size of CL-88
- The power is supplied from CL-88cable via the attached special cable.

Input sensibility/input impedance	1.5mV / 47kΩ	
Output/output impedance	150mV / 600Ω	
Input	Coaxial	1 system
Output	Coaxial	1 system
Accessory device	Power indicator, signal ground contact, power input terminal, AC inlet	
Vacuum tube used	ECC83S X 3	
Circuit format	3-step amplification NF type	
Maximum dimension	110(W) X 102 (H) X 315 (D) mm	
Weight	2.2Kg	

* The specifications and appearance are subject to variation without notice.

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