

LUXMAN

CONTROL AMPLIFIER

C-8f



LUXMAN CORPORATION

Control Amplifier C-8f

For the excellence of [f]. Controlling penetrating the center of music expression.

What is the existence meaning of control amplifier? Luxman has taken the pursuing for excellence of this topic as its mission and has poured its efforts and has poured its results in C-8f. The improvement of some basic functions such as input selection, sound volume control, etc. could offer much sufficient energy to the signal sending to power amplifier than before, and could play a role as power amplifier drive to activate the music expression. While continuing the pursuing for excellent purity music quality, Luxman has added innovative ODNF circuit and launched C-8f with an intent for controlling the center of expression field. The "f" attached to C-8f meaning the "finest" tells you what is the target that the control amplifier has been steadily pursuing for.

Collecting the analog technology to the extreme extent gives birth to the 4-connected ultimate volume

The control of sound volume plays an important role in the sound quality of audio amplifier. For solving this problem, Luxman makes efforts on studying the problem of sound volume control from the point of view with sliding type volume as topic. By applying the analog technology concerning the base of music reproduction to an extreme extent, Luxman has developed ultimate volume that could bring the highest purity. The analog volume control which used to get a high evaluation for formerly installed in C-911 was built in C-8f. The ultimate volume composed of the parts made of 4 connecting brass which could match to the complete balance circuit construction has achieved the remarkable high precision and lower distortion rate with its maximum attenuation value at -120dB and its synchronization error under $\pm 0.5\text{dB}$ ($0-90\text{dB}$), and no nuance loss occurred to the back ground of the sound even when the sound volume being small.



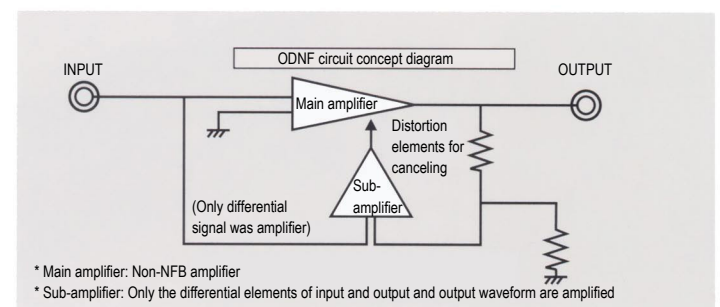
Ultimate volume with high precision and lower distortion rate

A power amplifier drive which could bring life to sound

When hearing the rich life feeling from the reproduction sound of system, one can feel the existence of excellent control amplifier. For protecting the purity of audio signal, there is a method to solve this problem by directly connecting power amplifier to the CD player, etc. Thus one could feel the full expression of leaping owned by the music by gaining a clear sound quality. To seek the music expression full of life, it has to adjust the impedance of signal in the system and to adopt the control amplifier which could enhance the energy of acoustics up to the level of being able to drive power amplifier. In C-8f, the flat amplifier composed of the circuits similar with that of power amplifier M-8f was built in. The control function of audio signal could highlight the sound forum and increase harmony than ever, and the functions displayed by power amplifier drive for clearing each sound character has brought life to each syllable of sound.

The newly-developed ODNF circuit which could grasp the moment when the music was played

Only by distinguishing the existence feeling of sound such as each violin, viola, cello from the grandeur sounds of full orchestra, the rich sound excitement could be gained. For freshly reproducing the nuance of each sound, efforts should be made in pursuing the speed of initial slewing rate which could catch the moment when the sound was generated. In addition, to reproduce more natural music, the smooth connection unified the sound colors covering the whole ranges from lower end to the higher end is indispensable. It is the ODNF circuit that has pursued the reproduction of music in a higher level, and aimed at fundamentally reforming the relations between music signal and distortion. Luxman shall first of all develop super-broad band-slewing rate and lower distortion circuit which needs no phase correction be done for the amplification circuit part of music signal. So the phase correction that has to be done in former negative feed back (NFB) circuit could be omitted. In addition, the existence of NFB should be paid attention too. For correcting the distortion of each music signal, the NFB method so far has caused the limitation on band field and the lacking of music information volume. Here, the distorted elements from output are fed back to the final section of amplification circuit, and only the distorted elements are removed from output waveform. Through the separating of NFB method from music signal, the high speed of initial slewing rate generated at the moment and the super-broad band field could be obtained. Furthermore, the DC servo amplifier used in controlling super-lower band that is the factor offering un-natural color ration to the lower band in NFB circuit could be removed. Thus the natural music reproduction unified the sound colors covering the whole bands could be realized.





Giving a full play of the real value of complete balance amplifier with high level know-how

The complete balance amplifier was adopted in C-8f. By adopting the power source supply mode of S.T.A.R. circuit which has used the high grade parts and taken the clear amplification reference point, the real value of balance amplifier was given full play. The un-wanted elements occurred inside the circuit will be cancelled effectively when output happened.

The high inertia power source following the drama with ever-changing sounds

The changes of sounds vary from shrieking to noiseless. Mahler's orchestra music featuring short-term fluctuation is nothing but a drama full of ever-changing sounds. The high inertia power source supplying energy in accordance with the fluctuation at every moment has liberated the leaping feeling of the lively music as it was. The ordinary method carried out in controlling the power supply in accordance with the music sound has become the controlling lagged behind off the real time music, as well as has become the factor blocking the leaping feeling of music. The special electrolytic condenser with excellent instantaneous discharge feature was built in the high inertia power. It has created an environment which could pool an ample power, and minimizing the delay control. It could supply dynamic power supply in a most natural mode to amplification circuit.

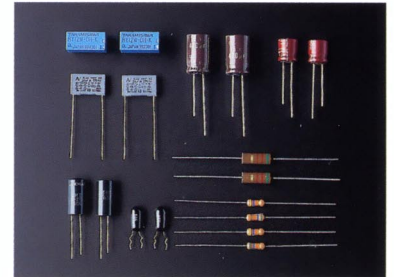
The countermeasure aiming at completely eliminating noise for thoroughly protecting the pure and stainless sound

It is a high rigidity and box-separating construction by adopting various countermeasures against noise and un-wanted vibration. With the 5-points earthing FRP chassis base which is excellent in the mode of absorbed oscillation as the foundation, the parts are firmly fixed on the thick chassis, the case body construction at heavyweight level keeping off the vibration noise was obtained. In addition, by taking the layout with no direct interference with each other of the power transistor, chemical condenser, amplifier block, and the separating of these blocks with shield plates, as well as the strengthening of internal filter, the flux and the interference of noise are cut down. The efforts dedicated to improvement of the pure sound quality are extended to the construction of power source. The power source part was separated by barrier construction, and the independent power source room mode which was combined with the body chassis by semi-floating processing was adopted. By isolating electromagnetically and mechanically, the leaking flux within the same case body could be shut out.

The special custom-made parts group provided by Luxman is a "must" (product) for improving sound quality.

In the music, there hides a life of sound which was not yet heard by the ears of human. Based on this confidence, for completely exploring the music information hidden in the source, Luxman has been dedicating itself to the improvement of the reproduction at tiny level by adopting

of custom-made parts. And the data and performance achieved through the development of high sound quality parts by years' efforts has given birth to the Luxman special custom-made parts. For making good resistor, the studies on the varieties of materials and methods from the selection of alumina used as the porcelain material, to etching, carbonization, terminal material, terminal shape, press-in method, etc. should be carried out on the basis of carbon film resistor with excellent sound effects. For rapidly increasing the transferring volume of information, the special resistor which could reproduce the music with rich expression was adopted. In addition, the custom-made parts filled with dedication to the high level technology and sensibility headed by power transistor, followed by electrolytic condenser, copper styrol condenser, copper-made bus bar, high purity cable, etc. are adopted. In the fields of custom-made parts group that could be said the exclusive kingdom of Luxman, you could enjoy all the sensibility shown by Luxman on audio.



Setting the "gain-1" position used for multi-channel machine

After careful consideration about combining the multi-channel audio machine such as the home theatre processor, etc. into the main volume, the "gain-1" position was newly determined. Thus the adequate music energy supply ability could be given full display under the condition without losing the audio level balance of each channel set by the processor, etc.



Making high grade design and finish intimate to music

It is a forum so intimate to the colorful music space. Audio amplifier is pursuing such dignified beauty. The symmetrical design was adopted in C-8f for removing the surplus performances. It is a slim and clean front panel. The precise hair line processing that reflecting the grade of the articles of everyday use could give you a legend of the high processing level in the internal mechanical part.

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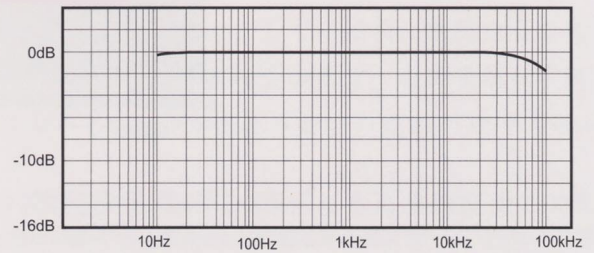


Subsidiary Function

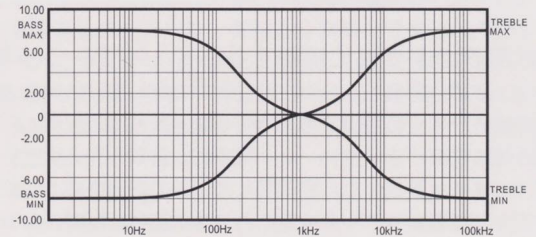
* Power source switch	*Tone control used in lower band	*Inverted phase switch (output phase switching)
* Output selector	*Tone control used in higher band	*Reverse mode switch (L/R mode reverse)
*Monitor selector	*Balance control	*Input selector
*Recording out switch	*Straight switch	*Volume control



Frequency character diagram



Tone control character diagram



C-8f SPECIFICATIONS

Input sensibility/input impedance:	CD/DVD A	250mV/50kΩ
	CD/SACD	250mV/50kΩ
	Line 1	250mV/50kΩ
	Line 2	250mV/50kΩ
	Line 3	250mV/50kΩ
	Balance Line1	250mV/100kΩ
	Balance Line2	250mV/100kΩ

* The balance input of Luxman shows as the follows: When in normal state, the third pin is "+", the second one, "-", the first one, GND.

Output/output impedance:	Coaxial: 1V/300Ω	maximum: 7.5V (rated)
	Balance: 1V/600Ω	maximum: 7.5V (rated)

Overall higher harmonic distortion rate: less than 0.005% (rated)
 Frequency characteristic: 20Hz-20kHz (+0,-0.1dB)

10Hz-100kHz (+0,-2.2dB)

S/N Larger than 119dB (IHF-A)

Tone control TREBLE: down over 3kHz

Maximum ±8dB 10kHz ±6dB

Bass: down over 300Hz

Maximum ±8dB 100kHz ±6dB

Subsidiary equipment

Tape dubbing 2 system (1→2,2→1)

REC OFF

Straight switch

Output selector

Output phase changing switch

Stereo/Mono changing switch

Remote terminal

Line phase sensor

*Power consumption

23W (Based on the regulations of Safety Law on Electrical Alliances)

*Power voltage AC100V (50/60Hz)

*Maximum dimension 467 (W) X 187 (H) X 475 (D)mm

*Weight 22.5kg

* The specifications and appearance are subject to variation without notice

LINE PHASE SENSOR



The line phase sensor detecting the polarity of AC power source. It could usually be set at the correct polarity.

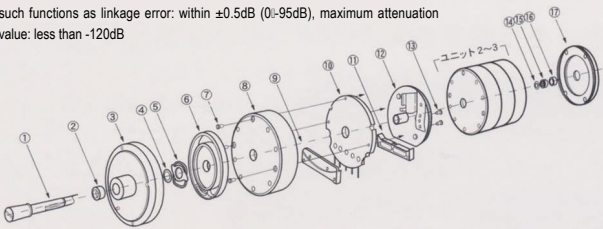
UNSWITCHED (TOTAL 300W max.)



AC inlet type which could make connection easy is adopted in power source input. It could also match to the Luxman 10000 series power cable.

C-8f/4-link unit ultimate volume

The ultimate volume with super-lower distortion and rigidity construction integrating such functions as linkage error: within ±0.5dB (0:-95dB), maximum attenuation value: less than -120dB



- (1) Ø8 brass cutting shaft (2) Oil-bearing metal (3) Brass cutting bearing (4) Washer (5) Earth blade (6) Damper (7) Brake used for fixing board (8) Brass cutting shield case (9) Terminal holder (10) Mirror plane resistor board and OFC terminal (11) Terminal holder (12) Multi-wire brush sliding disk (13) Multi-wire brush fixing copper brake (14) Washer (15) Nut used for fixing sliding disk (16) Oil-bearing metal (17) Brass cutting shield case